



web designer™

ISSUE 142

Dw DREAMWEAVER **FL** FLASH **Ps** PHOTOSHOP

RICH INTERNET?

How the RIA boom is changing the way we do business online

COLDFUSION CODING

Discover advanced techniques for Adobe's server-side builder

THE PSYCHOLOGY OF WEB DESIGN

- Learn to think like the user
- Evolve the way your sites work
- Tim Berners-Lee talks up the semantic future

HOW TO • Customise templates with **Dreamweaver & CSS** • Add **OpenID** authentication support to your site project
• **Flash CS3** game coding with **ActionScript 3** • Craft stunning abstract mixed-media web art in **Photoshop**

MICROSOFT SILVERLIGHT

Code a natural writing app with our latest XAML-based development masterclass



PERFECT PORTFOLIOS

Start crafting the ultimate web resume template in time for securing that dream career



Welcome



Building websites just isn't what it used to be these days. The 'rules' we once took for granted are shifting all the time and it's up to us to evolve with them...

ALTHOUGH CHANGE is often something us humans revile, it's an unavoidable thing that affects or afflicts all of us. We get older, we move out, get a job and take on all manner of responsibilities that many moons ago we vowed never to entertain – the point is, it's inevitable. So if you pine for a web design past where neon table layouts jostled with animated GIFs within the latest Netscape Navigator browser, then forget it fast. Times have changed beyond recognition and the 'art' of crafting online content has, in many ways, become exactly that – an art form. Just like architecture, automobile manufacture and music-making at its very finest, the discipline of web design can astound and inspire those that interact with it. For all the inherent pitfalls that dynamic advancements in Flash and AJAX have yielded, they have been pivotal in giving designers and developers the creative free reign to redefine the possibilities of the very things they build. Timeline-based animation and asynchronous JavaScript have enriched the experience so much that rich internet applications are now the defining vision of Web 2.0 – a place where the traditional notion of web pages is pretty much consigned to history.

So if the creative world we now live in has evolved, shouldn't we be trying to catch up?

What's more, surely we should be trying to pin down some new rules that readdress the needs of the user? After all, these are the people we should be designing for. This month's cover feature aims to get everyone thinking about these things, with special expert opinions from human-computer interaction specialist Linda Hole and the very esteemed Mr. Tim Berners-Lee.

On the practical side of things, there are highlights in the form of Rachel Andrew's look at Open ID, a Hot 100 entry from last issue, and the beginning of three related tutorials on designing cutting-edge portfolios from our own Jack Hayward. Remember also to get excited for our Creative Careers special issue coming up, and be sure to let us know if you're a web design student aiming to make it big – you might find yourself featured!

Mark Billen
EDITOR

Editor's picks

Web Designer 142 reveals much more than meets the eye – here's what to expect...



30-32

Read about Nik Ainley in Behind the Scenes – if you can tear your eyes away from his images that is!



84-86

The gorgeously skinny MacBook Air breezes into our office as part of the latest hardware reviews



92-93

Our eCommerce feature this month looks at the impact Web 2.0 RIAs are having on web trade

gallery

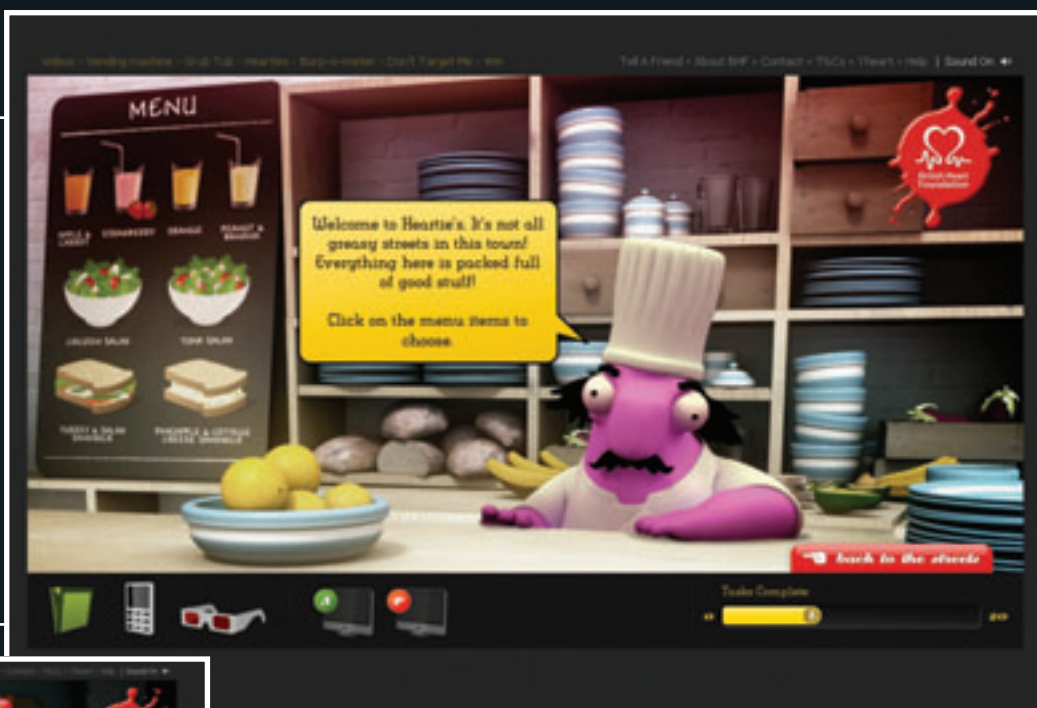
THE CREAM OF THE WEB CROP

This is a truly impressive website that uses point and click interaction to guide the user through a very vivid, graphically rich experience

BHF FOOD FOR THOUGHT

<http://food4thought.bhf.org.uk/>
Designed by: **Fingal**

It is with great pleasure for us to award those sites for great charitable causes and the Food for Thought website is a fantastically conceived 3D educational tool from the British Heart Foundation. The website is designed to educate you as well as entertain as you are taken through an urban jungle to take up the various challenges that await. Embedded within a stunning 3D environment, the site is packed full of informative facts and entertaining video about leading a healthier lifestyle. If they wanted this site to have maximum appeal to children, then they have most certainly achieved their goal.



Sick Rick is actually more of an irritating character than he needs to be, which is maybe the point...



Choose from the two 3D characters to go searching the beautifully crafted urban jungle to complete a series of tasks, each covering all aspects of the average daily life of a schoolchild

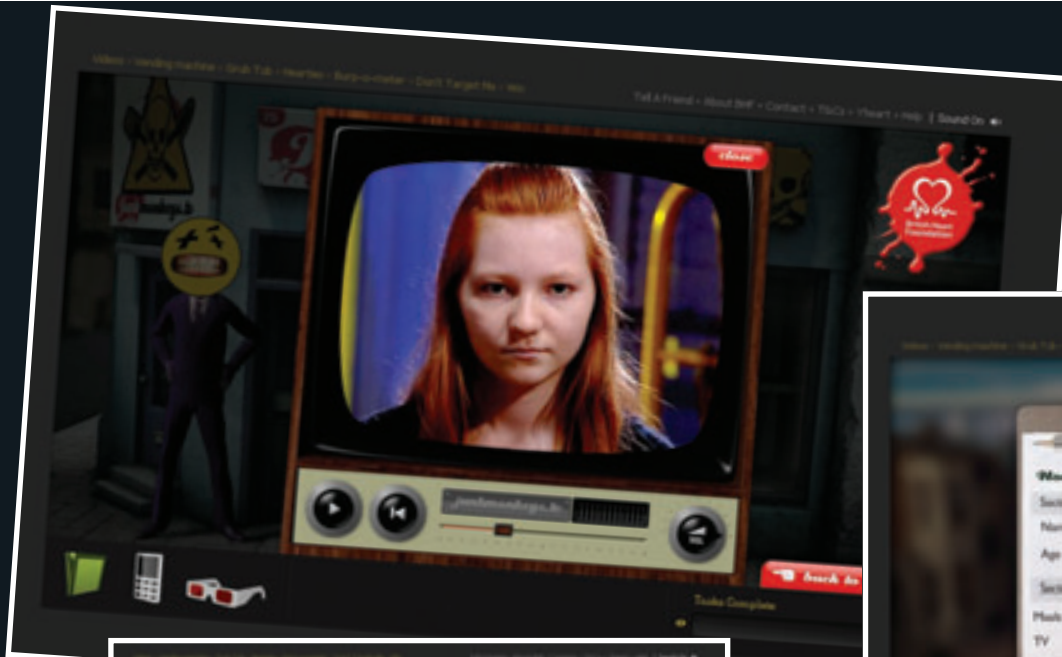
Photography and endorsements from celebrities is always a clever way to add clout to a message



THE NET HAS been cast far and wide once again this issue to bring you the best of the of the web, and we've only gone and outdone ourselves again with some fantastic digital specimens. There's more than enough to fire and inspire your creative endeavours with this little lot!

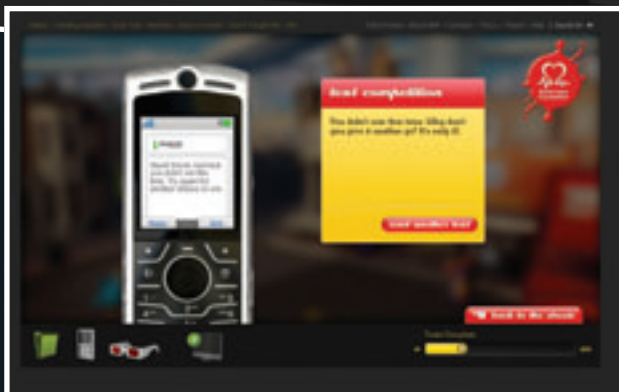
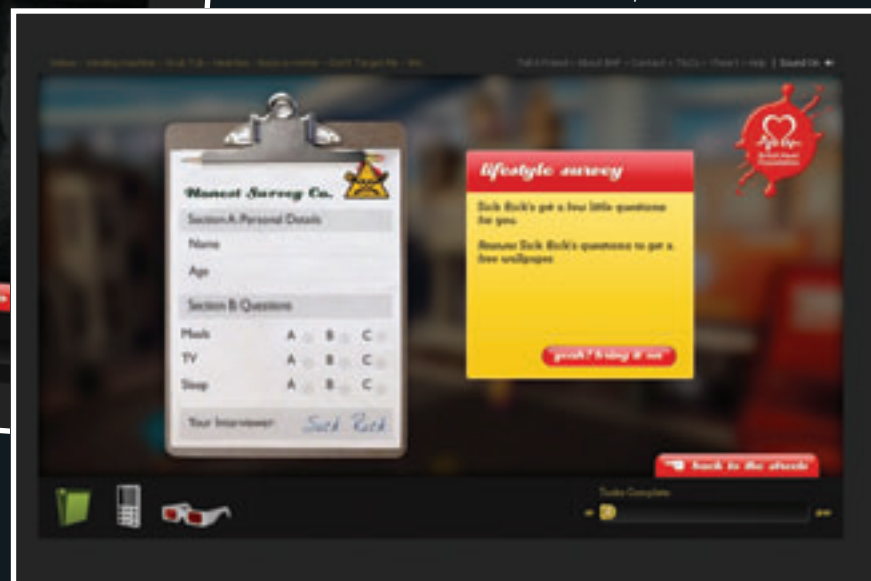
GOT IT? FLAUNT IT!

If you know of an exciting website or have perhaps built one you regard as being mighty fine, then tell us about it. We're always interested to hear about great URLs or stunning site launches so don't be shy, drop us a line at webdesigner@imagine-publishing.co.uk



Video sequences are nicely contained within a Flash player that harks back to retro TV sets or vintage radios

Some nice visual touches are used to give character to data entry or feedback components, such as the clipboard shown here



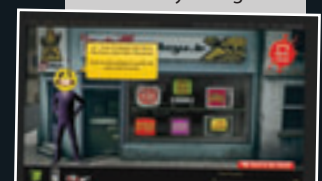
It might be fake, but the Flash-based mobile handset uses the SMS metaphor pretty well

The use of animation and cute characters is a good way to keep the interest of a young audience



Site Highlight

Sick Rick's video challenges are superbly entertaining and bursting with bags of energy, but are all containing a serious message about the reality of eating junk food, which will no doubt actually enthruse children about good and healthy eating.



gallery

THE CREAM OF THE WEB CROP



Site Highlight

This site is a breeze to navigate around and displays a highly receptive and slick graphic user interface that is a pleasure to interact with.



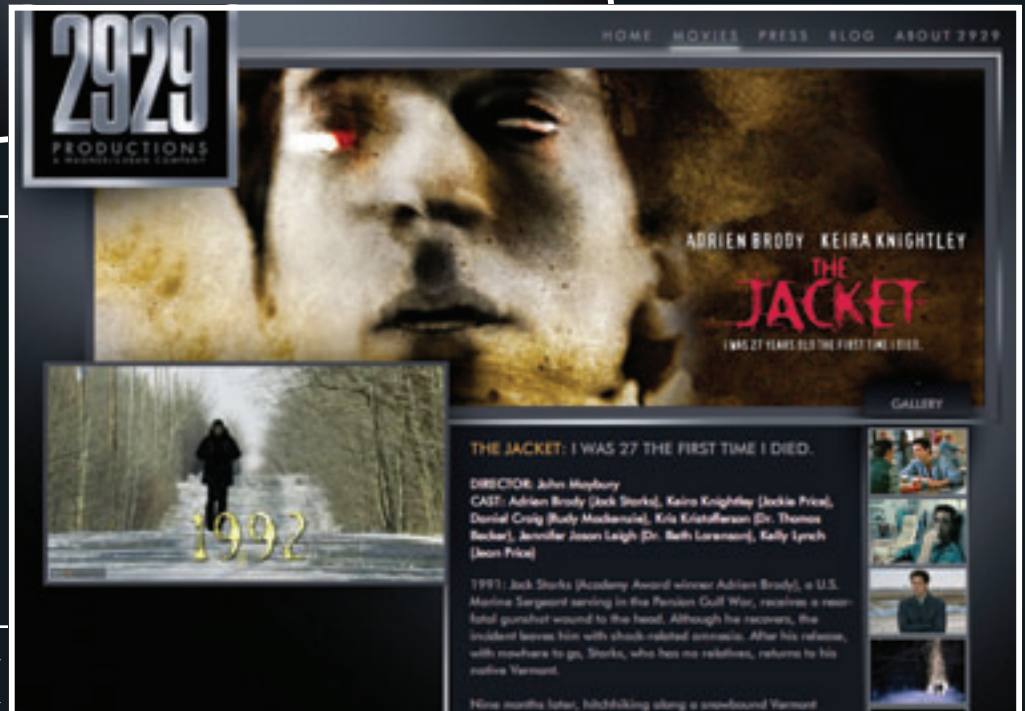
2929 PRODUCTIONS

www.2929productions.com

Designed by: T-Sign studios

2929 Productions is a Californian independent production company that has been aiming to create interesting and thought-provoking movies for a range of audiences since 2005. Its movie portfolio is a small collection of high-quality pictures that you may or may not have heard of from your cinema and theatre outings alike. Its website boasts a strong brand identity, with a bold and striking metallic and dynamic interface that impresses without question on every rollover and click the user decides to make.

You don't really need to read about the company to know what 2929 does to earn its crust as it's brought to you on a plate, thanks to a home page's carefully targeted content



2929 utilises the site to display all its latest press releases as they happen. It exudes a true movie-making style in an easy-on-the-eye layout

The site provides the user with plenty of entertainment by embedding their latest trailers into the site. Attached to the main interface, they are high-quality and have fast loading times too





Official imagery from the movie franchises helps to instantly identify each production, with integrated trailers or clips worked effectively into the content structure

gallery

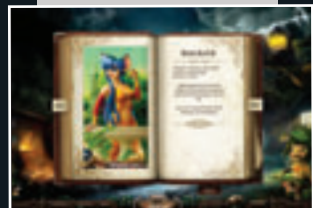
THE CREAM OF THE WEB CROP

The site resembles more of a rich interactive storybook which brings a fairytale charm that instantly sets a magical mood



Site Highlight

Click on Saizen's portfolio and you will find a big book of work that animates fluidly on your interaction with it. Typically stylized, Saizen's strength of work is here for all to see.



There is not a lot of depth to the site, however, the attention to detail on the visual elements makes all the difference when crafting an authentic and enchanting experience. Look at those backdrops!



SAIZEN MEDIA STUDIOS

www.saizenmedia.com

Designed by: Saizen Media Studios

For those of you who love beautifully stylish websites that are full of stunning interactive elements and visual craft, then this site will be most certainly be one that you will enjoy. Using a fantasy and mythological approach to its design with 3D animation, Saizen Media Studio is an award-winning creative house that specialises in developing, as it puts it, 'highly cinematic and detail-oriented imagery'. Saizen has studios across Europe in Italy and Russia and are experts in creating memorable user experiences.



The loading pages are particularly hilarious as you can help the lanky character to shake his booty with the use of the keyboard

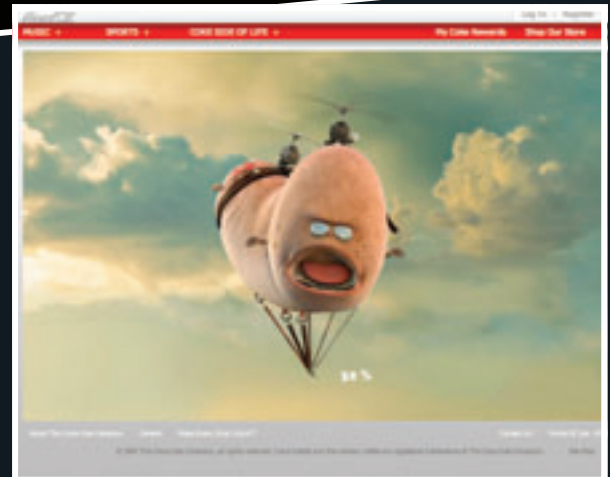
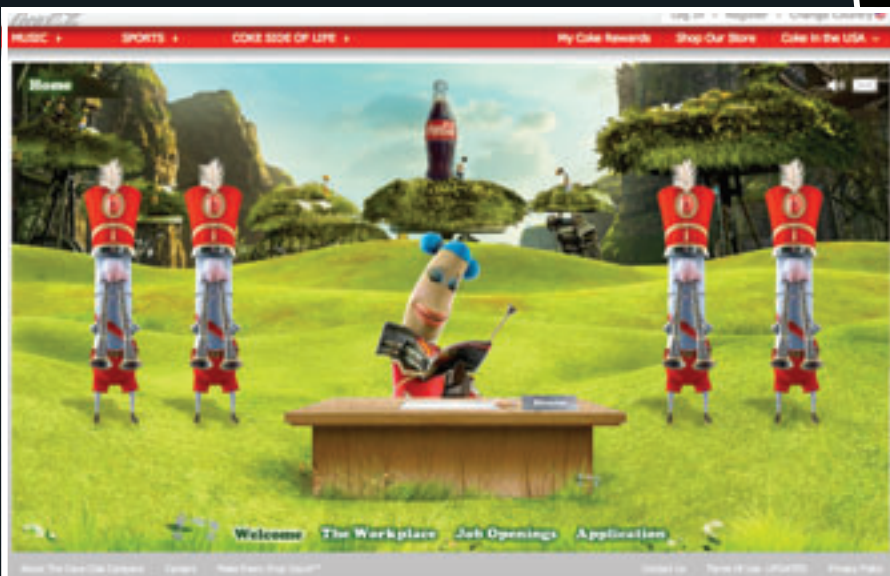
HAPPINESS FACTORY - NOW HIRING

www.coca-cola.com/template1/index.jsp?locale=en_US&site=../happiness_factory/index.html

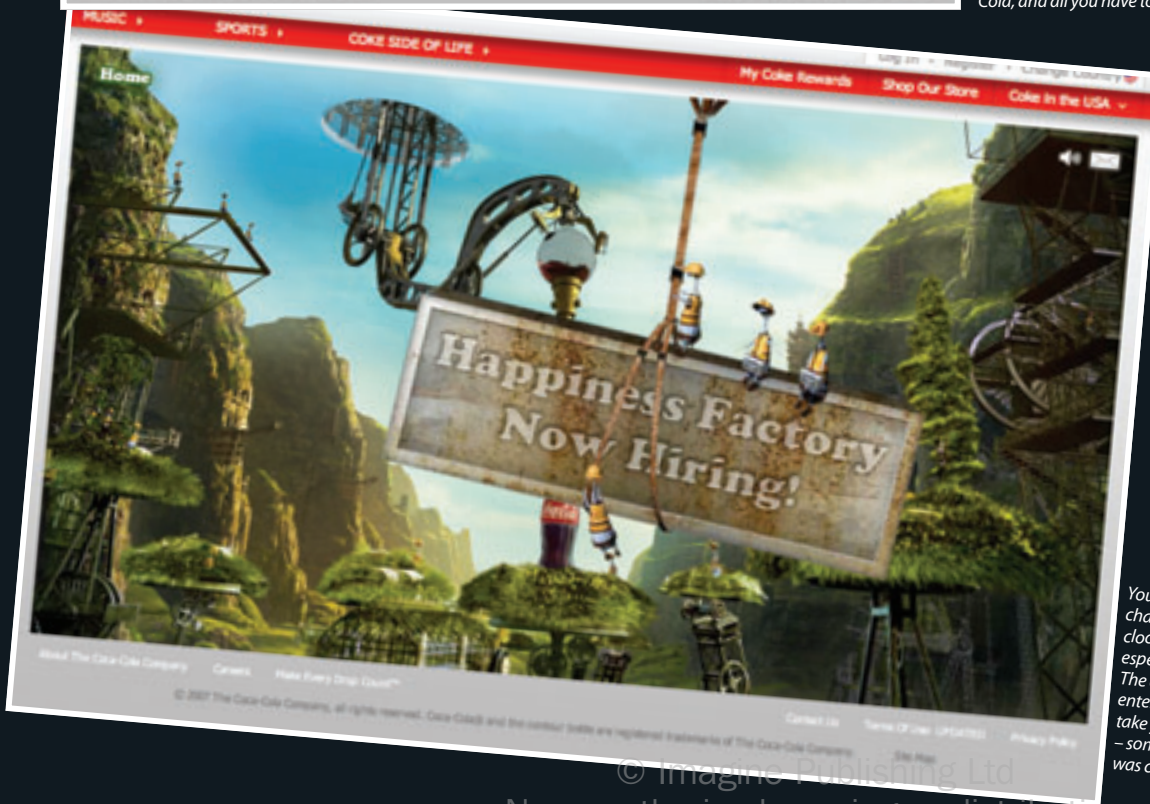
Designed by: AKQA

Created by industry masters AKQA for Coca Cola, this website is one of the most fun that we have seen in a long time and we think that you will agree. You may well be familiar with the highly successful television campaign for Coca Cola that this website is very much a part of, presenting us with some of the highest production standards you are likely to see around. The site has lots going on, with fantastic character animation and games that will keep you out of trouble for a while as you help to make the iconic beverage.

Watch the newest adventure straight from the site or via download across many formats, including those for the iPod, PSP, HD and mobile



Welcome to the factory! Here you are able to get a job making your very own Coca Cola, and all you have to do is click on the middle button to have your interview



Site Highlight

The 3D environments, characters and games help this site separate it from any would-be pretenders with joyous consequences.



You can choose which character you want to clock in as, each one especially distinctive. The clips are typically entertaining and will also take your breath away – somehow, you knew it was coming!

gallery

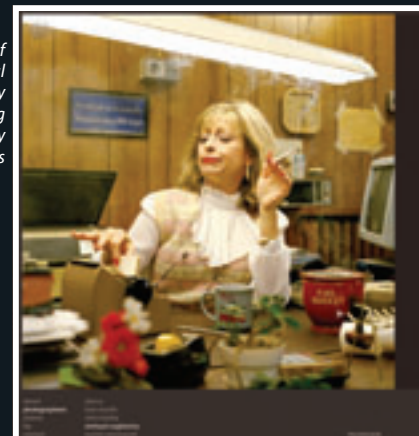
THE CREAM OF THE WEB CROP



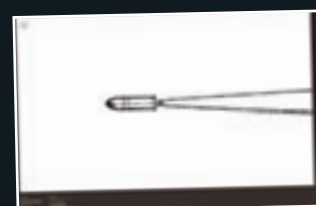
The site adapts in order to fill the various screen sizes of their users to maximum effect, filling the browser with wide aspect images flooding the screen

The layout is clean with the user in mind, and the location of your cursor determines the direction that the content flows in. Some lovely Flash fades and rollovers here also...

You have the option of viewing the individual photographers by thumbnail or by clicking through, which is very useful for quick access

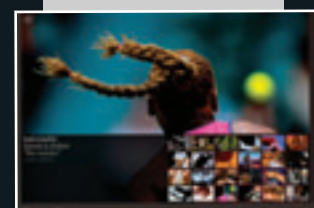


Each photographer has a short bio and portfolio PDF, but also provides you with the ability to request a portfolio



Site Highlight

This site is all about the images and the photographers that took them, thankfully without any hint of pretentiousness that all too often ruin portfolio websites.



CAKE-FACTORY - ARTIST REPRESENTATION

www.cake-factory.com

Designed by: Thoughtomatic

Cake-factory a photographic agency based in both New York and London, and has a fantastic portfolio website that we were very impressed with. It is one that has plenty of impact and is high on imagery but low on attitude, which is just what they wanted. You will notice the high level of quality of the photographs on show here, and as you would expect, each dominates your browser window as you scroll through the selection. Their client list is also impressive, boasting such names as 002 and Rolls Royce among them.





Truly a visually stimulating feast for the eyes
– you'll be captivated from the off!




The latest in the IKEA series of supercool sites with innovative effects.



A colour coordinated site designed for Norway's Salvation Army.



GRAPHICS RENDERING, NEW TAGS AND MASS INTEROPERABILITY – THIS IS THE FIRST MAJOR MARKUP REVISION THE WEB HAS SEEN IN 11 YEARS

 **THE WORLD WIDE** Web Consortium (W3C) have released a draft version of HTML 5 that supports in-browser graphics rendering, as well as new tags to embed mixed media.

It's been a long time since the introduction of HTML 4 – 11 years in fact – and the web has changed dramatically since then. The AJAX-powered web that we know today is crammed full of audio, video and interactive elements, something the existing version simply isn't built to handle. The fifth major revision also focuses on interoperability, ensuring that sites function correctly across all platforms and mobile devices.

HTML 5 brings with it several new features, in particular support for RSS feeds within the markup, <article> and <dialog> tags for blog articles and conversations, new tools for better form handling and the <canvas> tag, which allows the rendering of moving graphics in-browser. Some familiar items will be left out though; while iframes remain a part of HTML 5, frames, frameset and noframes have all

"BROWSERS ARE STARTING TO ADOPT THE NEW MARKUP NOW, WITH OPERA LEADING THE WAY"

been removed. The W3C states its belief that, “their usage affected usability and accessibility for the end user in a negative way.”

The new revision has seen input from nearly 500 participants, including Apple, Google, IBM, Microsoft, Nokia and Opera. Although it's going to be a while yet before the new standard is recommended by the W3C, browsers are already starting to adopt the new markup, with Opera leading the way. "I am glad to see that the community of developers is working together to create the best possible path for the web" said Tim Berners-Lee, author of the first version of HTML. "To integrate the input of so many people is hard work, as is the challenge of balancing stability with innovation, pragmatism with idealism."

Autodesk unveils 3ds Max '09

LEADING MODELLING SOFTWARE INTRODUCES REAL-WORLD MATERIAL AND LIGHTING SIMULATION WITH THE LATEST RELEASE

AUTODESK HAVE ANNOUNCED a new version of its modelling, animation and rendering software, 3ds Max 2009. Available in two flavours – 2009 and Design 2009 – the new release offers greater rendering capabilities, improved interoperability and time-saving animation and mapping workflow tools.

While Design 2009 doesn't come with the software development kit (SDK) available with its bigger brother, both include the new Reveal rendering toolset and the ProMaterials texture library for simulating real-world surfaces. Both also have the new Exposure

technology for simulating and analysing sun, sky and artificial lighting. "Every design has a story to tell," explained Marc Petit, Autodesk's senior vice president. "Entertainment technology enables design professionals to explore ideas, validate concepts and communicate design intent. It allows them to experience their designs before they are real."

Check out www.autodesk.com, where a time-limited trial version is available. The retail price for 2009 is set at £2,600 – but for those already using 3ds Max, the upgrade is set at a rather attractive £675.

Escape Awards 2008

PIXAR, DREAMWORKS AND SONY ARE AMONG THE JUDGES AT THE YEAR'S MOST PRESTIGIOUS CELEBRATION OF DIGITAL ARTS

LONDON'S ESCAPE STUDIOS have announced the 2008 Escape Awards in partnership with Autodesk and AMD, to be hosted at the Tate Modern on 27 March. Aiming to give up-and-coming talent deserved exposure, the awards include categories for both students and professionals in visual effects, games and design visualisation.

Lord David Puttnam, the Oscar-winning director behind *Chariots of Fire* and *Midnight Express* will be among the panel of over 30 judges, including director Danny Boyle and leading figures from Pixar,

DreamWorks and Sony. The awards will be for visual effects in film, broadcast, commercials and music among many others.

Escape Studios is the first dedicated computer graphics institute outside of the US, launched by Dominic Davenport and endorsed by Ridley Scott, along with some of the biggest names in film and animation. No stranger to Hollywood blockbusters, graduates from Escape Studios have gone on to work on major movies including *X-Men 3*, *Harry Potter* and *The Golden Compass*. Check out www.escapeawards.com to find out more.



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OpenID Foundation gets support from the big names

GOOGLE, IBM, MICROSOFT, VERISIGN AND YAHOO! JOIN FORCES TO PUSH THE REVOLUTIONARY STANDARD OF ONLINE AUTHENTICITY

THE OPEN ID FOUNDATION have announced that representatives from Google, IBM, Microsoft, VeriSign and Yahoo! have all joined its board, which means a massive step forward for the integration of single IDs.

Between the new members, there are now approximately 100,000 websites that accept Open IDs and a quarter of a billion people that are using them. What you ought to bear in mind is that a large chunk of those numbers are down to Yahoo! – everyone who's ever joined a Yahoo! site (Flickr included) now has an Open ID.

The core idea behind Open ID is to link identities (joe@bloggs.com on Facebook might be the same person as joebloggs734@hotmail.com on MySpace), and once you've logged into a site, using the technology to allow it to reference that identity. The way it actually authorises a user isn't really of concern,

but the Foundation hopes that the more people that join up, the more secure it will become, for example, using biometric logins instead of a simple username and password.

These big names coming on board really is fantastic news for the Foundation (<http://openid.net>), and means that Open ID should be accepted by the public in a much shorter space of time than originally thought. Worried about identity theft? No longer...



With over a quarter of a billion subscribers, Open ID is now set to go big with its new big-name partners

Efficiency goes virtual with Greenpeace's EfficienCity

GREENPEACE AND BIRO CREATIVE JOIN FORCES IN ORDER TO REDUCE CARBON EMISSIONS ON A VERY ECO-FRIENDLY NEW SITE DESIGN

GREENPEACE HAS LAUNCHED an interactive virtual city – cutely named EfficienCity – showcasing how the UK can cut its greenhouse gas emissions and electricity bills. In conjunction with Biro Creative, the impressive online town allows visitors to see how their own could become self-sufficient, demonstrating how to adopt 'decentralised energy', a clean and efficient that provides heating, cooling and electricity to the community. Based on real-world examples, the town features virtual zero-emissions housing, a hospital, a football stadium, a brewery, a leisure centre and even a solar-powered high street.

Vancouver-based Biro Creative, whose other clients include the Clinton Foundation and the United Nations Foundation, have created an impressive amalgamation of videos, animations, slide shows and sounds that guide the user through a brilliantly realised low-carbon system, explaining how renewable technologies from wave and tidal power to micro-hydro and anaerobic digestion actually work.

"To combine real-world feel with technical precision, we started with a visual style based on 'information graphics' and filled it out with colour, dynamism and the ordinary touches of everyday life," said Biro's Nicholas Klassen. "The site is designed to allow users

to dig in on their own terms. Some will graze through the site and be happy with a surface-level engagement. Others will drill down to every layer to absorb every detail."

Visit www.greenpeace.org.uk/efficiencity to see how you can help to cut Britain's emissions.



Modelled on real-world examples, Greenpeace's EfficienCity showcases exactly how we can cut our carbon emissions

NEWS In brief



FLASH MOBILE

Adobe have announced Flash Home and Flash Cast 2 – enabling customisable data-enabled wallpapers and home screens that provide instantly accessible, visually rich content on mobile devices. A major update to Adobe's offline portal solution, Flash Cast 2 allows the delivery of tailored content to over 450m devices that already support Flash Player.



BBC IPLAYER FOR MACS

It's here at last! The BBC are finally launching a version of the iPlayer that'll work on Apple Macs – time for us to celebrate! In a blog on the BBC website, director general Mark Thompson wrote, "I hope this good news is evidence of the hard work that the BBC is committing to supporting other platforms."



HD DVD WAVES GOODBYE

Blu-ray discs are set to become the standard high-definition medium as Toshiba have announced it will stop making HD DVD discs. The decision comes after many major film studios – including Warner Bros – have opted to release their features only on the Blu-ray format. Device owners will still be offered support.



hot stuff

Spotted an über-cool gadget that every self-respecting web designer should own? Tell us about it by emailing webdesigner@imagine-publishing.co.uk

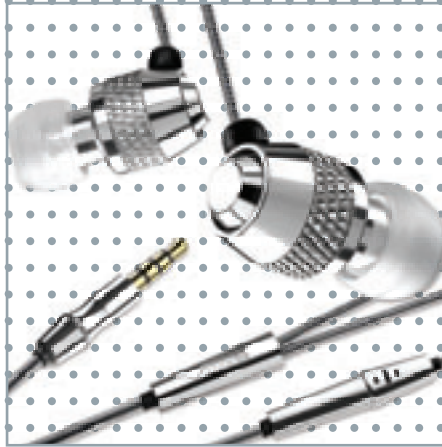
Another instalment of must-haves, this issue we bring you all the latest in gadgets, gizmos and even the downright infuriating...

1



1 V-MODA VIBE Duo
£69.95
www.v-moda.com

Being huge iPhone fans, we simply couldn't resist these sleek new high-tech offerings from V-MODA. The VIBE Duo isolating earbuds are designed for Apple's iPhone – including an inline mic/control – and siphon your tunes from pocket to pinna (check out our anatomical knowledge!) in truly astounding style. Delivered in a cool little leather pouch complete with a range of sleeves to get that perfect snug fit, the Duo's minimalist all-metal design houses a small but very responsive driver that would keep even the most enthusiastic audiophile happy. Coming in chrome, 'nero' (black) and 'gunmetal rouge' (a seductive red), the soft silicone fittings provide the upmost comfort and stability. Even the cables are lightweight and durable with a fabric outer layer. They're remarkably lightweight, yet somehow give you the sensation of having giant floor-shaking subwoofers in your ears. As Justin Lee Collins would say, "good times!"



2 Polymer Vision RADIUS
£7BC
www.polymervision.com

This nifty bit of kit from Dutch firm Polymer Vision certainly caught our attention. The RADIUS is a combined mobile phone and eReader, sporting a five-inch rollable display – a technology long awaited. The screen hinges around the unit (which fits comfortably in your palm when closed) and when unrolled, closely resembles paper. As if that wasn't enough, it's also a 3G HSDPA tri-band phone, RSS news reader, email client and fully blown MP3 player, with a MicroSD slot for up to 16GB of storage space. All of these are controlled through eight SimpleTouch buttons. Fed up with your current PDA or MP3 phone running out of sauce quickly? The RADIUS can be used for 30 hours without battery charge and what's more it's only a third of the average weight of typical eReaders. Expected to hit the shelves mid-year, this kind of technology could quickly make others, such as the iPhone, look pretty obsolete... that didn't last long, did it now?



3 Message Tape
£7.50
www.suck.uk.com

Instantly a hit in the *Web Designer* offices, the do-it-yourself multilingual Message Tape from SuckUK is great stuff. Designed by London-based art house rAndom International and coming in reels of up to 50 metres, it's a truly interactive tool that lets you physically engage with the endlessly reproducible quality of digital information. Just black out the unwanted parts with a trusty old marker pen to create your own messages, labels, art installations or even rename entire streets! You can choose from Pixel and Digit tape for your signage preference, and then use it how you want. It's expressive, it has the potential to be educational by teaching children how to spell, it's quick and it's brilliant – we've got it all over the office walls letting everyone know exactly what we think of them. Ahem. Who said growing older meant becoming mature? However, you could always just use it for its original purpose to bind things together, solely as tape... but where's the fun in that?

2



3





4

4 UB Funkeys

£4.95

www.ubfunkeys.com

Connectable collectables seem to be the order of the day at the moment, and the best out there are these friendly little UB Funkeys. Standing in at only seven centimetres tall, they 'dock' with their own hub – the bigger, whiter version – and open up a whole immersive online world on your computer to discover and explore called Funkeys Town. But the town is in trouble and needs your help to avoid a descent into chaos: your task is to re-establish order and decency in the post-Great Disaster world by completing challenges, avoiding baddies such as Master Lox and his Henchmen and collecting gems in a race against time to defeat Master Lox once and for all. There are 24 different Funkey characters, including Scratch, Boggle and Twinx, each granting access to new zones and content. As the site says, "Their fate is in your hands. The only question is... are you Funkey?" We thought we were, and now we're highly addicted. Are you ready to join us?

5 Bug Labs

£150

www.buglabs.net

If you're anything like us, it's quite likely that you were ripping apart computers to get at the insides before you could even manage solid foods. Those days seem to have passed now virtually every gadget on the high street comes 'integrated'. Which is why the open source, completely hackable BUGbase has got us excited; it's a gadget that can be pretty much whatever you want it to be. The base itself is a fast Linux machine with connectivity options aplenty, including 128MB RAM, an LCD with button controls and a rechargeable battery. It has four slots for the add-on BUGmodules that include a GPS unit, a digital camera, a touch-sensitive LCD screen and a motion detector, with more being released soon. What's more, it comes with its own integrated web community called BUGnet where you can share your ideas and finished devices. Fancy a GPS-enabled digital camera? Thanks to Bug Labs, now you can make one yourself!

6 Sudoku 3D Puzzle Cube

£2.99

www.gadgetshop.com

Remember the infuriatingly difficult Rubik's cube, with its 43,252,003,274,489,856,000 (that's 43.2 quintillion, for those of you who lost count – keep up!) possible permutations? Well, it's back to irritate you even more in an updated, less colourful version – the Sudoku 3D Puzzle Cube. Each interlocking cube rotates around the centre point on the horizontal and vertical axis, just like the original. All you have to do is align the six identical sides with the numbers one to nine. In that order. Somewhat inevitably though, it's just not that straightforward – ours has already been hurled across the office in disgust! Annoyingly addictive, you simply have to get one if you want to claim the title of Sudoku Master – a well-deserved title if ever we knew one! Our sub editor Sam has had one for a while now, and the stress ball on his desk is becoming increasingly worn. And we're really not sure if that frown will ever leave his forehead now...

5



6



Message board

POST: Web Designer, Richmond House,
33 Richmond Hill, Bournemouth, BH2 6EZ

FORUM: www.webdesignermag.co.uk/forum

EMAIL: webdesigner@imagine-publishing.co.uk

When you've stopped reading this issue, don't just put it down; pick up a pen (or keyboard) and let us know what you think!

Subscription sorrows

Hi there,

I live in Oregon, USA and am really interested in subscribing to *Web Designer* magazine. I haven't found anything comparable in the United States. My only problem is that because of the high price plus shipping costs, I have a hard time justifying paying \$13USD per magazine plus shipping. Do you have any alternatives for people in the US? I bought an issue and a bookazine just to check the magazine out and loved it, however, it was around \$50!

Anyway, I really would like to subscribe but I just don't think I can afford it at that high a price. I understand you guys are putting out an excellent magazine so you have the right to charge a fair amount, but for people outside of the UK it is very unaffordable.

I am not really asking for anything but I wanted to let you know I love the magazine, but at this point I just can't justify the high cost of it.

Thanks for listening,

Rich Fuller

It's always pretty humbling for us to get such nice letters and emails from our foreign readership – it just underlines the truly international direction the magazine is heading in. We do get told an awful lot that, in the States especially, *Web Designer* is a very unique publication that doesn't have many equivalents, so we do understand your frustration Rich. Obviously the problem that we do have, until Imagine opens a US office, is that the mag is produced here and shipped over rather than being licensed for printing in America – which raises the cost on your newsstands. On the subscriptions front, our World price is £80 or around \$156USD for 13 issues. This means each issue comes in at a slightly more affordable US price of \$12, so check out page 106 for more details or head to www.imaginesubs.co.uk.

Creative Careers exposure

Hello,

By my reckoning, your May issue should be the Creative Careers special – issue 144, right? I was a big fan of the one you did in issue 131 as some friends of mine were featured before going on to secure top design jobs. Is this happening again this year, and how do I get my work into it?

Cheers in advance,

Paul Jevons

First up Paul, the Creative Careers issues are set to continue with May's edition – indeed, issue 144. We're pleased you enjoyed the last one and that you've taken heart from friends or colleagues who have benefited from being in our 'new blood' showcase. It's true that a good few went on to take positions at leading London agencies and we hope to follow that up with an even more comprehensive roundup of student work and course information. So if you want to be part of it, then drop us a line or get your course leaders/tutors to mail us at the above address right now!

MAIL OF THE MONTH

The web's warring formats

Hey *Web Designer*,

I've never written to you guys before, but I've just spotted on the BBC technology site that Toshiba has finally pulled the plug on its HD DVD format after Sony's Blu-ray has managed to attract all the major content providers. Although largely unrelated to the web, this did get me thinking about the destructive competitiveness that often hinders technology innovation as far as the early consumer is concerned. Businesses will naturally jostle for dominance within new trend arenas, granted, but I'm sure we've seen similar public battles both drive and harm internet advancements that affect developers and users alike. Take Microsoft's begrudging attitude to adopting standards and CSS within IE, or the general inconsistencies between all web browsers, or Adobe's gobbling up of Macromedia, etc, etc. What price on Silverlight waking up and doing a Toshiba by jacking in the fight against Flash?

Before any of us crack a wry smile, perhaps we should remember that a lack of meaningful competition for control of the web will only result in flabby performance and an easy ride that can be equally damaging to us all.

Chris Powell

Some interesting arguments put forward there Chris, so thanks for finally deciding to take the plunge and drop us a line. While the writing was on the wall for the HD versus Blu-ray battle, the whole thing was poor for both parties and you do wonder why more productive corporate partnerships can't be formed to try and maximise product potential. You're right that the web has suffered in similar ways here, although it benefits slightly from the more open principles it was born out of. We're now seeing a backlash against corporate ownership in the form of Open Source and the online community has largely driven that, so this bodes well for the future. We'd echo your sentiments about competitive unity being damaging in its own ways, however, and we certainly feel that there's room for what Microsoft are doing with Silverlight – especially if it keeps Adobe and Flash on their extremely nimble toes!



Find out more about the forthcoming Creative Careers issue on page 94



- World Wide Web (WWW) released by CERN
- JPEG/MPEG/MP3 standard formats released

1991

- CGI (common gateway interface) released
- First graphical WWW browser released (Mosaic)
- Adobe Portable Document Format (PDF) introduced

1993

- Labyrinth 3D (VRML) WWW browser
- Netscape released
- Microsoft announces Windows 95

1994

WD'S RORSCACH
TECH TIMELINE

- Sun launches Java
- Emerging Technologies: Java, JavaScript, VRML
- eBay launched
- PHP released

1995

- ASP 1.0 released
- Flash introduced

1996

- W3C release XML 1.0 (extensible markup language)

1997

THE PSYCHOLOGY OF THE WEB

to ease the modern face of
online design evolving, we look at
the factors driving the new laws
of net usability

- Google launches

1998

become a haven for scientists and academics alike, and by 1989 CERN had become the largest internet node in Europe. Berners-Lee, by this time a fellow of the organisation, wrote a paper entitled 'Information Management: A Proposal', an attempt to persuade his managers that a global hypertext system akin to Endpipe was in CERN's interest. It suggested the theory that a web of notes with linkable references could be placed on top of existing computer networks to facilitate remotely accessible linked information systems. A year later it was approved, and Berners-Lee went about coding the first web browser/editor, aptly named 'World Wide Web' – and the first server, <http://httpd.apache.org/> (hypertext Transfer Protocol daemon), both of which ran on NeXT systems. The problem, however, was that NeXT systems were far more advanced than general computing equipment available at the time, thus a much less sophisticated version of the browser software was required. Come Spring the following year, Berners-Lee and his colleague Robert Callahan were already testing a universal line mode browser able to run on any machine simply by typing commands, allowing anyone with an internet connection to access the web's information resources. Three days after powering up Primo II with a copy of the server application, he posted an article to the newsgroup <http://www.ietf.org/> with a short summary of the web and how internet users could take part. "The WWW word consists of documents and links. Links are special documents that, rather than being read, may be searched. The result of such a search is another 'virtual' document containing links to the documents found. To follow a link, a reader clicks with a mouse (or types in a number if he or she has no mouse). The link was born."

On 6 August 1991 in a dimly lit, air-conditioned back room of the European Organisation for Nuclear Research (CERN), a little NeXT workstation affectionately named 'Primo II' blinked away in silence, a tattered paper sticker on the front displaying the warning "THIS MACHINE IS A SERVER: DO NOT POWER DOWN." It hosted <http://info.cern.ch/hypertext/WWW/TheProject.html> where in bold black lettering the site told anyone interested exactly what it was about. "The World Wide Web (W3) is a wide-area hypertext information-retrieval initiative aiming to give universal access to a large universe of documents. Everything there is online about W3 is linked directly or indirectly to this document." This was the world's first website.

11 years previously, physicist Tim Berners-Lee had been working on a project called Endpipe, a prototype system that used the concept of hypertext to allow the sharing and updating of information among CERN's researchers. At this point the internet had

WD'S RORSCHACH
TECH TIMELINETHE
PSYCHOLOGY
OF THE
WEB

With the modern face of online design evolving, we look at the factors driving the new laws of net usability

1999

- WML (wireless markup language) and WAP (wireless application protocol) released

2005

- Adobe acquires Macromedia
- YouTube goes online

2003

- Apple iTunes service launched

2001

- ActionScript released with Flash 5
- Wikipedia launches

2000

- Apple OS X (Jaguar) introduced

2007

- Adobe Integrated Runtime (AIR) introduced
- Flash Player 9 gets HD support

2008

- HTML 5 draft version published

Nuclear Research (CERN), a little NeXT workstation affectionately named 'Primo II' blinked away in silence, a tattered paper sticker on the front displaying the warning, "This machine is a server: DO NOT POWER DOWN". It hosted <http://info.cern.ch/hypertext/WWW/TheProject.html> where in bold, black lettering, the site told anyone interested exactly what it was about. "The World Wide Web (W3) is a wide-area hypermedia information-retrieval initiative aiming to give universal access to a large universe of documents. Everything there is online about W3 is linked directly or indirectly to this document." This was the world's first website.

11 years previously, physicist Tim Berners-Lee had been working on a project called Enquire, a prototype system that used the concept of hypertext to allow the sharing and updating of information among CERN's researchers. At this point the internet had

become a haven for scientists and academics alike, and by 1989 CERN had become the largest internet node in Europe. Berners-Lee, by this time a fellow of the organisation, wrote a paper entitled *Information Management: A Proposal*, an attempt to persuade his managers that a global hypertext system akin to Enquire was in CERN's interest. It suggested the theory that a web of notes with linkable references could be placed on top of existing computer networks to facilitate remotely accessible 'linked information systems'. A

year later it was approved, and Berners-Lee went about coding the first web browser/editor – aptly named 'World Wide Web' – and the first server, httpd (HyperText Transfer Protocol daemon), both of which ran on NeXT systems. The problem, however, was that NeXT systems were far more advanced than general computing equipment available at the time, thus a much less sophisticated version of the browser software was required. Come Spring the following year, Berners-Lee and his colleague Robert Cailliau were already testing a universal line mode browser able to run on any machine simply by typing commands, allowing anyone with an internet connection to access the web's information resources. Three days after powering up Primo II with a copy of the server application, he posted an article to the newsgroup alt.hypertext with a short summary of the web and how internet users could take part. "The WWW world consists of documents and links. Indexes are special documents that, rather than being read, may be searched. The result of such a search is another 'virtual' document containing links to the documents found. To follow a link, a reader clicks with a mouse (or types in a number if he or she has no mouse)." The link was born.

The web has evolved considerably since that momentous day nearly 17 years ago. The link marked the beginning of the internet as we know it (for many, the web and the internet have become synonymous), the first way in which we could interact with information through this new protocol. Just three years after Berners-Lee made his announcement, the web hit an annual growth rate of 341,634 per cent, spurring on an ever-increasing amount of home users to connect. The WWW usage figures quickly surpassed any other protocol, and with the amount of hosts doubling every year, it was clear that

to-face conversations with people on the other side of the world, watch TV shows online, download music, vote for our favourite politician, play games, buy the latest trainers and all whenever we want; but the essence of the link hasn't changed. We still connect to the internet to do one thing: retrieve information. The way in which we interact with that information has, however, dramatically evolved.

The web has seen its commerce phase too. As soon as the commercial sector realised there was money to be made, major companies starting jumping on board, pushing their goods and services in

“Designers are taking advantage of technology to combine the senses”

the web was here to stay. By the turn of the century, 304 million people had internet access. Today, that figure is estimated to be closer to 1.3 billion.

Just what was it about the link that attracted so many people? In 1992, Michael Hauben wrote in his article *The Net and Netizens: The Impact the Net Has on People's Lives*, “We are seeing a revitalisation of society. The frameworks are being redesigned from the bottom up. A new, more democratic world is becoming possible.” 16 years on from the introduction of the web and we're able to have face-

what was to become a fiercely competitive marketplace. The dotcom boom, an era defined by soaring stock market values in the new internet sector with a surrounding aura of new economy, hit in the mid-Nineties, climaxed in 1999 and eventually burst over the following two years, wiping out \$5 trillion in US dollars in market value and marking the beginning of a mild but lengthy recession in the developed world. Only a handful of the larger dotcom businesses survived, eBay and Amazon among them – both based on traditional business models.

Q&A with Linda Hole (HCI)

Which examples of good or effective UI on the web do you think push the boundaries, and why?

Web users' needs have moved beyond the utilitarian to the pleasurable. The move towards personalisation in websites is proving appealing to users; websites are beginning to incorporate artificial intelligence to support searches and conversational agents to assist users. Websites that offer engaging experiences are those that deliver a feeling of community and offer dynamic challenges during the user experience; both interactivity and novelty are key.

Although still in its infancy, the web is beginning to mature. Tangible goods don't seem so cheap any more; intangible goods (downloaded music increasingly considered the latter) are almost expected to be free and available on demand. People have become used to the internet as another instrument of lifestyle, taken for granted by the next generation born into a world where it knows no different. However, the explosion in popularity of blogs and wikis over the last five years are taking the web back to Berners-Lee's original vision of a decentralised information resource. User-generated content is feeding the next big growth, and simultaneously the development of technology that allows more and more creativity in our own homes. Aspiring musicians can record their latest works and unleash them onto the world hours later at little to no cost. Budding filmmakers can publish for free on YouTube in the hope of becoming the next Scorsese. Hardware has evolved to allow, for example, high-definition movie content to stream instantaneously from a completely different continent to our desktops or even our mobile phones, while software technologies like Flash facilitate the delivery of content in an immersive, engaging way. Now the novelty of simply having an online presence has worn off, retailers and service providers fight for our attention by utilising such technologies. Now it's not only a case of who's got the best deal but instead who's got the best deal as well as the most captivating delivery method.

Interview: Dr. Linda Hole

As an interactive designer and top usability consultant, Linda's research within the Human-Computer Interaction (HCI) arena focuses on affective computing and gauging user experience. We spoke to her about web interaction present and future...



Dr. Linda Hole,
HCI academic

WD: How well do you feel that the concepts behind the science of human-computer Interaction (HCI) are applied to modern websites?

LH: In recent years, there has definitely been more synergy between the fields of HCI and web design. Within the HCI research community, there are many groups examining aspects of users' interactions with websites, and the results of their work have fed through to the industry. HCI concepts are normally applied in software engineering through a process of user-centred design (UCD); there are increasing signs that web design teams are incorporating that process into their development by using a multidisciplinary approach. Web users have now become more sophisticated and discerning: those organisations that develop websites from a UCD perspective are more successful in keeping their audiences.

WD: Currently we see standards being put in place that deal with accessibility and usability issues,

but many believe they're restricting the development of interfaces that are able to challenge and engage the user. Should we break the rules going forward or look at how to bring them up-to-date?

LH: Standards are normally a way of encapsulating good practice, so any new development should move beyond the details of a current product standard. If you look at the published usability standards (ISO 9241 and ISO 13407), you'll see that 9241 has become outdated as a product standard because interaction design has moved on. However, the process standard 13407 for UCD remains current as it reflects a way of thinking about the design approach. There is no justification in ignoring accessibility standards, which reflect the current laws on Disability Discrimination and support the notion of Universal Usability. Moving forward will involve thinking differently about web products, but by keeping accessibility needs in mind, it should be possible to develop

new, nondiscriminatory ideas. My advice would be by all means move beyond the old design concepts, but don't ignore the best development practices out there.

WD: We've recently seen the introduction of new ways to interact with interfaces, for example, Apple's Multi-Touch and other gesture-based control systems. How will the user's cognitive response to a computer change when this sort of technology becomes widespread?

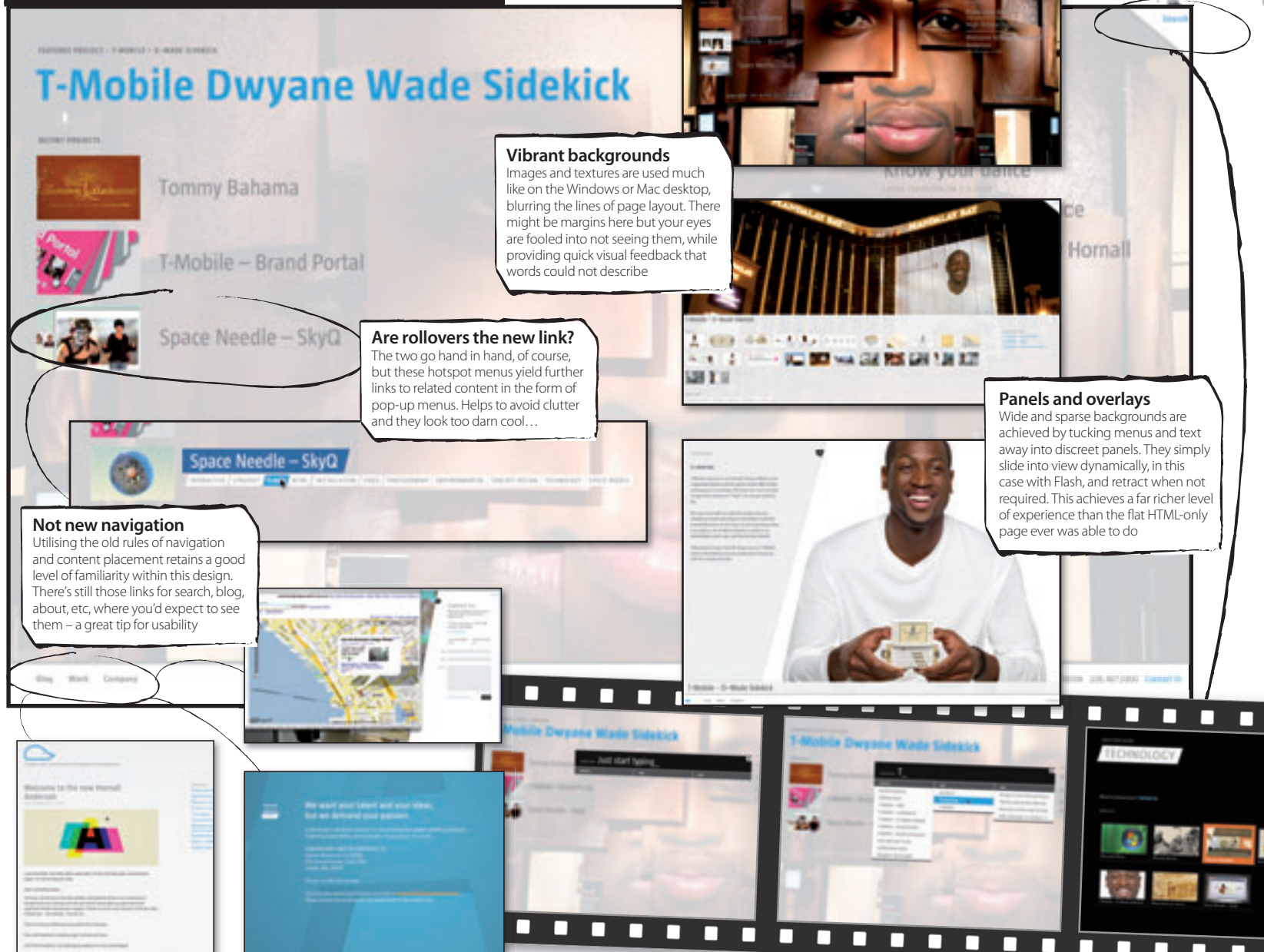
LH: We are moving towards a world of computing devices that are no longer desk-bound, and which offer users more choice as they work on a variety of tasks in a range of computing environments. The gesture-based systems will provide more natural, flexible, efficient and expressive interaction, which is much more intuitive and no doubt more enjoyable for the user. This more direct form of interaction will in turn reduce the cognitive distance between the user and the technology.

Style contrasts – ‘Contemporary Traditional’

To illustrate the changing look of site design, we present two different sites that encapsulate each end of the spectrum – traditional and experimental. First, a progressive take on the home page...

Hornall Anderson

www.hornallanderson.com



Vibrant backgrounds

Images and textures are used much like on the Windows or Mac desktop, blurring the lines of page layout. There might be margins here but your eyes are fooled into not seeing them, while providing quick visual feedback that words could not describe

Are rollovers the new link?

The two go hand in hand, of course, but these hotspot menus yield further links to related content in the form of pop-up menus. Helps to avoid clutter and they look too darn cool...

Panels and overlays

Wide and sparse backgrounds are achieved by tucking menus and text away into discreet panels. They simply slide into view dynamically, in this case with Flash, and retract when not required. This achieves a far richer level of experience than the flat HTML-only page ever was able to do

Not new navigation

Utilising the old rules of navigation and content placement retains a good level of familiarity within this design. There's still those links for search, blog, about, etc, where you'd expect to see them – a great tip for usability

The search bar gets a revamp here as a bespoke-style component that intelligently retrieves matching tag and story matches as you type

Related links

Adhering to the common rules of intuitive layout, navigation and structure has always been a staple of mainstream eCommerce sites. Here we look at three that each evolve the business of selling effectively online in their own way...



Play

www.play.com

Not the most audacious pick, but Play sets a benchmark for popular dotcom designs. Strict column layouts, familiar placement of section tabs, search bars, navigation menus and shopping carts also blends bright product imagery and striking tones.



Diesel Online Store

<http://store.diesel.com>

A step forward in product presentation, the Diesel store maintains a traditional eCommerce experience. Pick a type of clothing and you'll get a Flash-based carousel of garments to select from, before multiple views and colour variations can be loaded.



Cicatriz clothing

www.cicatriz.se

More hairbrained than the others, Cicatriz uses Yugo Nakamura-inspired elements to revolutionise the whole structure. Cubed video sequences showcase the clothes available on live models, while interactive menus are overlaid across the top.

"Technology is removing the last barrier between user and interface"

The humble link of yesteryear has evolved into something much, much more complex today. The combination of development technologies means modern websites can be much more interactive, functional and fast. With each new development the user experience is altered, but the formula hasn't changed – the best one always comes out on top. Be it a site that effectively performs its function, such as Google or Wikipedia, or one that fills a certain niche, like Facebook or Last.FM; those that grab our attention win every time.

So what exactly is the secret behind the success of these sites? How do we end up furiously tapping our most personal details into a rather dodgy-looking form on a brand-new website belonging to a complete unknown, and not only keep going back but tell our friends about it too? We're no longer amazed simply by the fact that we can buy ourselves a new pair of Nike Airs without leaving the living room, so retailers and service providers alike are starting to rely on consumer psychology, more commonly seen on the high street and only recently making the transition to the virtual. The difference with the internet, however, is that we're not outside of our comfort zones – in a high-street shop, a pushy salesperson might convince us into buying something we really don't want, whereas online we can eternally banish anything that doesn't satisfy our personal tastes with a single click. As a

result, site design is starting to incorporate techniques such as digital spotlighting and intelligent product placement to hold our attention, all contributing to a more intuitively navigable web. Designers are taking advantage of technology in order to combine the senses, challenging and engaging users in a more immersive online environment by bringing sound and interaction to their sites, quickly moving away from static, structured pages to full-screen interfaces. This is radically altering the approach to designing a site, taking the old textbook-standard style and pushing it into the human-computer interaction arena. Today web designers they need to be multidisciplinary visionaries, business savvy, technologically proficient experts in graphic arts, animation, programming languages, systems administration and psychology. Web design is no longer a skill: it's a science.

As websites begin to replicate physical environments instead of mimicking two-dimensional print design, it's important to understand how we as receptors perceive colour. Colour conveys meaning primarily in two ways – through natural associations and psychological symbolism. There are no rules as such; each individual will base their perception of a colour and its meaning on personal intuitive experience and within the context of culture. For example, white symbolises death in Japanese culture, whereas Westerners generally

Q&A with Linda Hole (HCI)

How close do you think we are to being able to create natural, 'immersive' interfaces on the web? What obstacles are still remaining?

My interpretation of 'immersive interfaces' regards those interactions that make an enjoyable user experience (UX). Engagement and flow are the keywords here; the concept of 'flow' refers to the users' immersion with the product. The UX research field is relatively new, but our understanding of what makes an engaging user experience is growing, and the design ideas are beginning to emerge.

associate it with purity. The mind brings memory and imagination to the activity of sensing colour and combines them with awareness, perception, reasoning and judgement in order to decide what a colour means in a certain situation, which more often than not can be several things – we associate black with death and yet a black leather chair would be considered symbolic of affluence and sophistication. The way in which a colour makes us feel ('shocking pink' or 'red hot') is known as an indeterminate attribute because it cannot be measured, but instead relies on our own experience. A determinate attribute, on the other hand, can be in levels of hue, saturation and brightness.

Colour can also tell us how rich or complex an environment may be. The saturation of a colour has more of an affect on us than the hue itself – pale colours are much more calming than strong, exciting colours. Pastel schemes are often associated with natural and organic surroundings, whereas richly saturated schemes are representative of artificial man-made environments. Think about the high street. You're constantly subjected to striking colours that demand your attention and are more stressful to the brain. When attempting to simulate these effects with an online environment, we need to take into account the subject of the site. Take a look at www.play.com. You're instantly bombarded by bold colours that imply a product-rich setting, akin to a high-street store. A photography portfolio surrounded by a mix of strong colours would detract attention away from the content itself, so instead we'd use cool colours to allow the images to take focus; an organic food store would logically use an earthy scheme as opposed to an intense one. Consumer screen and graphics technologies have advanced enough to handle a gamut of up to 16.7 million distinct colours (24 bit), coming much closer to mimicking those found in nature. This allows us to simulate depth through artificial tricks of light such as shadows, highlights and reflections. Sound also now plays an integral part in modern site design to reinforce the feeling of being in a real-world environment. In reality, an action generally has an accompanying sound and we rely on aural feedback to supply confirmation. On the web, up until recently every action produced the same sound, a mouse click, which made for a pretty dull experience. The growth in use of broadband connections and the development of software technologies such as Flash, however, are enabling designers to take advantage of being able to push more data to the user. The use of audio has progressed from simple ambient background music to being heavily incorporated as engaging effects relevant to the interface.

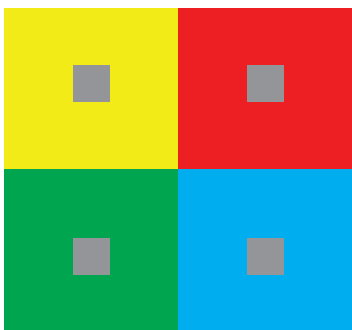
The addition of sound and rich colour to the modern web has inadvertently satisfied another sense: touch. Because elements of design are beginning to look, sound and now act like their real-world counterparts through animation, it's easy for the mind to

Colour phenomena

As well as conscious responses, there are several other instantaneous subconscious phenomena when we perceive colour

Colour constancy

When we see a colour affected by differences in lighting, we automatically compensate and perceive them to be one and the same. This allows our brains to focus on what we judge to be more important elements of the environment.



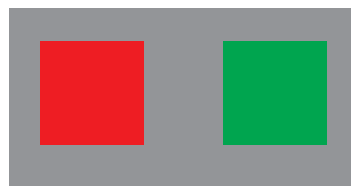
Each grey square takes on a tint of the background's complementary – the upper-left has a blue tint, the upper-right a green, the bottom-left a red and the bottom-right a yellow. Pretty freaky huh?

Simultaneous contrast

Colours seem to shift depending on their surroundings, due to our perception being weighted towards the complement (the opposite on a colour wheel).

Optical mixture

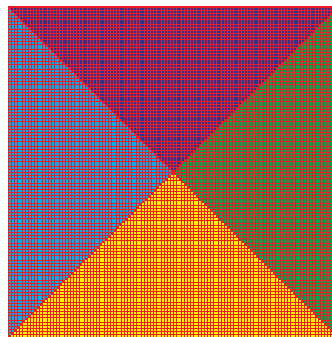
We mix closely positioned patches of colour when they are small enough to pass below the threshold of conscious perception; a Gradient Overlay in Photoshop is a line of single pixel solid colours, but we view them as a soft transition in hue.



Because the red colour has a closer focal point, it appears to 'stand out' from the background more than the green

Spatial dimension

We add or subtract distance to an object based on the colour we perceive it to be. Warm colours (such as red, orange and yellow) have a longer spectral wavelength and therefore a closer focal point than cool colours (such as blue, green and purple).



Because the dots in this image are so small, our eyes can't distinguish them from the background, as a result giving the impression of there being four different tints of red – when in fact there's only one

Style contrasts – ‘Modern Experimental’

Designing for the web has become a statement of artistic license as much as a tool for communication. This marketing site example breaks every rule to achieve a unique user reaction...

Orange Unlimited

unlimited.orange.co.uk

To infinity and beyond

The entire site scrolls vertically ad infinitum – try and reach the bottom! Playing on the idea of never being able to find the end of a rainbow, it offers engaging interactivity along the way

Multiple monsters

Unleash them from their cage and these little critters replicate endlessly, along with their eyes...

The future's orange

Multilayered and ever-changing, the use of bright orange as a background colour is unusual, but striking and certainly on-brand

A brew and a bit of banter

A particularly entertaining feature, this conversationalist entices you with "a nice cup of tea and a chat" and keeps you nattering for hours. Odd, but strangely suitable!

Trees cycle through the seasons as you click on them, each element constantly pushing the idea of 'unlimited'

Related links

Experimental sites strive to push the boundaries of what's acceptable, often triggering huge viral success. The layout, structure and navigation are generally innovative; the measure of their success is normally how engaging they are



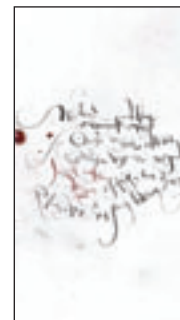
Amadana N705i

www.n705i-amadana.com
Instantly recognisable as a Takashi Okada design, this Japanese mobile phone manufacturer is truly showing off with style. The site is primarily black and white, with 'paper' elements constantly floating around. Beautiful, engaging and totally innovative.



Pink Floyd: Oh, By The Way

www.pinkfloyd.co.uk/obtw
If Pink Floyd's new site wasn't experimental, we'd be very surprised. PF's *Oh, By the Way* is a box set compilation of all their albums, distributing the discs at certain points along a rainbow when you first visit.



Conclave Obscurum

www.conclave.ru
The Conclave Obscurum is a surrealist's heaven, offering all manners of eye candy and interactive video vignettes. The menu is in Latin, the whole thing flips upside down and left-to-right, twitching in a deranged sort of fashion.

be fooled into believing it's interacting with a three-dimensional interface as opposed to a flat image. Technology is taking it one step further with touch-screen displays, removing the last barrier between user and interface by allowing us to interact directly with content. Apple's recently launched Multi-Touch displays, for example, allow hand gestures to do things like drag objects across the screen or grab the corners of an image to directly manipulate its size. Add it all together and we have something as close to tactile feedback as computers can reasonably achieve.

Last year, streaming high-definition video became a reality with Flash Player 9, blurring the line between a computer and a television; rich internet applications hit the world with the release of Adobe AIR, promising to blend the desktop with the web. Immersive design is rapidly becoming the way forward as flat pages give way to full-blown interfaces, compiling and displaying information from a whole number of sources. Understanding the way in which users will interact with such a mashup of data and technology will be crucial to the success of a web designer. It's not hard to imagine a web where we can pick up virtual representations of products and spin them round in 3D with our hands, and even literally 'place' them into a shopping cart. The technology already exists, but isn't practical or affordable enough yet to see it deployed en masse. The moment when computers imitate and respond to our thoughts seamlessly will be the moment when the internet will become completely ubiquitous.

Modern designers' site mapping

As sites have evolved to encapsulate single-page interfaces, designers have ditched the traditional site-mapping technique in favour of storyboarding

In many modern agencies, the designer's job is to visualise the interface and pass it over to a Flash developer, so the need to clearly illustrate the way in which elements move on a page is obvious. This means that the designer is afforded greater creative freedom at the planning stage. Take the Orange Unlimited website, or even Jonathan Yuen's famous portfolio site – both will have been visualised first on paper and then adapted to the screen.

Traditionally, any documentation of site planning would take the form of link/page maps or perhaps data flow diagrams. With content changing to something more GUI rich and state driven, storyboarding interface transitions is a much better way of conveying dynamic sites to both colleagues and clients alike. The sketches you can see here were the initial plans for the site we'll be developing in our three-part tutorial – starting this month with Photoshop.

Q&A with Linda Hole (HCI)

What five golden rules do you think exemplify a good understanding of HCI from a website?

The website should aim to be useful, support the users' information needs and offer an aesthetically pleasing experience. It needs to evoke user trust to promote customer loyalty, and provide an engaging user experience.



Tim Berners-Lee

Power to the user: The man credited with inventing the internet gives exclusive insight into his predictions of a Semantic Web

The rise of the Web 2.0 generation of sites has meant a massive growth in the amount of data being stored on servers worldwide. However, that data is designed to be read by people as opposed to machines. Tim Berners-Lee believes the way forward is to allow that content to be accessible by both, using descriptive technologies such as the resource description Framework (RDF). Way back at the end of the Twentieth Century – before the onset of Web 2.0 – he wrote, "I have a dream for the web [in which computers] become capable of analysing all the data – the content, links and transactions between people and computers. A 'Semantic Web', which should make this possible, has yet to emerge, but when it does, the day-to-day mechanisms of trade, bureaucracy and our daily lives will be handled by machines talking to machines. The 'intelligent agents' people have touted for ages will finally materialise."

Nine years have passed since his prediction, and the Semantic Web increasingly looks likely. We asked him how he envisions the web in the not-so-distant future.

"Web 2.0 has created justified excitement over the ability to mash up data from different sources. But many Web 2.0 sites lock in user data, and as a result users are starting to ask for their data back. Recent

interest in social networking APIs is a clear signal that people want to exercise greater control over their data and to do more with it.

For example, suppose I subscribe to two independent services: a social network where I converse with fellow avid gardeners and a photo-sharing site. My goal is to create a photo album of my fellow gardeners. I happen to keep track of who is in the photos in a private database. To create the album, I need to merge three sources of data. I want to keep the two online services unaware of each other, both for privacy reasons and because I may switch to a different photo-sharing site and want to be able to do so without constraint. To create my album, I use an application that runs on my local machine (say, in my browser). This can access my private data as well as online sources. The application uses Semantic Web technology to fetch and merge the information: SPARQL for the queries and RDF for the data representation. As my online group of friends and my set of photos evolve, so does my dynamic album.

I find that once you catch a glimpse of all you can learn from just a few sources of data, it becomes very exciting and you never want to give up your data again. It will be very exciting to see how people run with the Semantic Web and what they discover."

Courtesy of Le Fevre Communications

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Demon "An abstract produced from some aborted experiments in Poser." It is this sort of honesty that makes Ainley such an amiable artist

As featured in



Nik Ainley

If you've managed to tear your eyes away from the stunning images, then read on to get introduced to the creator of www.shinybinary.com



Dream machine "This was produced for an exhibition in the UK called Inkthis. The theme was given as dreams and nightmares, so I produced something on the process of dreaming"

UK-based Nik Ainley is relatively fresh to the digital arts game, currently enjoying his third successful year as a web designer and freelance digital artist. He made the transition from being a potential nutty Physics professor to hip digital artist quite by coincidence.

"It was a bit of an accident really," Ainley explains. "I picked up a copy of Photoshop and fell in love with it immediately. I spent a lot of time just messing about and improving my skills, but when I left university I realised I wanted to continue with graphics creation. Luckily my level of Photoshop was now good enough to use in a career, so I got a job as a web designer."

Despite a brief detour in the career path, it was pretty obvious from an early age that Ainley was going to end up being attached to a computer one way or another – whether it was science-based or through the arts. "I'm not that sure I ever really had a definite idea of what I wanted to do as a kid, but I think I knew it would

be something technical. I've always been one to play around with computers and gadgets and had a big interest in science, so I thought I'd end up involved in that somehow."

Lucky for us, Photoshop ruled and the design process started rolling for Ainley. In 2004, he set up Shinybinary (www.shinybinary.com), namely as a source to generate website work. Since then, it's gone through

"His work is an eclectic mix, but one thing that links them is his fearless use of colour"

two makeovers and a record number of visitors, with statistics shocking its creator. Shinybinary clocked up over a quarter of a million visitors in its first version and decided to go ahead with version two in August 2006 to keep things moving and progressing – and progress they did, with more than 300,000 visitors in the first

eight months of the second incarnation. "Near the end of last year, I received my millionth visitor, which is great as I never expected to get anywhere near that when I started the site," says Ainley. "My website is pretty much my entire way of self-promotion. Thankfully, now it's established I get a decent number of visitors, and enough of them are interested in commissioning me that I don't really have to go looking for work."

At just 25, Ainley has already enjoyed the success of being named by an industry magazine as one of the top ten up-and-coming creative talents for 2006, he's exhibited at the prestigious OFFF exhibition in Barcelona and has seen his designs displayed in magazines, books and clothing ranges.



Keep it together "This was an experiment at creating 3D effects in Photoshop. The initial head was a render that I took apart using Photoshop's tools"

But getting to this point has cost Ainley some hard graft, teaching himself Photoshop alongside studying for a Physics degree at Imperial College, London. "When I first started, I just played around with every function to see what they did, and slowly worked each one out," Ainley says. "I think most people learn the same way – first you just mess about and see what comes out. Then, when you've learned some of the tools, you can actually plan a picture from the start and hopefully end up with what you intended (although it never quite works out that way)."

With no formal training, Ainley relied on himself to get things right; if things didn't work first time round, then he'd try again until it did. "Since I didn't know anyone else who used Photoshop at the time, I just had to work things out myself, which was quite frustrating." Having experienced the frustrations and struggles for himself, Ainley now shows a lot of compassion for fellow Photoshoppers and like the saint of the Photoshop

world, often lends a helping hand. "I try and answer anyone who emails Photoshop questions to me now, as I know how useful it would have been when I was learning."

Ainley's big break as an artist came when he was invited to join depthCORE.com. "It doesn't sound much," says Ainley, "but being asked to join the digital art group depthCORE was quite a break. It was the first real recognition from an established group of artists that my pictures were more than just amateur doodles." From there things really started hotting up for Ainley, with recognition from design-based magazines coming from left, right and centre.

These days, Ainley juggles web design commissions with a variety of artistic projects. His work is an eclectic mix of subjects and styles, but one thing that links them is his fearless use of colour. It plays such a key role in Ainley's work, you'd be forgiven for assuming Ainley sticks to rigid rules in its appliance. In fact, it's



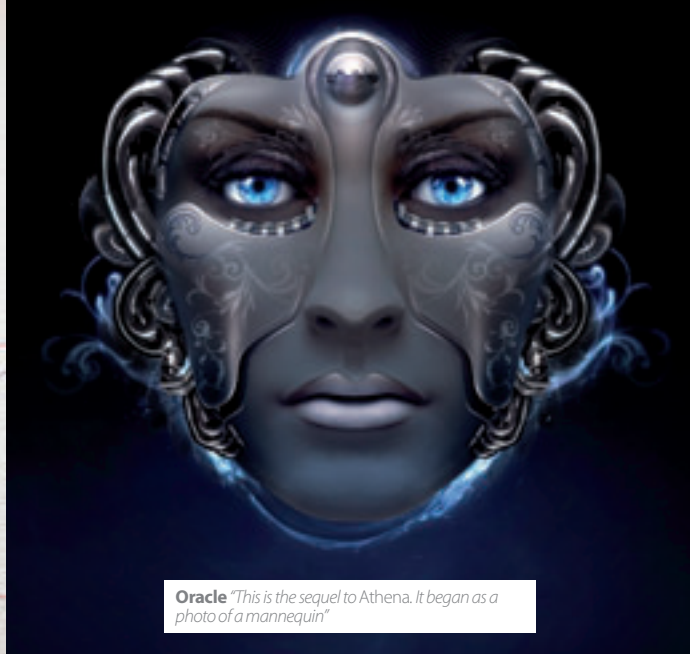
The unbearable lightness of being "A personal illustration based on me finding some old medical illustrations. I mixed about ten of them together in Photoshop and textured it to get the feeling I wanted"

quite the opposite. "Whatever looks good, looks good. You can go into the emotions or semiotics of colours when producing pictures with very specific meanings, otherwise I just like to mix it up. Photoshop's adjustment tools are a godsend for this. I can't remember the last picture I did that didn't have about ten adjustment layers stacked at the top."

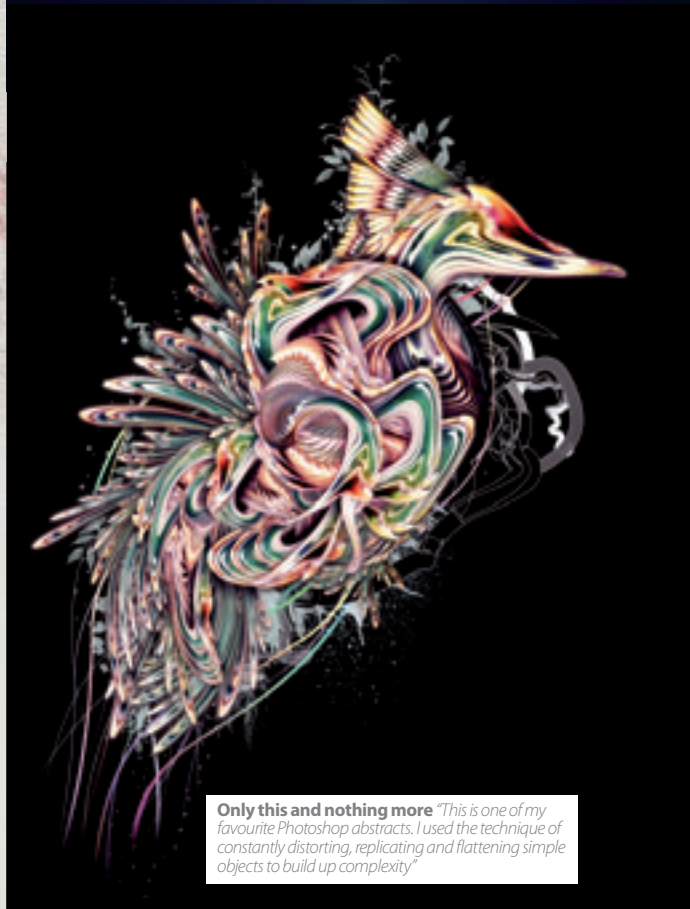
Although Ainley takes a pretty laid-back approach to colours, that's not to say he doesn't apply any rules to his work. Many of his pieces either heavily feature type, or revolve around type completely. It seems, in Ainley's



Imagine "This started out as an experiment with Poser, but went through so much Photoshopping that it came out as rather abstract"



Oracle "This is the sequel to Athena. It began as a photo of a mannequin"



Only this and nothing more "This is one of my favourite Photoshop abstracts. I used the technique of constantly distorting, replicating and flattening simple objects to build up complexity"

mind, this is one thing you can't afford to get wrong. "Most of my typographical work is based around very short words or phrases where a lot of the normal rules of typography aren't so important. However, if you're dealing with large chunks of text then it's all about legibility, alignment, kerning and all that. With single words, you can heavily adapt fonts and can style each letter in as much detail as you like. If people want to experiment with this sort of work, then I recommend really trying to get a feeling for the word/phrase and pick a font that echoes that."

Despite veering off-path from his Physics-related aspirations, Ainley is forever thankful for his chosen career that comes naturally to him. "Even if I had another job I'd still be doing it as a hobby, so to be paid for it makes me feel I'm very lucky," he remarks. And as for keeping motivated in a self-employed environment? "Having bills to pay does a pretty good job at keeping me going," he says.

"Though he takes a laid-back approach to colour, much of his work revolves around type"

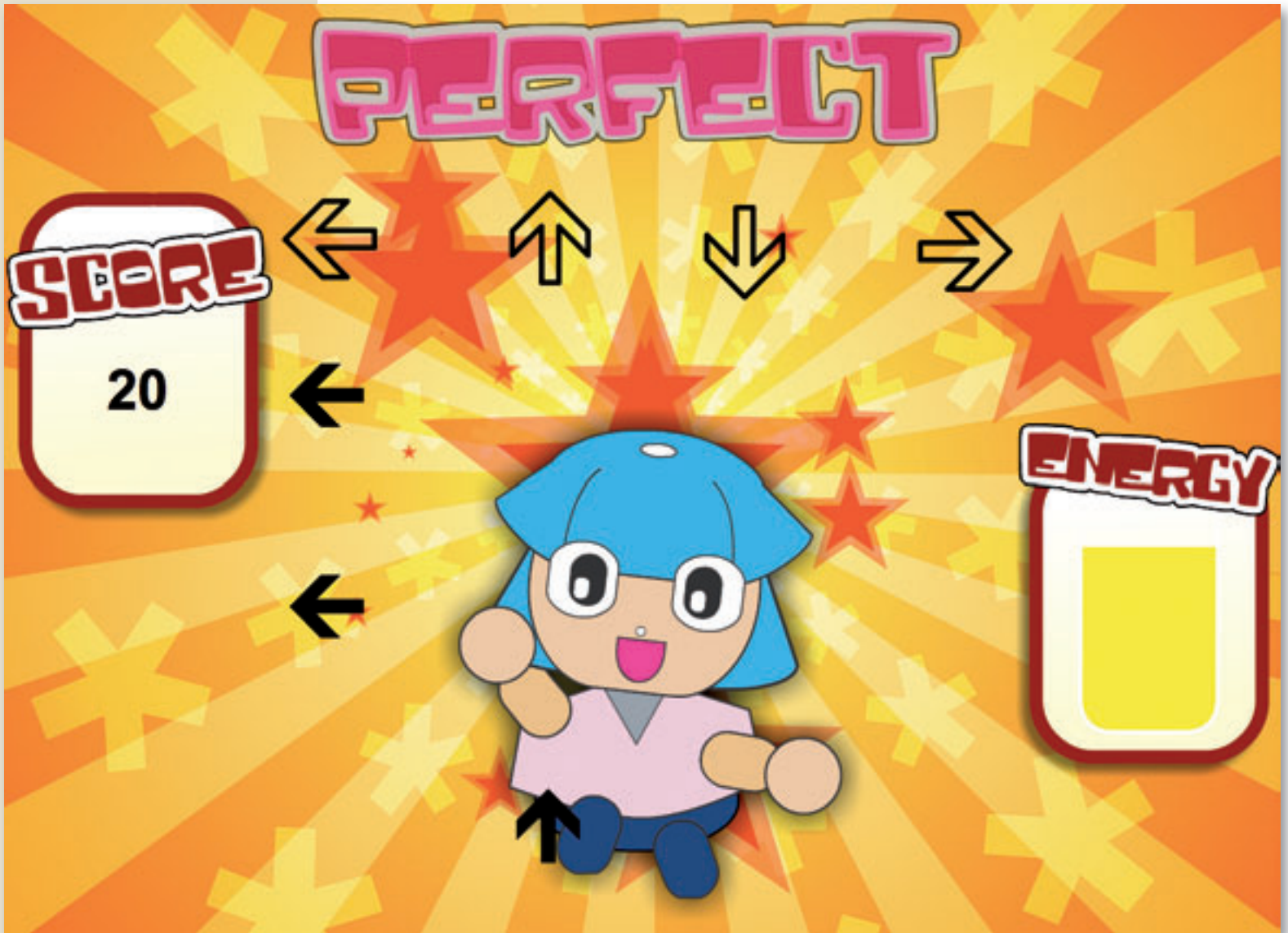
It seems in a world of discontent, Ainley is one of the lucky few who really loves what they do. That's not to say there haven't been the lows, as Ainley is the first to admit. "There were some periods when I was working as a web designer and I was incredibly bored, which was pretty hard to deal with. HTML and CSS coding can be quite fun, but web design is all about usability and so creativity always has to take second place. I didn't like this and am glad I could focus more on the artwork."

Luckily with the lows come the highs, and Ainley has enjoyed a hugely successful year making himself known in the industry. He says, "The full interview I did with a design magazine has to be one of the highs so far; it was the first I had done and was a huge honour. For the first time then, I felt like I was on a level with the big guns."

Now enjoying the 'big gun' status himself, the future is looking bright for this talented young artist. Determined to keep evolving artistically, you can't help thinking that this guy is going to be reaping the successes of his hard work for a very long time. "My ambition is to just keep learning software and techniques so that I can produce more of my ideas," he says. "At the moment I'm still limited by my technical abilities, and a lot of ideas I have to leave as I have no idea how to turn them into reality. I hope that becomes less common in the future."

If Ainley feels limited by his ability at this stage, just imagine what he'll be capable of in the future. It's an exciting time as he continues in his voyage of discovery and we can't wait to see where he ends up.





THE BRIEF

ON THE CD

Tutorial files:
game-start.fla
game-finish(pt1).fla

TUTORIAL OBJECTIVE

Prepare graphics and animation for use in a Flash dance game

TIME REQUIRED

Two hours

SKILL LEVEL



Create a dance game in Flash CS3 **PART 2**

WE'VE ALREADY MADE MANY OF THE GAME'S ASSETS; NOW WE'LL CREATE OUR ANIMATED DANCE ELEMENTS AND ADD THE CODE

IF YOU FOLLOWED Mark Shufflebottom's first part to this tutorial last issue, you will see how much time is taken on creating the assets needed for a game. We're by no means out of the woods yet, and the main part of this tutorial will concentrate on creating those animated dance routines for our character. Obviously when we make certain button presses,

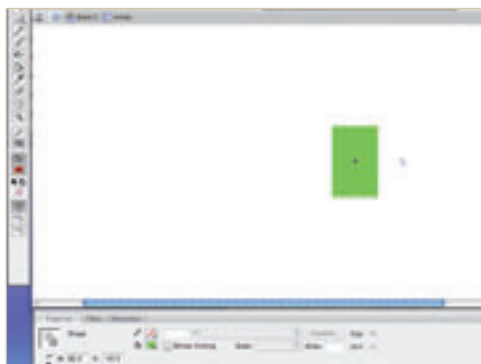
or if you map a dance mat to the cursor keys as discussed last tutorial, we want there to be some relative on-screen action. With that in mind, this second part of the tutorial will focus on tying up all those loose ends that we created last issue and bringing the project to a cohesive whole through the use of ActionScript code.



YOUR EXPERT

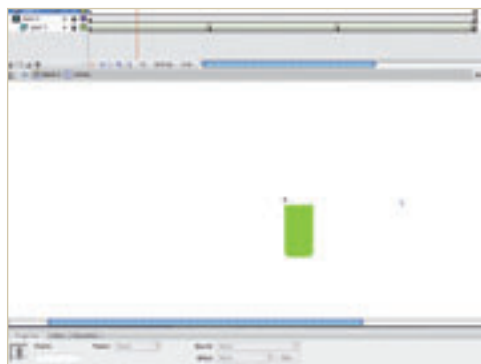
Mark Shufflebottom teaches on the BA and MA Interactive Media courses at Bournemouth University. He teaches 3D applications, interface design, online gaming, small-screen device production and, of course, all things Flash and ActionScript.

Create a dance game in Flash CS3 (part two)



01 Picking up the project

You can open your final project from last issue, or open the file game-start(pt1).fla from the cover CD. Press Ctrl+F8 to create a new symbol, name this 'energy' and make it a Movie Clip. Click OK and on the new stage, draw a rectangle that's at least 85 pixels wide and 125 pixels high.



02 Energy bar

Create a Keyframe at frame 100 and reduce the rectangle to just a few pixels high. Change the colour to red. Add a shape Tween on the first frame. Add other Keyframes and colours for the energy bar. Add a new layer and a rounded rectangle over the top. Right-click to make it a Layer Mask.



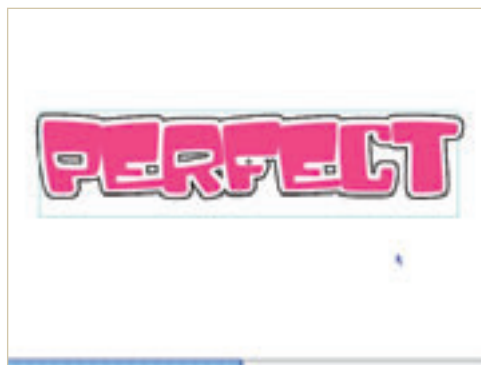
03 Add a border

Using the rounded rectangle from the mask, copy and paste it to a new layer above the mask. Add a white one-pixel stroke and delete the centre. Return to Scene 1 and select frame 2, layer 2. Add the energy Movie Clip. Position as shown, naming it 'energy' and placing behind the label.



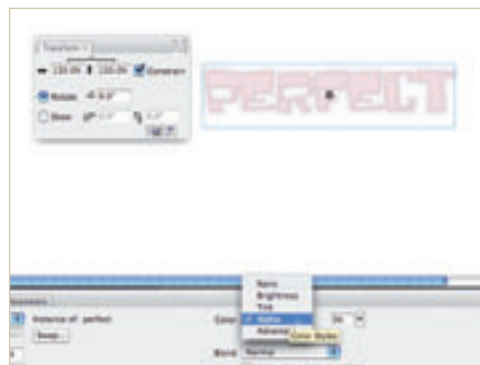
04 Feedback for user

We're going to create feedback now for the user. Create a new Movie Clip and name it 'perfect'. Add the word perfect to the Movie Clip stage and break apart the text. Create two copies of the text. On the bottom copy, add a black, eight-pixel stroke and group these letters together.



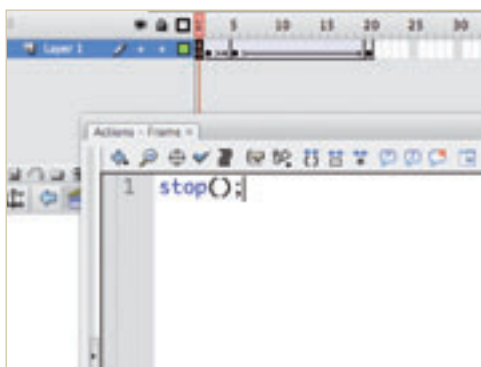
05 White edge

Now select the second perfect text and add a white, six-pixel stroke and group these letters together. Place this over the black outline text. Group the last text letters together that should be pink, and place this over the top. Now create a new Movie Clip and name this 'perfectClip'.



06 Animate the text

Drag the perfect clip to the stage. Move the Keyframe at frame 1 up to 2. Change the Alpha value to five per cent. Add a Keyframe at frame 5 and make the Alpha value 100 per cent. Add another Keyframe at frame 100, scale the clip up to 130 per cent and add an Alpha value of five per cent.



07 Stop the timeline

Select the Keyframe at frame 5 and increase the size of the perfect text to 105 per cent. Now add Motion Tweens to the Keyframe at frame 2 and 5. Select frame 1 and open the ActionScript editor. Add a stop(); command as shown and return to Scene 1. Add the perfectClip to the stage.



08 Position the perfectClip

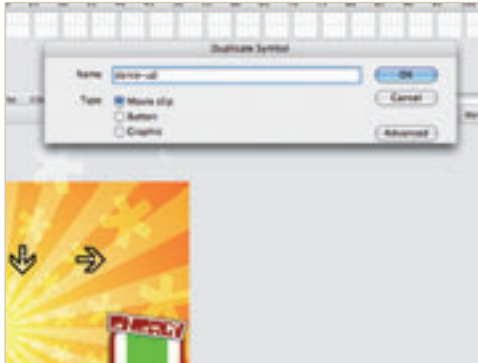
The perfectClip instance will show up as a white spot; position this at 272 pixels on the x axis and 38 pixels on the y axis. Give this the instance name of 'perfectClip'. Now repeat steps three to eight, but this time create the Movie Clips 'miss' and 'missClip', using green text instead.



09 Add the missClip

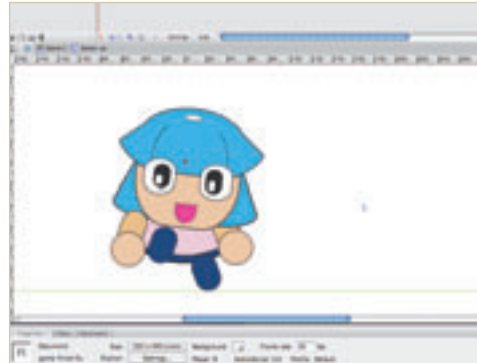
Add the missClip to the stage in the same position as the perfectClip, naming it 'missClip'. Again, repeat the same steps in order to create the Movie Clips 'good' and 'goodClip'. This should have the text in red. Again, add this to the stage and give this the instance name 'goodClip'.

Tutorial



10 Create character animation

Now to create the dance moves for the character on the stage that will respond to our key presses. Scan through the library and find the clip named 'dance'. Right-click this and choose Duplicate from the drop menu. Name the new instance 'dance-up'. Double-click this to edit it.



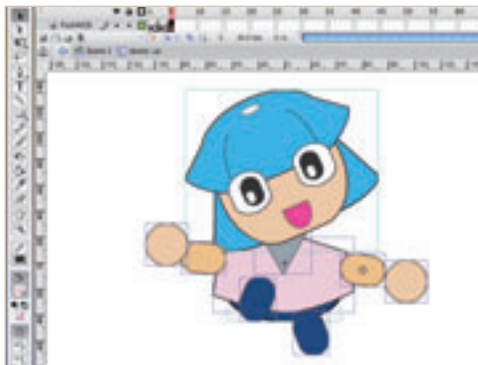
11 Young start-up

Select all of the frames after the first two by clicking the third frame and Shift-clicking the last frame. Right-click the highlighted frames and choose Delete Frames. Now arrange the character's body parts on frame 1 as shown above; also drag a guide to the stage below the right foot.



12 Moving on up

The guide under the feet will help us understand where the girl has sprung from as we are intending to animate her jumping. Create a Keyframe at frame 3 and change the body parts as shown in the screenshot above. Then select frame 5 and press F6 to add a Keyframe.



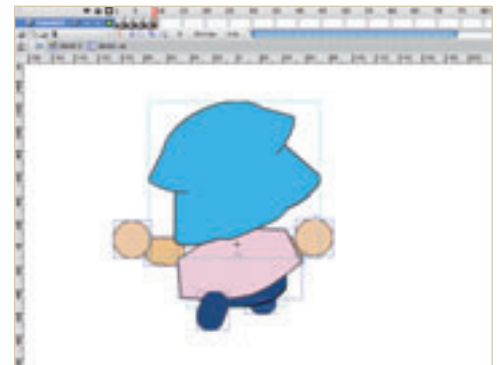
13 Spring is in the air

Move the girl up quite a lot this time; because there will be a lot of action in the game, it is important to make the animation of the dance moves quite exaggerated. In fact, this is sometimes quite a good principal for any form of animation. Copy the character's position as shown above.



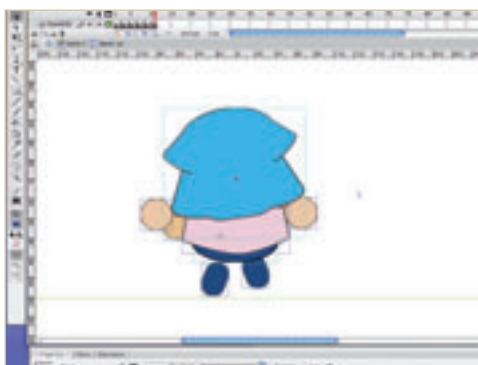
14 Leap of faith

Select frame 7 and press F6 to add a Keyframe. Again move the character upwards and change the arm positions now. This will be the crest of the jump and we will animate the girl coming down with her back turned. Notice the girl is almost her body height into the air in this step.



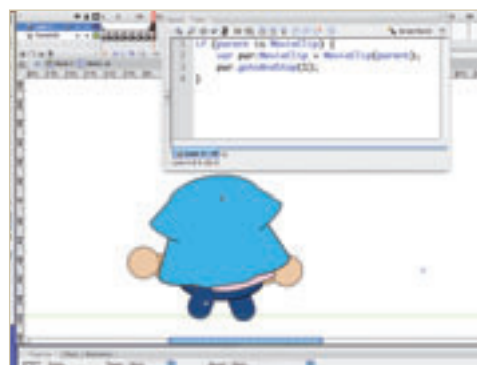
15 Backing track

Select frame 9 and add a Keyframe. On this, double-click the group of the head, remove all the face details and fill in the shape with blue so that it appears the girl is facing away. Position the remaining body parts as shown to give the illusion that the arms and legs have changed sides.



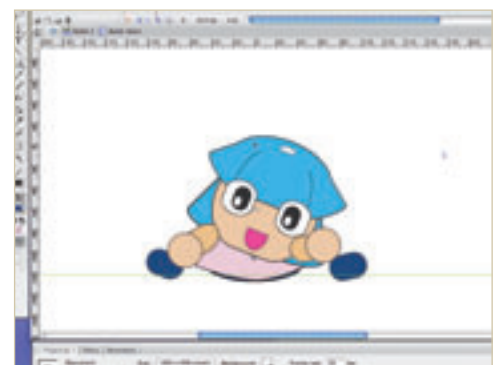
16 Touchdown

The next Keyframe will be frame 11. More than one frame per movement allows the eye to fully take in the action when there is a lot of animated elements. In this Keyframe, start to position the feet and arms, preparing the girl for touchdown on the floor that our guide represents.



17 Stretch and squash

When the character lands, they squash down with the impact. Add a Keyframe at frame 11 and move the girl's body parts to equal those shown above. Add a frame at frame 14, then add a new layer and a Keyframe at frame 15. Open the ActionScript editor and add the code shown.



18 Create other directions

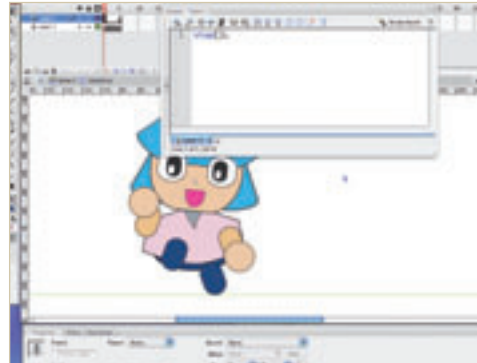
Duplicate the dance-up Movie Clip three times, naming each clip 'dance-down', 'dance-left' and 'dance-right'. For each clip, animate the girl doing an appropriate action such as the splits for dance-down or a dance facing left or right for the remaining clips.

Create a dance game in Flash CS3 (part two)



19 Put the moves together

We need a Movie Clip to hold all of the dance moves. Make a new Movie Clip, name it 'danceClip' and press OK. On frame 1, add a guide so all the moves sit on the same floor line. In frame 1, drag the dance clip from the library. Add a blank Keyframe at frame 2 and add the dance-left clip.



20 Stop the frame

Add a blank Keyframe at frame 3 and add the dance-right clip. Add two more blank Keyframes and add the dance-up and dance-down clips to frames 4 and 5. Select frame 1 in a new layer and open the ActionScript editor. Add a stop(); command and return to frame 2 of the main timeline.



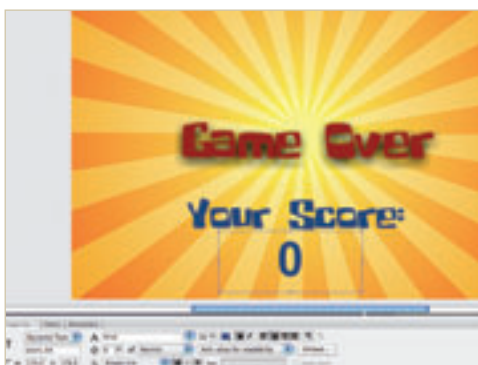
21 Add to the stage

Add the danceClip from the library to frame 2, layer 2 of the main timeline. Give the Movie Clip the instance of 'danceClip' in Properties, then add a 20-pixel Drop Shadow to give the dancer more definition on the main stage. Select frame 5 and press F7 to add a blank Keyframe.



22 Game over

Create a new Movie Clip and name it 'gameOver'. Add the words 'Game Over' to the stage in red. Select frame 139 and press F5, then add a blank Keyframe at frame 140. Open the ActionScript editor and add the code shown. Back in the main stage, add this Clip to frame 5, layer 2.



23 Display the score

Add a Drop Shadow to the gameOver Movie Clip, then use the Text tool to add the words 'Your Score' below that. Create a Dynamic text field underneath, giving this the instance name 'score_txt'. This will display the score dynamically at the end of the game.



24 A new layer

Now you need to add a new layer to the timeline and select frame 1. Open the text file code_24.txt from the cover CD. Select all the code, copy it and return to Flash. Open the ActionScript editor at frame 1 and paste in the code from the text file.

TECHNIQUE

Animation principles

Realistic animation is about exaggeration and techniques to give your character appeal. We explored squash and stretch



01 Normal character

To make a character realistically appear as if it has movement, it is important to note how high your character is when at rest; this way, exaggerated movements can be added to the character in order to enhance the animation.



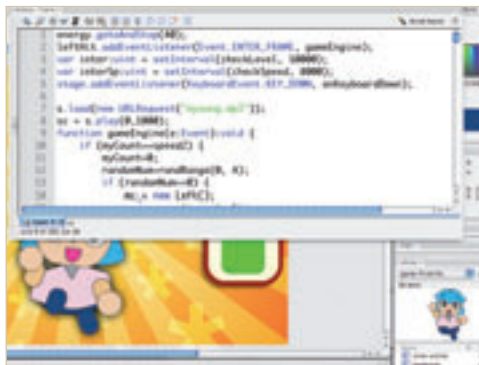
02 A little stretch

When a character is jumping, or even on the upward movement of a walk cycle, make them stretch. This helps to give the impression of an upward motion and really helps to make the movement look much better.



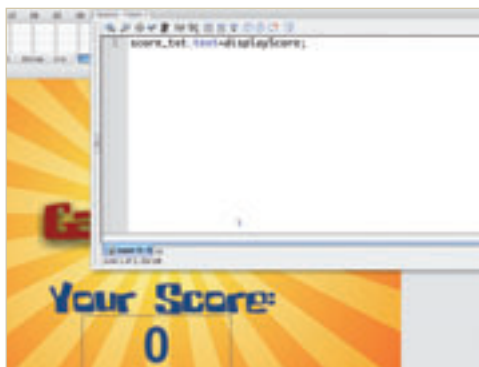
03 Flat squash

When your character is landing after a bounce, make sure that they squash down for added realism. Even when your character is walking, you can add a little squash at the point when both feet are on the ground.



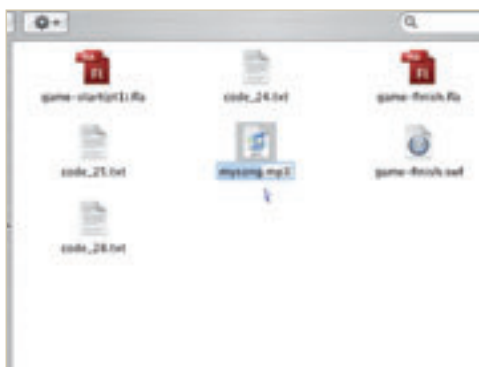
25 Main game code

Select frame 2 of layer 3 and add a blank Keyframe. Open code_25.txt from the cover CD. Select all the text and copy and paste this over to the ActionScript editor on frame 2 of layer 3. These 193 lines of code is the main code that runs the game.



26 Last code frame

Select frame 5 of layer 3 and add a Keyframe. Add the code in the ActionScript editor as shown in the screenshot above. This final code just ties up the Dynamic text box on the screen to display the final score of the game once it has finished.



27 Add an MP3

In step 25's code, the code talks to an MP3 named 'mysong.mp3'. In order to make the game work, add your favourite song to the same folder that you are going to publish the SWF in and rename it 'mysong.mp3', so that Flash can play it as the backing track to the game.

IN DETAIL

Adding a dance mat

The code in the game has been split into roughly four sections. Here we will explore those four sections of code and how they relate to the game

THE CRUCIAL PART to any game is working with the ActionScript to talk to the assets we have created in order to manipulate them and make them respond in the right way.

Over the course of this tutorial, we have created many different game elements, including animated clips of the dancer, feedback for the user to show if they got a perfect hit, a good hit or a miss. The way that we talk to the stage elements is to call them in the code by their instance name. Throughout the tutorials, we have added names into the Properties palette for lots of different items on the stage. Clicking on any of these items and looking in the Properties palette will let you see what the name is that the code will be talking to.

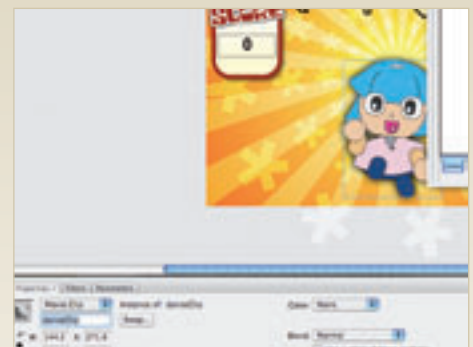
The first section of code on frame 1 sets up a number of variables that will be used within the game, and also just stops the playhead here until the user clicks on the Play button, then the game will start. In the first section of code, you will see the listener for the button to start the game.

The second section of code on frame 2 is the main part of the game. Notice how it is split up into different sections. The gameEngine function generates a random number that adds a random arrow to the stage and removes it when it reaches the top of the screen, which increases the difficulty.

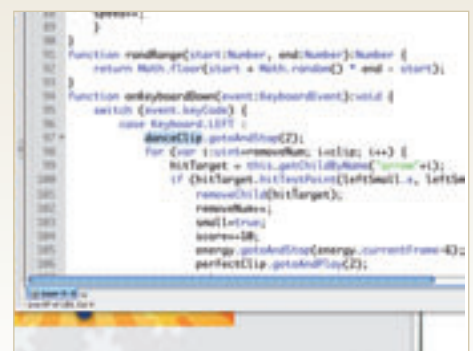
The Key Down listener checks the keyboard input and detects if any of the arrows are touching the appropriate marker, providing feedback for the user. There are two functions that increase the level of difficulty and the speed.

The third section of the code is on frame 5 and this just resets the game when it is finished.

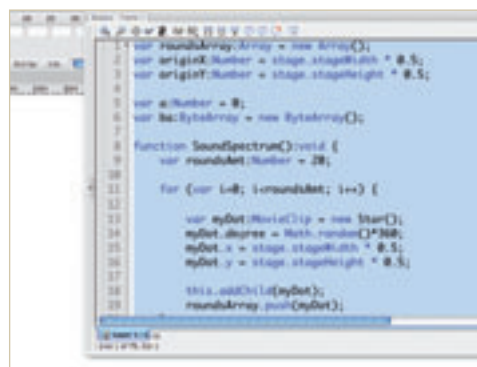
The final section of code is in the bg Movie Clip and this generates random stars and animates them so that there is plenty of in-game action to add to the overall aesthetic. Throughout the code, check how different stage objects are called with their instance name.



The instance name is one of the most important aspects of Flash development as this allows code to talk to the object on the stage

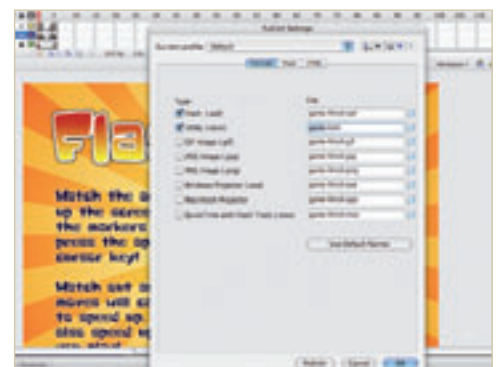


ActionScript talks to objects on the stage and manipulates them in order to make the game behave appropriately at the right time



28 Last code

Now to add the very last lot of code for the game. Open the bg Movie Clip in the library and open the ActionScript editor. Now add the code from the file code_28.txt from the cover CD. Return back to Scene 1 and from the File menu, choose Publish Settings.



29 Publish and play

With the Publish Settings open, change the HTML filename to 'game.html' then publish the game. Save your Flash game as it is now finished, and open the game.html in your web browser. Start bashing those keys and jumping on your dance mat to play the game.



As featured in

Tutorial



Silverlight



THE BRIEF

ON THE CD

Tutorial files:
All the files you will need
on this issue's CD

TUTORIAL OBJECTIVE

Create a Silverlight INK app using MS
Expression Blend 2 Sep Preview

TIME REQUIRED

Three to four hours

SKILL LEVEL



Build a natural writing application in Silverlight

HOW TO EMPOWER YOUR USERS WITH DRAWING FUNCTIONALITY

THE EAGLE-EYED among you may have spotted the InkPresenter element hidden in Expression Blend 2's Asset Library. This is the secret behind Microsoft's Tattoo Studio (<http://silverlight.net/community/communitygallery.aspx>) – a Silverlight application that adds interactivity to web pages by allowing users to draw or circle objects. In this tutorial, we're going to build an INK application of our own that lets us draw lines using different sized nibs, as well as in a range of colours.

So why learn about INK? Allowing the user to interact with your web designs brings up a whole range of interesting opportunities, like GIS maps with directions where users can

highlight relevant roads and destinations, or Silverlight sports videos where you can freeze-frame and circle tactical moves by players. Silverlight INK could even be used to provide some of the basic functionality for a Nintendo Wii-style PC game, involving mouse clicks and moves.

INK applications use JavaScript to add drawing functionality to XAML InkPresenter canvas objects by capturing mouse movement, and writing each click-and-drag as a stroke on the XAML canvas. The code is on the CD along with place holder assets which will can be bought separately from iStock. URLs to these images can be found in the main background image.



YOUR EXPERT

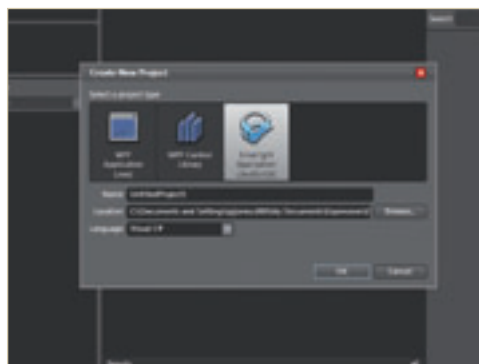
Petra Jones is a systems analyst who has worked as a website designer and developer in the industry for over ten years. Among her interests include sound production, podcasting and interactive multimedia sites.

Build a natural writing application in Silverlight



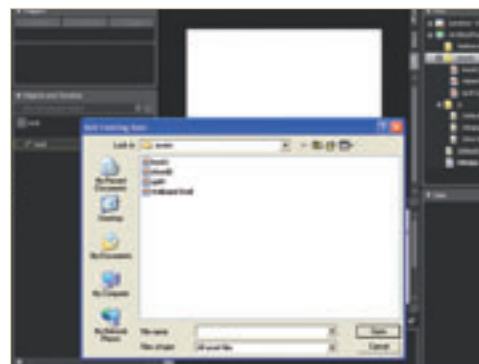
01 The right blend

Sign up for a Microsoft Windows Live ID account if you haven't got one already, then download both .NET Framework 3.0 and the Microsoft Blend 2 September Preview. September Preview is preferable to December Preview, which doesn't offer any added INK functionality.



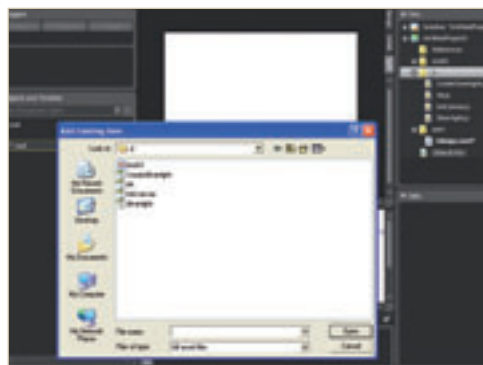
02 Your first canvas

Download the Silverlight Reader 1.0 runtime from <http://silverlight.net/GetStarted> and then launch Expression Blend 2 September Preview. Select File>New Project>Silverlight Application (JavaScript). Rename the default canvas 'root' and alter the dimensions to 630 x 455.



03 Creating your project

Select Project>New Folder to create a folder named 'js'. Cut and paste all four JavaScripts into this folder, then create a second folder named 'assets' to hold your images. Right-click on this and hit Add Existing Items to upload the four images from the CD. Rename the page.xaml file as 'inkapp'.



04 Deleting the defaults

Place inkapp.xaml inside a parent folder named 'xaml', then delete both the autogenerated Default_html.js (calls the XAML file for the HTML plug-in page) and inkapp.xaml.js (creates sample event look-ups and handlers). Upload CreateSilverlight.js, ink.js and InkCanvas.js into the js folder.

05 Perfecting your plug-in

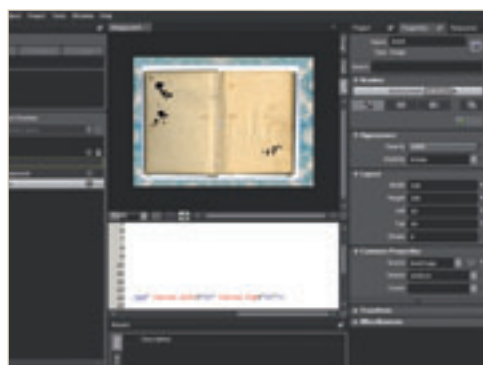
By default, your new project will be saved in your Expression folder under a subfolder named UntitledProject1. Use Windows Explorer to locate this (typically under My Documents), then open Default.html using Notepad and edit the JavaScript links to point to the four JS files. Delete all the CSS and add the code below.

```
<div id="InkAppContainer">
  <script type="text/javascript">
    createSilverlightInkApp();
    function IMG1_onclick() {
    }
  </script>
</div>
```

06 Add background

Default.html now calls up the createSilverlightInkApp function in CreateSilverlight.js. Back in September Preview, add a rectangle. Make it the same size as the root canvas and add the WallpaperSmall background image. Edit the root canvas in XAML by adding a Loaded event.

```
<Canvas
  xmlns="http://schemas.microsoft.com/
client/2007"
  xmlns:x="http://schemas.microsoft.
com/winfx/2006/xaml"
  Width="630" Height="455"
  Loaded="root_Loaded"
  Background="White"
  x:Name="root"
>
<Rectangle x:Name="background" Width="630"
Height="455">
  <Rectangle.Fill>
    <ImageBrush
      ImageSource="assets/WallpaperSmall.jpg"/>
  </Rectangle.Fill>
</Rectangle>
</Canvas>
```



07 Adding images

The alternative to adding images as a shape fill is to select the Asset Library icon (>) then tick Show All to pick Image. Double-click on the new icon and browse under Properties>Source for book3.jpg. Rename the object 'book', resize to 550 x 399 and position at 30 left, 30 top.



08 Hiding behind masks

Let's do away with the unsightly white background to the book3 image by creating a Clipping Mask. Select the Pen tool then carefully draw a series of lines around the book's outline. When complete, highlight both the path and the book object then select Object>Path>Make Clipping Path.



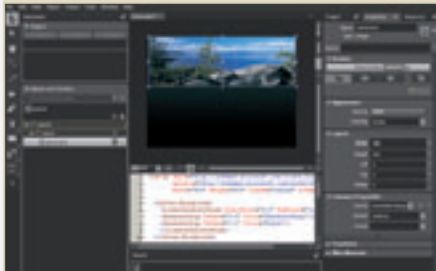
09 Getting inky!

Now for the exciting part – the ink! Select Asset Library and tick Show all, then select InkPresenter. Double-click to add, then rename as 'InkPresenterElement'. Resize to 550 x 399 and position at 30 left, 30 top. Our InkPresenter won't do anything without some JavaScript functions, though...

TECHNIQUE

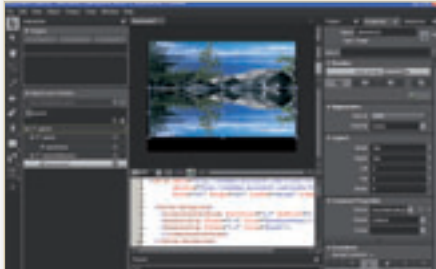
Reflections of XAML

There are other ways to spice up Silverlight applications than interactivity, and here we share a few with you



01 Reflection effects

You can also use Blend 2 September Preview to add a reflection effect to images. In this example, we've created an 800 x 600 parent canvas with a 790 x 264 child actual canvas. Add the image you want to reflect to the child canvas, eg, MountainLake.jpg.



02 Transform image

Copy the actual canvas and its child image and paste under the parent. Rename appropriately, then reposition the second canvas and image underneath the first. Select Properties>Transform, then enter a y value of -1 under Scale.



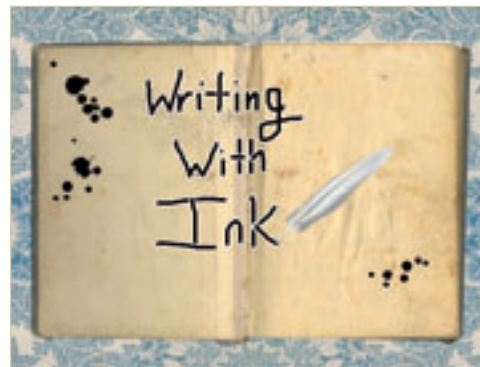
03 Decrease Opacity

The final touch is to select Properties>Appearance and reduce the Opacity of your reflected image to 17 per cent. Select Gradient Brush under Properties>Brushes and add a navy-to-black gradient to complete the watery reflection effect.

10 JavaScript power

Add the following XAML to the InkPresenterElement. InkPresenterMouseDown is a JavaScript function in ink.js that captures each mouse movement and starts the stroke. InkPresenterMouseMoveWithQuill then captures each subsequent movement as a line of ink. Finally, InkPresenterMouseUp stops drawing.

```
<InkPresenter x:Name="inkPresenterElement"
    Background="transparent"
    Width="550" Height="399"
    MouseLeftButtonDown="InkPr
esenterMouseDown"
    MouseMove="InkPresenterMou
seMoveWithQuill"
    MouseLeftButtonUp="InkPres
enterMouseUp"
    Canvas.Left="30" Canvas.Top="30"/>
```



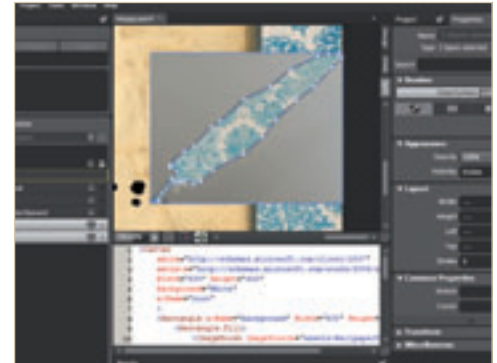
12 Customise cursor

The JavaScript function InkPresenterMouseMoveWithQuill in ink.js uses the quill image as a custom cursor. Open Default.html in your browser to see this in action. You can fine-tune the position of the quill nib relative to the stroke using the x and y parameters in args.getPosition(null).



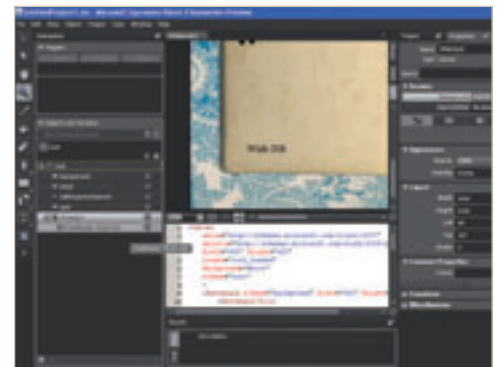
14 Changing stroke size

When the WideQuill canvas is clicked, the INK app changes from the default narrow stroke settings to the much larger ten by ten pixels stroke defined in the function ChangeQuillNib. Now let's create a second canvas control to let us toggle between the two quill nibs.



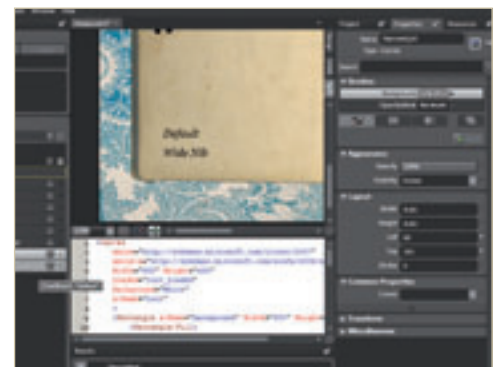
11 Create a quill

Now we need something to draw with – add a new image object named 'quill' and browse for quill3.jpg. Set the properties of the object to 150 x 118, positioned 480 left and 227 from top. You'll need to use the Pen tool to apply another Clipping Mask to cut away the grey background.



13 Create a wide nib

Create a new canvas named 'WideQuill' at 60 left, 367 top. Add a text block and drag-and-drop this into WideQuill. Enter 'Wide' as your text and set to Georgia 12pt Italic, positioned at left 13, top 3. In XAML view, give WideQuill a MouseLeftButtonDown property of 'ChangeQuillNib'.



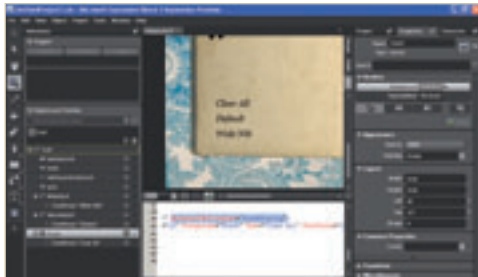
15 Create default nib

Add a new canvas, naming it 'NarrowQuill'. Canvas names are vital as the ChangeQuillNib function references these in ink.js. Place NarrowQuill under the previous WideQuill control and add a child text block that reads 'Default'. Add a MouseLeftButtonDown property of 'ChangeQuillNib'.

16 Numerous nibs

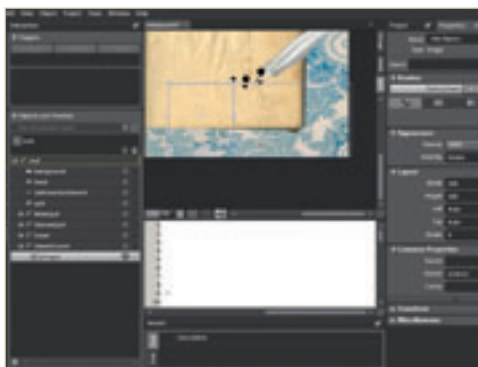
You can add new sizes of quill to the ChangeQuillNib JavaScript function in ink.js, and even create stripy strokes using OutlineColor, Gradients or different types of nib.

```
function ChangeQuillNib(sender,args)
{
    StartQuillTop=EndQuillTop;
    if (sender.Name=="NarrowQuill")
    {
        currentWidth=4;
        currentHeight=4;
        isEraser=false;
        EndQuillTop=63;
    }
    if (sender.Name=="WideQuill")
    {
        currentWidth=10;
        currentHeight=10;
        isEraser=false;
        EndQuillTop=60;
    }
}
```



17 Add Eraser

Create an Eraser control in the same manner as WideQuill and NarrowQuill, but edit the XAML canvas properties by adding a MouseLeftButtonDown property of 'eraseDrawing'. This references the eraseDrawing function in ink.js, which clears all strokes captured up to that point.



18 Inserting an inkwell

Create a new 284 x 112px canvas named 'inkwellCorner' and position this 350px left, 340px from top. Select View>Fit to Screen then click on >> to include the Add Image icon in your Toolbar. Double-click on this, then drag-and-drop the image object into inkwellCorner.

IN DETAIL

Silverlight INK on the web

With so many possibilities available, what else can you use INK for? Here are a few ideas from the web...

INK IS STILL very much a newcomer in Silverlight applications, but there are signs it is beginning to gain popularity. The fashionable photo-sharing tool Flickr (www.flickr.com) now includes InkGrams, a tool for scribbling quick messages or drawings and publishing them for friends to see or to your own personal Twitter account (a social networking site utilising instant messaging). While InkGrams aren't likely to ever rival texting or the sheer speed of typing an email, they do offer a quick way to send cartoons, diagrams and sketches. Flickr users are limited to just four colours, but it's easy to imagine a full-colour version with ink-based text captions on Flickr images in the near future.

Elsewhere on the web, Loren Heiny has developed a Google search plug-in that allows you to scribble search terms on screen using your mouse. This Silverlight application sends the INK data to the server via AJAX, providing those who hate typing with a viable alternative, although sadly it seems to struggle with joined-up handwriting (www.tabletpcpost.com). Finally, there's a Silverlight INK version of a diary featuring page-turn animation like a conventional diary (www.silverlight.net).



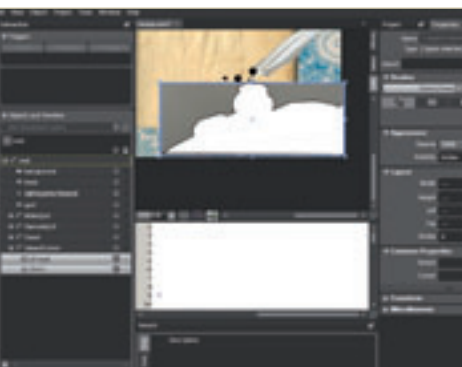
Flickr InkGrams – imagine how popular SMS text functionality with INK style drawing could be



How about Google-searching with INK...?

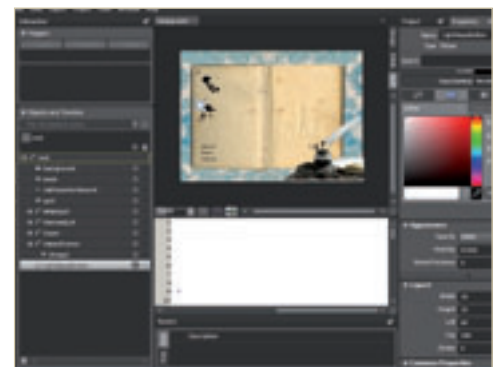


The Silverlight online gallery contains cool examples to play with



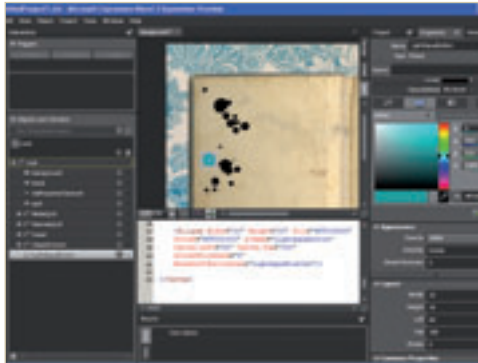
19 Clip tips

Select Properties>Source and browse for inkwell2.jpg. Set Properties to 284 x 112 with position set to 0,0. Select the Pen tool and carefully draw around the inkwell. Ctrl-select both the image and path, then select Object>Path>Make Clipping Path. Keep Stretch set to Uniform.



20 Glorious technicolour

Let's add some colour to our INK application. Right-click on the Rectangle tool and select Ellipse, then double-click to add. Name the new ellipse 'LightAquaButton' and resize it to 20 x 20px then position left 60px, top 180px and set the StrokeThickness to 0.



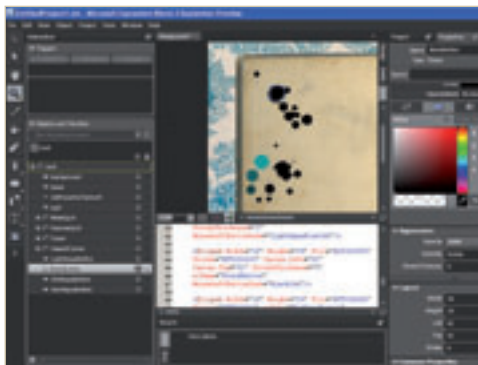
21 Creating colour controls

Change the ellipse's background fill to #FF009999, then go to Split/XAML view to add a MouseLeftButtonDown property of 'LightAquaBlueInk' to the LightAquaButton. This calls a function that changes the stroke colour from default black to light aquamarine using ChangeColor().



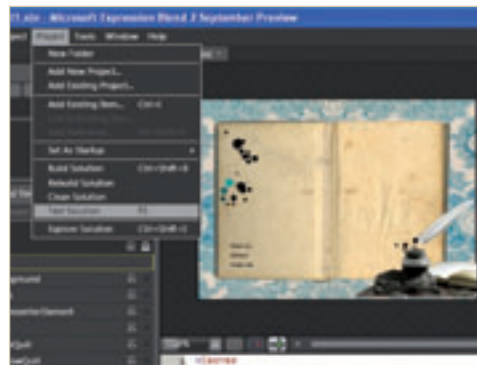
22 Editing outlines

Test your new colour control out in a browser window. By default, each ink has a white outline; this can be changed or deleted entirely by removing newStroke. DrawingAttributes.OutlineColor="#FFFFFF"; from the InkPresenterMouseDown function in ink.js.



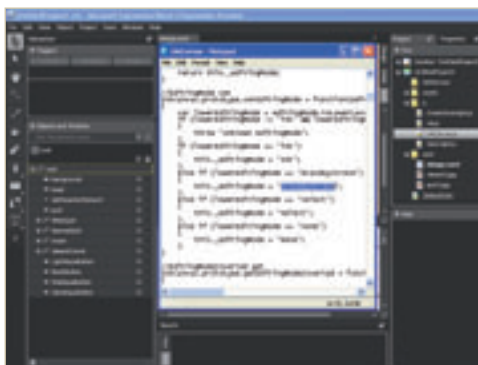
24 Back to black

Make sure, though, that you remember to include a button that returns the user to the original default colour. Create a new 18 x 19 ellipse positioned at left 81px, top 91px right over the top of the upper-left ink splodge, then add a MouseLeftButtonDown property of BlackInk.



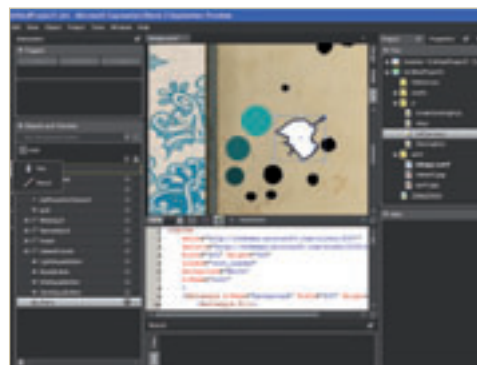
25 Testing INK apps

You can use Blend 2 September Preview to test your XAML code by selecting Project>Test Solution; any errors will appear in the Results pane underneath the Design/XAML area. But be warned, code that works fine in the browser can still fail Blend 2's stringent standards!



27 Configuring your INK app

Most of your configuration changes can be done by editing ink.js. InkCanvas.js contains some of the core stroke-creation functionality as well as some additional JavaScript functionality that will enable you to modify your Eraser control so that it erases stroke by stroke.



28 Some final tips

If you need a Clipping Mask on an irregular-shaped image (eg, an inkblot), right-click on the Pen tool to bring up the Pencil tool – this allows more freehand control to draw paths around variable, jagged shapes. Don't forget your Zindex when building more complex layered INK apps.

23 Adding more colours

You can create additional colour controls by either creating shapes (ellipses, rectangles) or adding images inside parent canvases, and assigning each with a XAML MouseLeftButtonDown property calling up the appropriate JavaScript function defining each new colour.

```
function LightAquaBlueInk(sender,args)
{
    currentColor="#FF009999";
}
function MidAquaBlueInk(sender,args)
{
    currentColor="#FF036262";
}
function DarkAquaBlueInk(sender,args)
{
    currentColor="#FF034141";
}
```

26 Multiple InkPresenters?

If you're working with more than one inkPresenter object, remember to add the new InkPresenter object in root_loaded and edit the core functions (eg, InkPresenterMouseDown, InkPresenterMouseMove and InkPresenterMouseMoveWithQuill) accordingly.

```
function root_Loaded(sender, args)
{
    wpf = document.getElementById("wpfobj");
    inkPresenter = sender.findname("inkPrese
nterElement");
    inkPresenter = sender.findname("NewInkPr
esenterElement");
}
```



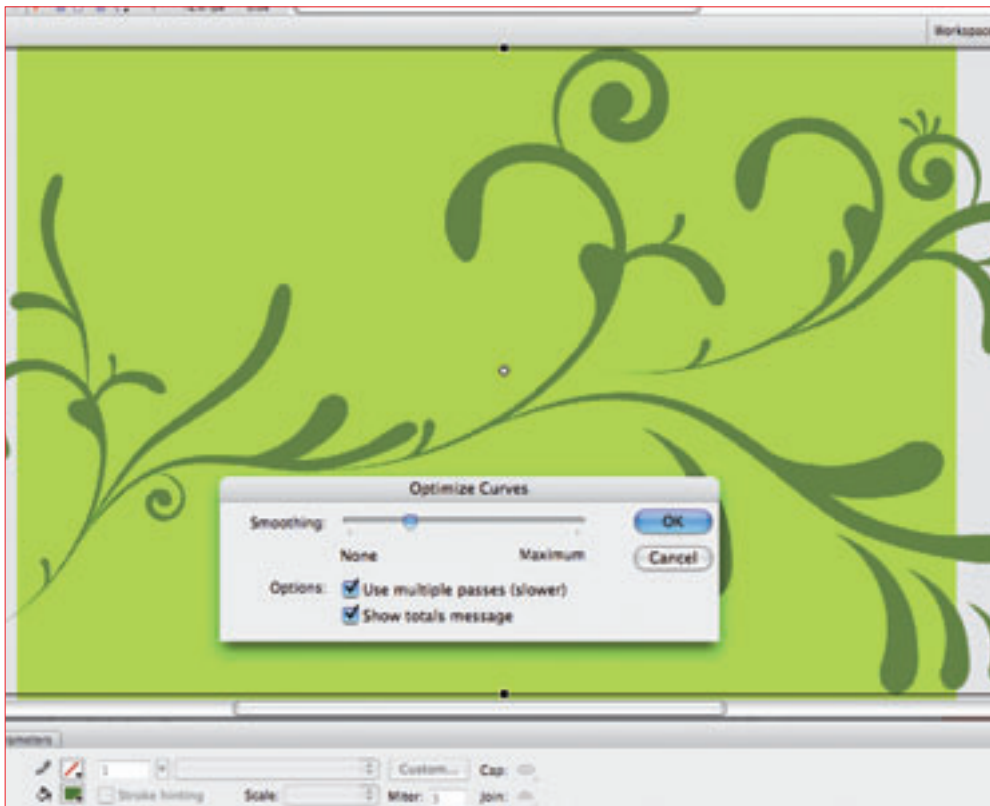
29 INK in the real world

The real trick is not building INK applications, but thinking of ways INK can actively enhance our web designs. This could be anything from an INK lasso feature that enables users to circle a portion of map to zoom in and enlarge it, to a proofreading tool that highlights spelling mistakes.



Tech Support Flash

Problems with text areas are causing headaches and heartache in this month's Tech Support, but help is on hand from Mark Shufflebottom



Flash has the ability to optimise your vector shapes, but third-party software can optimise whole animations in one click as opposed to frame by frame in Flash

Q A trip to the opticians...

I have been working on a Flash animation file that is now quite large in size for my audience. I have a mixture of both vector graphics and bitmap images. I wondered if there are any optimising programs that you can recommend, or any tricks or tips?

Peter Ellis

A It is good to see that you are trying to make your work as accessible to as wide a range of users as possible through the small file size. So often web designers are not too worried about hefty file sizes, which can still drive audiences away in this age of broadband.

There are several products on the market that aim to help reduce file sizes. Optimaze! by Electric Rain has been around for some time and works really well at reducing your overall file size. It is helpful to use this while

assembling assets, ensuring that vectors are as compressed as possible. The only drawback with this software is that it is only available on PC. A cross-platform solution is Eltima's Flash Optimizer. This comes in a lite and regular flavour, so can be a little easier on the wallet.

These applications only really emulate the optimisation features found in Flash anyway, and aim to be a one-click solution. In Flash you can always go to the Modify, Shape or Optimize menu. In here, you can apply an optimisation to the selected graphic on the screen. Unfortunately, what sets apart optimisation applications from Flash is that they will apply your optimisation to an entire animation, whereas in Flash it is a long process of going through frame by frame and applying to each.

As far as bitmap images are concerned, the basic rule is if a bitmap is being animated, give it the highest possible compression you can.



Load images easily in Flash by using HTML tags in your text. Using the `` tag allows you to load images into a text area component

As it is moving, your visitors probably won't be able to focus on the finer details of the image. However, if an image is still, apply JPEG compression of around 45 per cent and then give or take ten per cent, depending on the image in question.

Hopefully, that should help you optimise your SWF to the smallest file size!

Q Image anxieties

I created a Flash site for a client some time ago, which loads HTML text files into a text area component. This has a scrollbar so it is a useful inclusion for text. My client regularly updates this text and has had no problem with this simple system. I have now been asked if they can add images and this worries me slightly as I am now thinking that the text should load into a dynamic text field and the image into an empty Movie Clip, but obviously I am concerned about how much height the image will take up so I can position my text under this. Is there an easy way to solve this issue?

Hannah Grover

A Yes, there is an easier way. We can understand your concern because you have provided a simple solution for your client that works well, and if the solution becomes too fiddly, there are more problems that can go wrong. Since Flash Player 7, which was released in 2004, Flash has the ability to load images directly into the text area component from your external HTML file. As that Flash Player has been around for just over three years now, your audience will more than likely have this version or higher of the Player.

In your HTML file, add the following code:

```
<img src='images/file.jpg'>
```

Next change the image name and folder as necessary. Now open your Flash file and hit Ctrl+Enter to test the SWF. Hopefully, you should see your image load at the appropriate

"SO OFTEN DESIGNERS AREN'T WORRIED ABOUT HEFTY FILE SIZES, WHICH CAN STILL DRIVE AUDIENCES AWAY"



YOUR EXPERT

Mark Shufflebottom teaches on the BA and MA Interactive Media courses at Bournemouth University. He teaches 3D applications, interface design, online gaming, small-screen device production and, of course, all things Flash and ActionScript.

If technical troubles are giving you a headache, then make sure you visit our forum

SPEAK OUT
www.webdesignermag.co.uk/forum

Q&A
Tech Support

point. You will have to tell the client the width of the text area, so that they don't put images in that are too wide and would cause horizontal scrolling as a result. It is also important to tell your client that the images should be saved as nonoptimised and nonprogressive, as these might cause loading problems in some of the older Flash Players.

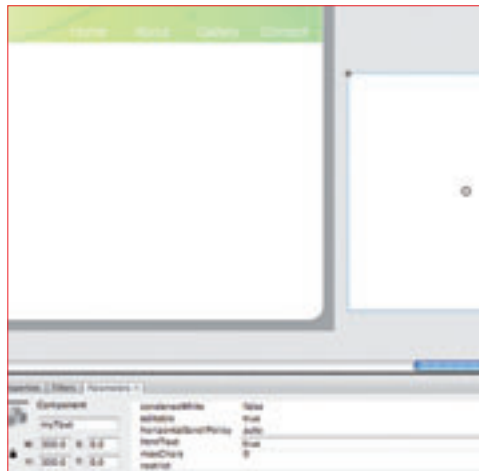
We're sure you'll agree that this is a very simple solution to your problem, and luckily one that does not require any recoding at all on your behalf!

Q Text area 51

I have recently completed the great tutorial in *Web Designer* magazine, issue 137, and just wanted to know if there is any possible way to use a scrollbar with the dynamic text field? I was wondering, how would I go about doing that in the easiest way?

Magnus Tannfors

A The best way to do this is to add the text area component. This text area has a scrollbar built into it, and it is automatically added if your text is too long for the box. First open the content Movie Clip and remove the two dynamic text fields called myText_txt and heading_txt. From the Component pane, drag on the text area component. Once on the stage, resize the text area to the size you need. Next, give this the instance name of 'myText'. Click on the Parameters tab in the Properties palette and locate the htmlText parameter. Now click to the right of this and type the word 'true'.



Changing issue #137's interface to incorporate a scroll bar can be done through the text component and altering two lines of the code

In that tutorial, we controlled all of our project through a Document class named Content. Now open the Content.as file and scroll down to lines 86 and 87. Amend those lines of code as follows:

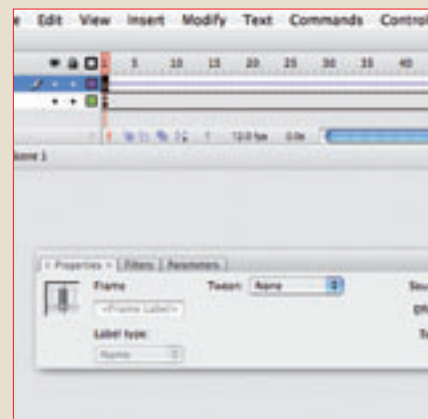
```
mover_mc.myText.htmlText =  
externalXML.dialogue[0].heading;  
mover_mc.myText.htmlText +=  
externalXML.dialogue[0].text;
```

This just sets both the heading and the main text into the myText text component inside the mover_mc Movie Clip. This is by far the easiest way to have scrolling content in your project.

Expert advice

Keeping in sync

If you are creating an animation and it is essential for you that the Flash Player doesn't slow down, then you can use a cunning trick of sound. If you were to place a sound on a new layer in a timeline, and then set the sound playback to Stream instead of Event in the Properties palette, the Flash Player will automatically drop frames of the animation in order to keep the sound and the animation in synchronisation. If you don't want to use a sound with an animation, but you still want Flash to drop frames to keep the playback fast, then simply create a very small silent piece of audio and make it loop down the timeline, setting the playback to Stream.



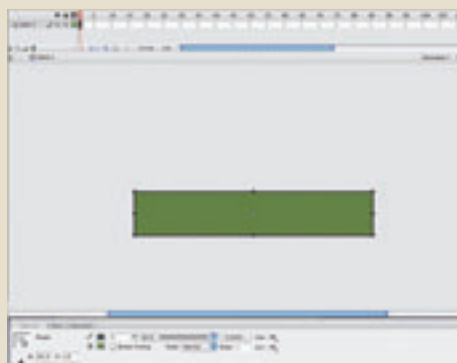
Taking away the listener when it is no longer needed will free up valuable time and space for Flash to run faster

Technique: Banner adverts

Q I have made an animated banner that I'd like to add to my website. I've managed to create the animation the way I want it to look, but I need help getting the functionality. I'd like the user to click anywhere on the banner and it take them to the site in question, but I'm not sure how to do this.

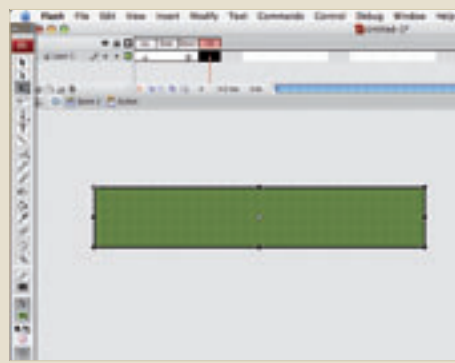
Shaun Davies

A The easiest way to get a click-through for anywhere on your banner is to place an invisible button over your animation. All you have to do then is add some ActionScript that checks when the button is pressed and sends the user off to a new URL. It is easy to set up and in the steps below, the code has been set up to work with ActionScript 3.0 for CS3.



01 Create a rectangle

First create a new layer above your animation and then draw a rectangle that completely covers your stage on that layer. This layer should be the topmost layer in your timeline.



02 Convert to button

Now choose Modify>Convert To Symbol and make it a button symbol, then click OK. Click on frame 1 and move it to frame 4, the hit state, and return to the stage.

```
myButton.addEventListener(MouseEvent.  
CLICK, banner);  
function banner(event: MouseEvent) {  
    var myRequest:URLRequest =  
    new URLRequest("http://www.url.com");  
    navigateToURL(myRequest);  
}
```

03 Add the code

The button is now semi-transparent blue; give this the name 'myButton'. Add a new layer, open the ActionScript editor and add the code shown above. Test the movie and you have a working banner ad!



THE BRIEF

ON THE CD

Tutorial files:
Find all the files you need on this issue's CD

TUTORIAL OBJECTIVE

Take influence from code limitations to design a modular portfolio

TIME REQUIRED

Four to five hours

SKILL LEVEL



One-page-wonder modular portfolios **PART 1**

LEARN HOW TO PLAN AND DESIGN AN AJAX-DRIVEN, JAVASCRIPT-ANIMATED PORTFOLIO SITE THAT BOASTS YOUR WORK

LAST ISSUE WE looked at approaching a design as a work of art and fitting the code around it, taking advantage of Photoshop's capabilities to break free from standard layouts. An impressively functional website is useless if it doesn't engage the user. Equally, a visually stunning site is useless if it doesn't actually work. It's important to know exactly what can and can't be done at the development stage, and to allow that knowledge to influence your creativity but not control it.

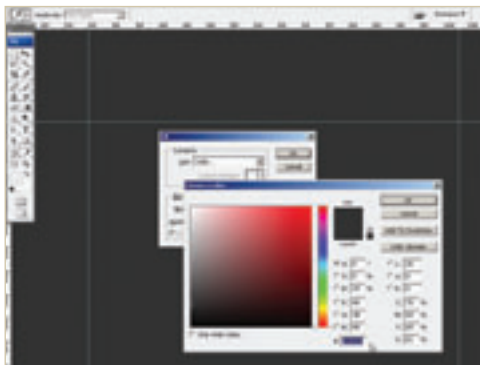
As a three-part tutorial covering both the design and development stages, we're going to look at how to plan and produce a stunning AJAX-driven modular portfolio that employs both animation and transparency using only CSS and JavaScript. We're going to break down how to embed rich typography without sacrificing accessibility, and to top it all off, we're going to show you how to do it like the pros, from concept drawings right the way through to the finished article.



YOUR EXPERT

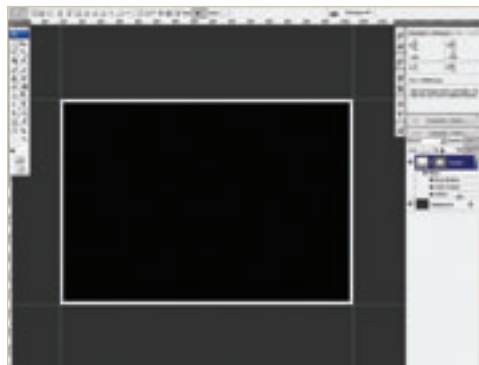
Jack Hayward is well-qualified in Photoshop. An avid user for over a decade, he's passionate about anything visual, fascinated by everything psychological and excited about all things interactive. His previous scribbles can be found at www.jackhayward.co.uk.

One-page-wonder modular portfolios



01 Create the canvas

First off we need to set the canvas up. Create a new document and drop in some guidelines so you've got a 782 x 550px work area in the middle of your canvas. Hit Shift+F5 and flood-fill the background layer with a dark grey (#303030).



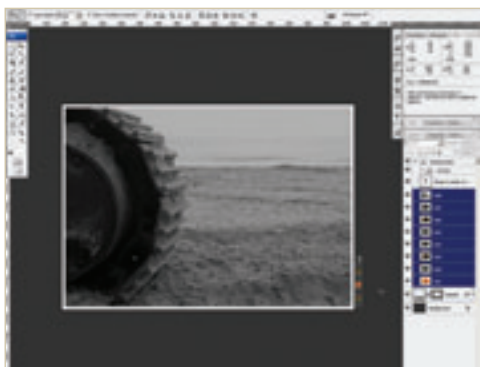
02 Set the scene

Drag out a 782 x 550px rectangle with the Shape tool and open up Blending Options. Apply a black Color Overlay, an eight-pixel white Inside Stroke, and a slight Drop Shadow at 54 per cent Opacity, a distance of one pixel wide and ten pixels in size. Hit OK and name the layer 'MainBG'.



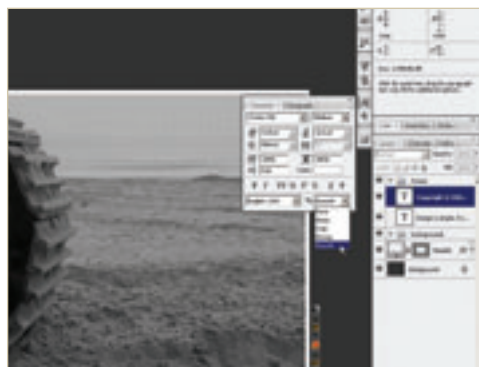
03 Hang the backdrop

As one of the main portfolio skills we're highlighting is photography, we've got a great chance to show it off as background imagery. Drag a photo in from the CD so it sits over the rectangle. Ctrl-click the MainBG layer thumb, invert and clear. Also take the brightness down a notch.



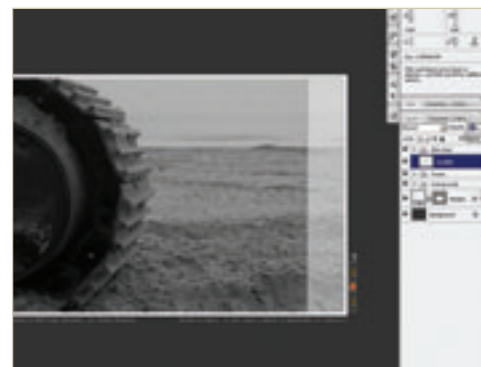
04 Stacked controls

Repeat the last step until you've got all eight backgrounds. So the user can freely change the background, we need to offer controls. Vertically stack 13 x 13px thumb versions of each in the bottom-right corner, and add a one-pixel white stroke to each, dropping the effect Opacity to 45 per cent.



05 Hands off!

As a portfolio site contains original work, it's important to make sure nobody can pinch it. Add a copyright message beneath the main shape, using nine-point Orator Std. As we'll be using sIFR to embed rich typography, use an anti-aliased font (Hit Alt+0169 to insert the copyright symbol).



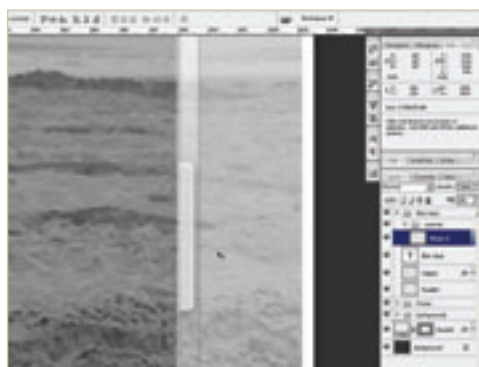
06 Feed me

For the Flickr feed, Ctrl-click the MainBG thumb, contract by eight pixels and subtract (hold Alt with the Marquee tool) all but 85px from the right-hand side. In a new layer called 'FeedBG', fill with white and drop the Opacity to 45 per cent. This will be re-created with CSS in development.



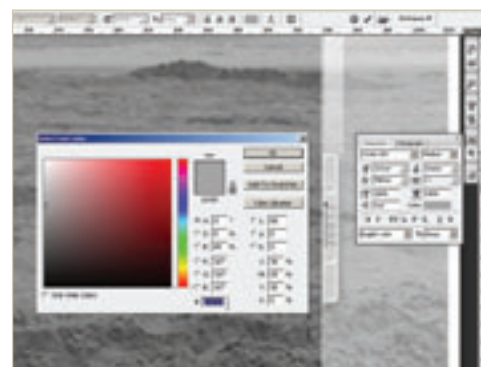
07 Add the title

Ctrl-click the FeedBG layer thumb, contract by one pixel and subtract all but 13px from the left. Create a new layer called 'TitleBG' and fill with white. Use 15pt #292828 Orator Std (sharp) for the text, setting the tracking to -50. Rotate 90 degrees and position so that the top spacing is equal.



08 Sliding structure

The Flickr feed slides from the right so it needs controls. Drag out a 22 x 100px rounded rectangle (three-pixel radius); apply a #DBDBDB Overlay, one-pixel #EDEDDE Stroke and a light Drop Shadow. Rasterize and place half over the title. Ctrl-click the TitleBG thumb, invert and clear.



09 Give it depth

Add two one-pixel vertical lines and emboss them in the Blending Options (emboss, chisel soft, one per cent depth, down, one-pixel size) for a stamped-metal effect. Set the Fill Opacity of each to zero per cent, add the 'close' text and a few direction arrows (use the Custom Shape tool).

TECHNIQUE

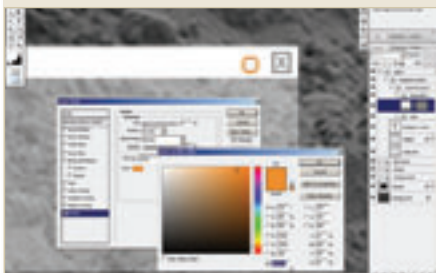
Intuitive controls

How to create Windows-like component controls to ease navigation



01 X marks the spot

For the Hide control, grab the Marquee tool and drag out a selection eight by nine pixels. Create a new layer, fill it with white and apply a one-pixel #878787 Inside Stroke in the Blending Options. Drop in a lower-case 'x', using 8.33pt #8F8F8F Orator Std.



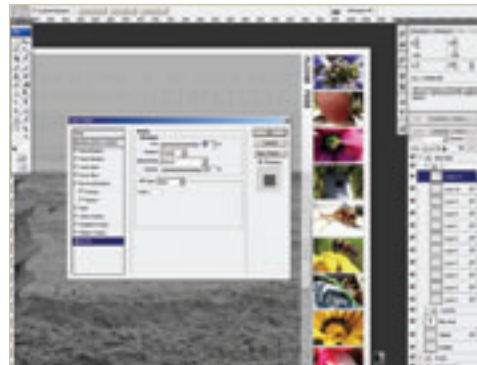
02 Expand...

Grab the Rounded Rectangle tool, set the corner radius to one pixel and drag out a shape six by five pixels in size. In Blending Options, apply a one-pixel #F69024 Outside Stroke and place to sit level with the bottom and five pixels left of the Hide control.



03 ...and collapse!

Duplicate the rounded rectangle shape and drop under the original in the Layers palette. In Blending Options, change the stroke colour to #5A5A5A. With the Move tool, hit the Up and Right keys three times each. Group the controls together and duplicate.



10 Dummy content

As the thumbs are only here as examples for development, use dummy images. Make them 66 x 46px, with a one-pixel white stroke and a one-pixel space around each. They won't be used, but it's good practice so the developer has something to measure against when building the site.



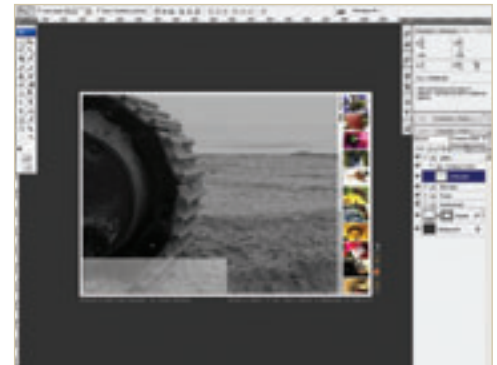
12 Top it off

Duplicate the title bar elements you created for the Flickr feed, select both layers and rotate 90 degrees anticlockwise. Ctrl-click the GalleryBG layer thumb, invert and clear the excess from the TitleBG layer. Move both layers down one pixel from the top of the GalleryBG layer.



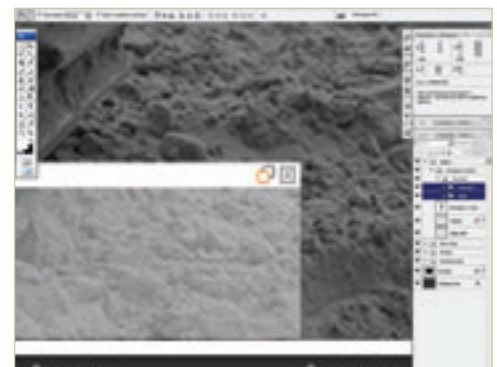
14 Thumb teasers

To finish the first gallery module off, just add in some thumbs. These will be placed dynamically using AJAX, so for the moment they're really only for layout purposes again. Use 18 42 x 39px thumbs laid out in two rows of nine, leaving a one-pixel space above and below each one.



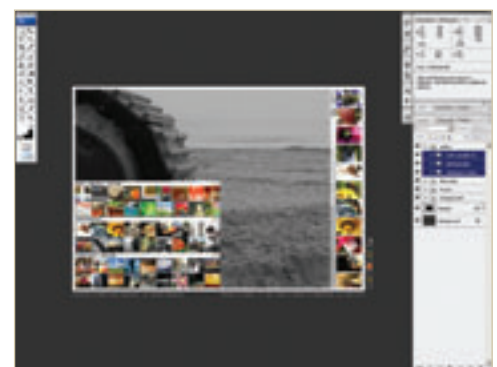
11 Modular moments

Each gallery needs to be able to expand/collapse, but load initially in a half-open state. Ctrl-click the MainBG thumb, contract by nine pixels and subtract so you're left with 386 x 95px at the bottom-left. Create a new layer, 'GalleryBG', fill with white and set the Fill Opacity to 45 per cent.



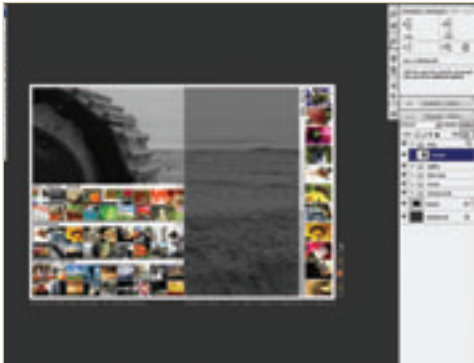
13 Open or closed?

As mentioned earlier, we want the user to be able to expand each gallery module as they wish in order to view the work displayed in greater detail, so we need trigger controls here too. Head on over to the Technique steps to learn how to create attractive, intuitive controls.



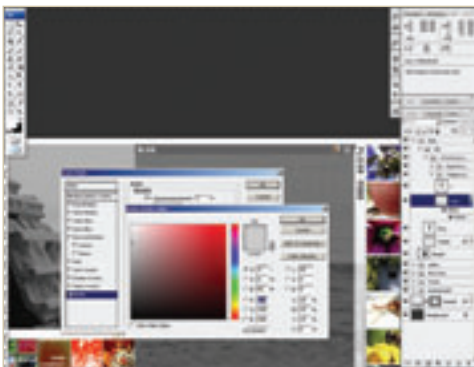
15 Stack 'em up

Duplicate the module as required, each in its own group. The beauty here is that because they all collapse down, you could fit several in, but we've used three here as it leaves a nice amount of space for the background to show through. Leave a one-pixel space between each.



16 Blogged down

For the blog module, Ctrl-click the MainBG thumb, then subtract so you've got a full-height 293px-wide selection with a one-pixel space between the gallery modules and the Flickr feed. Create a new layer, name it 'BlogBG' and fill it with solid black, setting the Fill Opacity to 35 per cent.



17 Inverted colours

The blog title bar uses the same layout as the others, but with an inverted colour scheme. Follow the same steps as for the gallery titles but change the colour of the TitleBG layer to black, setting the text to white. Use the Blending Options to change the colour of the controls.



18 RSS available...

As the content will be dynamic, it's important to lay out the text accurately with equal spacing to ease development. We used a 17pt, small caps Orator Std in bold for the title; 12.5pt for the article titles; and ten-point #FF8A00 for the date. Body text is ten-point white Tahoma.

IN DETAIL

Look at the state of it!

Learn how to smooth the transition between design and development by illustrating each state of the site, ensuring that the finished product looks exactly how it was meant to

THE LINK BETWEEN design and development has always been a little rough, more often than not resulting in a finished product that only loosely resembles the initial Photoshop mock-ups. Not particularly ideal really. To ensure that this doesn't happen, every single element of the site needs to be planned, detailed and illustrated in detail. In this example, we're looking to produce a one-page-wonder site, driven by AJAX and animated with JavaScript that has three essential states: what it looks like when it initially loads up; how it looks with all the modules completely closed; and how it looks when one of the gallery modules is fully expanded. As it is essential to the developer to know the start and end points of an animation, we need to help and provide them with screen grabs of each separate state.

As far as Photoshop is concerned, it doesn't take much work to produce these. Music to your ears, no doubt! For the fully closed state, all you have to do is move each element's entire group so that just the title bar is on display, and then clear anything that sits outside of the MainBG shape. Be warned though, make sure you save this state as a separate file (or as a snapshot in CS3) so you don't accidentally trash your work!

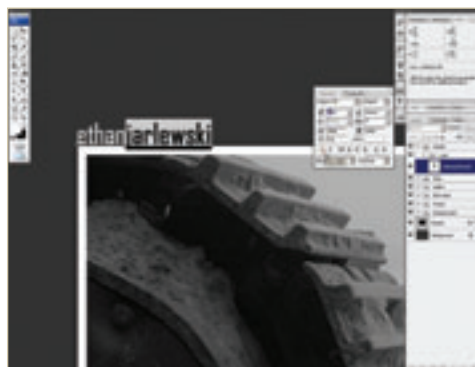
It is also vital to take into account that a lot of the graphical elements will be created using CSS as opposed to sliced images, so it's important to let the developer know exactly what the dimensions, opacity levels and base colours are for each one. This can be solved if you put together a text file that links this information with each layer in the PSD. Then when the design stage is complete, you can simply pass the slices, layered files, flattened JPEGs of each state and the textile to the developer, and then rest easy in the knowledge that everything they need is there. We'll be looking at slicing in Photoshop in the second part of this tutorial.



The first image shows the site in its initial state. Note that each gallery module is half-open



With the site in the all-closed state, the background image becomes fully visible. The visitor can change the image as desired



19 Minimalist logos

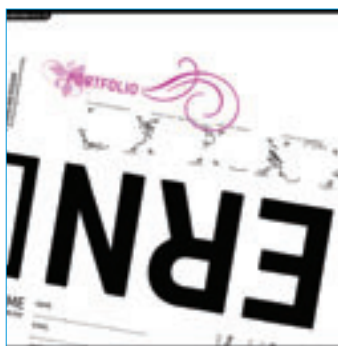
Drop your logo in to sit flush with the MainBG shape's left edge. Use a 25pt Agency FB font with crisp anti-aliasing and give the surname a bold face. Doing away with the white space between is a pretty old trick, but it nicely emphasises the minimalist style of the site.



20 Add some beats

Background music really lends itself to a portfolio site when chosen wisely. It's easy to add a Flash Media Player in the development stage, and we'll look at a good one to use in the third part of this tutorial. Check the CD for some great ambient loops!

Justin Lerner www.jlern.com



TOP TIP



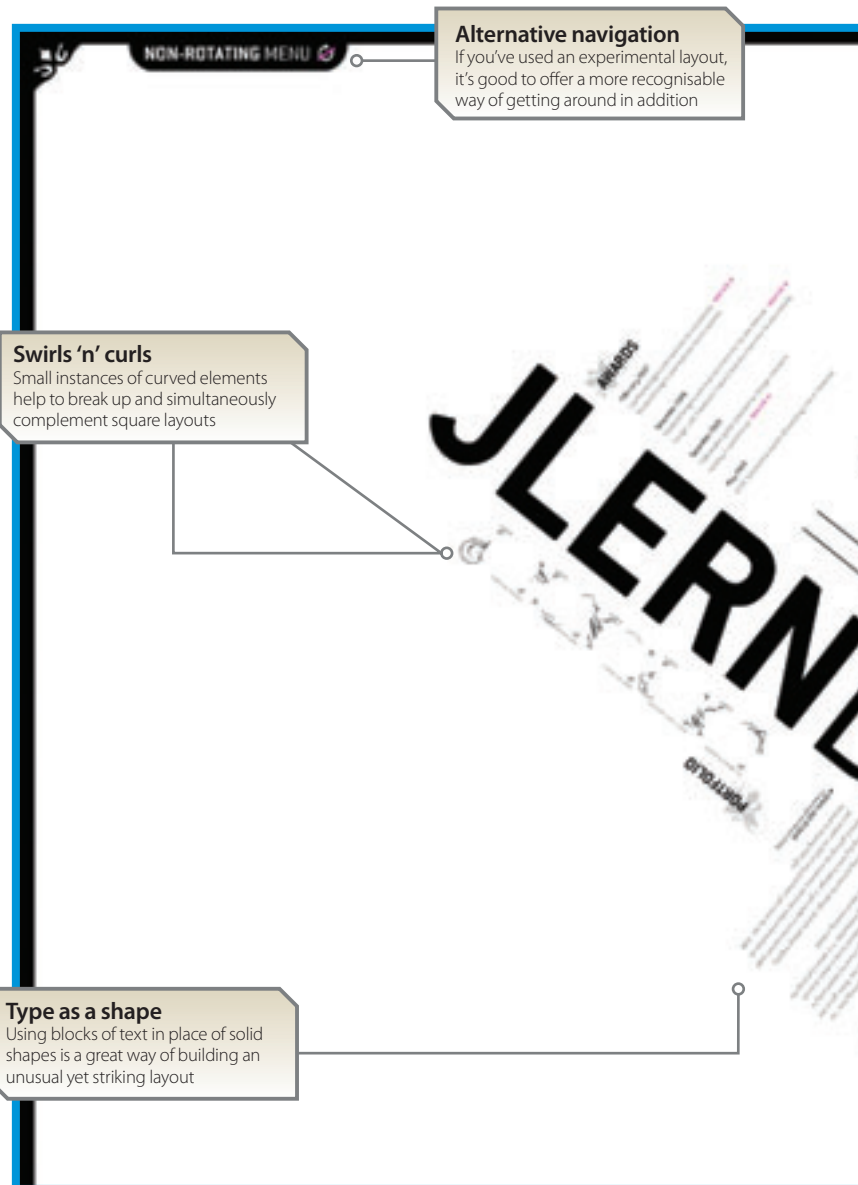
Colour on request

One of the most impressive aspects of Lerner's site is his use of colour – or lack of it, rather. Initially everything is straight-talking black on white, with small splashes of colour introduced on interactive events. In the Portfolio section, even the thumbnails are black-and-white, coming to life only when you hover your mouse over them. When putting your mock-ups together, experiment with 'on' and 'off' group states for thumbnails – you'll be surprised how much they change the overall look!

As we've been concentrating heavily on portfolios and the subject of interactivity this month, it seems only fitting to break down a site that uses an original interface. And Philadelphia's Justin Lerner certainly does that with his personal site, www.jlern.com.

A Flash extravaganza, the main structure of the site is built entirely from type. Using nothing but variations in font size and weight, Lerner gives the site depth, separating the content into sections by rotating each 90 degrees clockwise around the centre title – the only thing that gives you any idea of the 'right way up'. As you spin the whole site around with your mouse, subtle black-to-pink colour changes indicate if there's something to click on. If you're not feeling a little nauseous at this point and have managed to hit on a section as it whizzes by, the site freezes and zooms in on the corresponding block of text. The only things that break up the 'square' feel of the site are small, decorative vector leaf and swirl elements, sitting behind the section titles.

Albeit unusual and generally 'against the rules' (although there is a standard drop-down menu available for those so inclined), the navigation style is very engaging. Lerner has been sure to use a simple monochromatic colour scheme so as not to confuse further. The result is an impressive showcase of talent that's obviously happy to push the boundaries.



Structural typography

The site is built entirely on typographical elements, varying size, weight and direction

To re-create Lerner's illusion of shape in your own designs, start by laying solid colour rectangles around a main centre point until you're left with a blocky, unusual shape. Grab the Text tool, drag out an area the same size as one of the shapes and for now, fill it with dummy text (www.lipsum.com). Hide the original solid colour background and repeat until you've replaced all of them. Add upper-case titles to each text area, and play around with different font weights. Drop your main heading in to the centre point, then Shift-rotate (Ctrl+T) the surrounding text areas



through 90, 180 and 270 degrees, adjusting the paragraph alignment as you go. Pay special attention to the spacing – each 'solid edge' should sit the same distance away from the heading as the character tracking of the heading itself.

Magnify

Playing with zoom levels while you're working allows a much greater amount of detail

At its opening state, Lerner's site only clearly displays the heading and the titles of each section – although it is obvious from the tiny text that there is much more to it, backed up by the coloured rollovers.

When setting up your canvas, create a 300dpi document instead of a lower screen resolution. Although this is good practice anyway in case certain design elements are later required for print, the benefits for web design are rarely seen. Work at 25 per cent magnification, then once you've got your basic layout sorted, zoom in at 25 per cent, treating



each new level as a new canvas. Work with relative font sizes, strokes and effects, and by the time you've added the final detail at 100 per cent and zoomed back out to 25 per cent, you'll be surprised at the level of intricacy you've just created!



YOUR EXPERT

Jack Hayward is well-qualified in all things Photoshop. An avid user for over a decade, he's passionate about anything visual, fascinated by everything psychological and excited about all things interactive. His scribbles can be found at www.jackhayward.co.uk.



Rotate sections

Experiment with free-transforming elements through 90 degrees to create head-turning artwork

STEP BY STEP

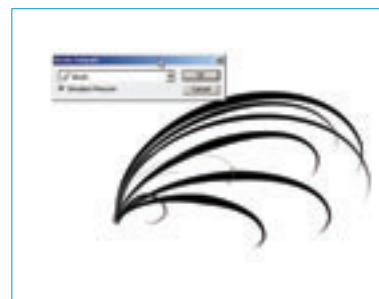
Custom curls

Create stylish swirls and classy curls using the Freeform Pen tool and stroked paths



01 Draw the paths

Create a new layer and grab the Freeform Pen tool (Shift+P). Open up the Pen options from the top toolbar and set the Curve Fit value to ten pixels. Draw a rough curve – Photoshop will smooth it out for you. Tweak it using the Convert Anchor Point tool until you're completely satisfied.



02 Stroke

Grab the Brush tool and change the tip to a hard 19px. With the Direct Selection tool, right-click the path and choose Stroke Path. Select the Brush in the drop-down, tick Simulate Pressure and press OK. Use Free Transform to create several instances, experimenting with the path and brush size.



03 Dark roots

Open up the Layer Blending Options and apply light Drop and Inner Shadows (20 per cent at a two-pixel distance), then a Gradient Overlay to match your colour scheme. It's always good to go from dark at the inside to light and bright on the outside to give your shape 'roots'.

Frame up

When working on a design, make it look like a work of art by adding a border

If you're working on a full-screen or even a minimalist design, adding a border is really easy to do and frames your work just like an oil on canvas. To start, create a new layer on top of your background layer, grab the Marquee tool and Select All (Ctrl+A). Contract the selection by ten pixels (Select>Modify>Contract) and invert it (Shift+Ctrl+I). Hit D followed by X to swap the default colours, and then fill (Ctrl+Backspace). Grab the Custom Shape tool and load all the shapes available. Drag out a shape with a solid black fill that suits the style of



your site, and position it so that the visible part will mirror perfectly in each corner. Illustrator also has a pretty great symbols library, any of which you can import as a Smart Object. If you're feeling a little more adventurous, try designing your own.

Ritzy résumés

Having a résumé available from your site that matches the theme is a great touch

If your portfolio garners professional interest, then allowing the potential client to download a slim version of your CV can be quite powerful – it makes them feel like you want to work for them as opposed to them bothering you, as it's so often seen in this industry.

We're not going to go into detail about writing a résumé, so take a look at Lerner's for the perfect example. Keep it to a single A4 page and if you're producing it in Photoshop, be sure to work on a 300dpi A4 canvas and keep all your text and shape objects as vector paths. Try to follow the theme of your

JUSTINLERNER

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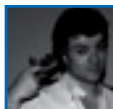
RESUME

EXPERIENCE
POWER DESIGN, MYNILE, PA
AUGUST 2003 – PRESENT
INTERACTIVE SPECIALIST / DESIGNER
DUTIES INCLUDE:
• LEAD ROLE ON ALL FLASH PROJECTS
• COMPLETE INTERACTIVE PROJECT DEVELOPMENT FROM DESIGN PHASE TO PROGRAMMING (USING HTML, FLASH, PHP AND MYSQL)
• WORKING DIRECTLY WITH CLIENTS AND PARTICIPATING IN PREDES
• OVERSEEING WEB PROJECTS AND PROVIDING TECHNICAL ASSISTANCE
• CLIENTS INCLUDE: CMTI, GLADSDITHALINE, COMEDY CENTRAL, COMCAST

JLERN DESIGN: PLYMOUTH MEETING, PA

main site – design it at the same time if it helps – so if you've used variations in font such as weight or size, stick to them to ensure the two sit well together. Render off as an optimised PDF when you're done so the client can easily print off a high-quality copy.





YOUR EXPERT

Justin Maller is a freelance artist from Melbourne, Australia. He's been working with digital art for seven years, and as a professional for the last two. He's no stranger to writing tutorials and has worked for several design titles. www.superlover.com.au

Craft abstract mixed media designs in Photoshop

THE BRIEF

ON THE CD

Tutorial files:
All the files you will need are on this issue's CD

TUTORIAL OBJECTIVE

Improve your images with sampling and blending techniques

TIME REQUIRED

Two hours

SKILL LEVEL



Craft abstract designs

CREATING DYNAMIC IMAGES FULL OF ENERGY AND TEXTURE IS A SIMPLE PROCESS WHEN YOU MAXIMISE THE POTENTIAL OF YOUR ILLUSTRATIONS AND STOCK PHOTOGRAPHY

THERE ARE FEW types of image that are more fun to create than those full of movement and power. Sitting back and admiring a finished visual piece that almost jumps off the screen is hugely satisfying. However, there's a fine balance between composing a unique, vibrant image and creating a chaotic monstrosity that burns the viewer's retinas. The trick to making something aesthetically pleasing is to build the energy in the piece with harmonious components. By using your existing illustrations to sample and recontextualise your stock photography, you can create new illustrative elements that

blend perfectly with your backgrounds and combine to create a cohesive composition.

In this tutorial you'll be shown how to really maximise the potential of your illustrations and stock photography, as we examine some handy and very versatile sampling and blending techniques that are the bread and butter of any graphic artist who regularly combines multiple mediums of illustration. We'll also take a look at some nifty adjustment layer-based methods that give great results with minimal effort. Lots to do – let's get on with it then!

01 Getting started

Open up wall.jpg from this month's CD. This photograph is great for our purposes – plenty of texture and detail, but nothing too obtrusive to distract the eye from the illustrations we'll create.



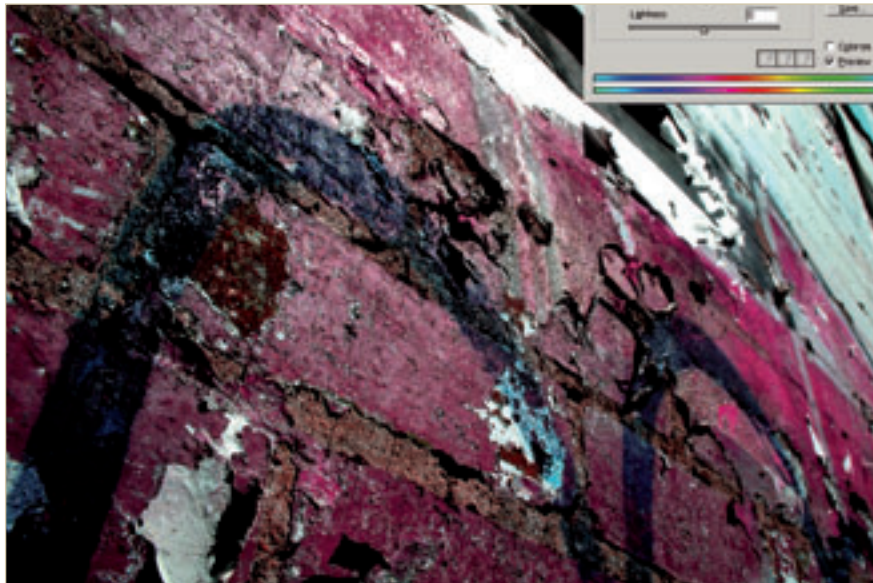
02 Level tweaking

First things first. Let's add a bit more contrast to this photograph. Hit Cmd/Ctrl+L to bring up the Levels interface (if desired, you can add a Levels adjustment layer at this point instead of adjusting the layer itself). Drag the Shadows and Highlights sliders in a bit, and move the mid-tones slightly towards the Highlight marker to get a rich level balance.



03 Pick your palette

It's time to prepare our base palette. Bring up the Hue/Saturation dialog by hitting Cmd/Ctrl+U, and move the Hue slider to the -25 position. This results in funky magenta and cyan tones that will work wonderfully for our piece. Rotate the Canvas 90 degrees clockwise and then flip it horizontally.



04 Tracing

Open up arm.jpg from the CD. This image will be the basis of our central arm element. Feel free to alter the concept here if you wish; use a flower stem, a pipe – anything with a column-like appearance will do nicely. Zoom in nice and tight on the stock, and start tracing the element with the Pen tool (P).

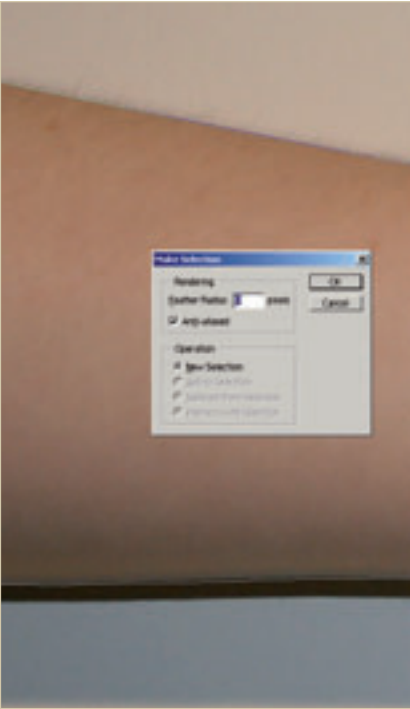


Threshold Highlight

THE THRESHOLD HIGHLIGHT technique is an effective way to get a graffiti-style highlight to work in with your images. The process itself is straightforward. Chop your stock out from the background as you usually would, and duplicate the selection into a new layer. Duplicate this layer and add a Threshold adjustment layer. You'll need to experiment with the values until you find something that gets an adequate selection of highlights. Set white as your Foreground Color and bring up the Select>Color Range interface. Set Fuzziness to 200 and hit OK. Create a new layer and fill with white (or any other colour). Deselect to observe the effect; repeat with a different Threshold level until you are satisfied. This technique is especially powerful when used with Layer Masks to provide contrast.

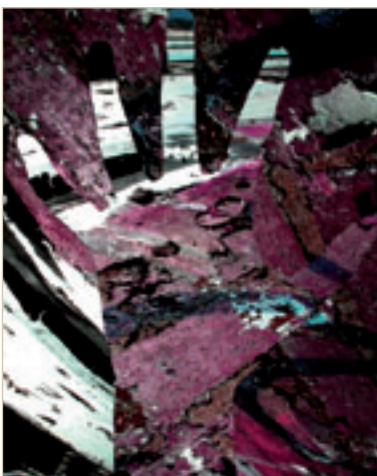
05 Making a selection

Complete your trace by clicking again on the original anchor point. Make sure your trace is as accurate as possible – the more anchor points, the better. Right-click in the middle of the path and hit Make Selection. Ensure that Feather Radius is set to 0 and then make a new selection.



06 Importing

Copy and paste your selection into a new layer. Duplicate this layer back into your main document. Now position it in the centre of the document, with the fingertips just beneath the top of the image.



08 Texture time

Cmd/Ctrl-click your Hand layer to get its selection, then hide it. Transform this selection by rotating it 180 degrees (Select>Transform Selection). Position the new selection over an interesting part of the background, then copy and paste to a new layer. Flip this one vertically and place it on top of the original Hand layer.



07 Adjusting

Hit Cmd/Ctrl+U and reduce Saturation to 0. Hit Cmd/Ctrl+L to bring up Levels. Now drag the Shadows slider to the first major Level spike from the left, and the Highlights slider to the one on the right. The mid-tones should slide slightly towards the highlights to get a nice dramatic contrast.



09 Multiply and resample

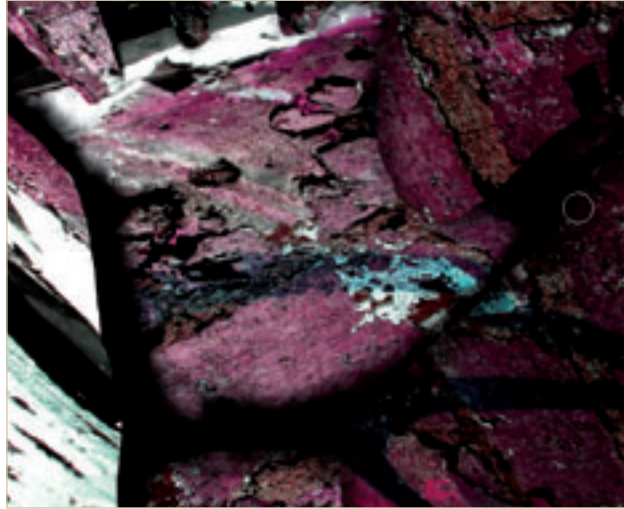
Set the Blending mode on this Texture layer to Multiply. This sits nicely over our contrast hand, which now serves as a shadow map and gives an awesome blended feel to the arm element. Resampling in this fashion is vital for a cohesive piece. Feel free to redo the last two steps until you get the most interesting texture selection possible.

Resampling images

AS THIS TUTORIAL shows, resampling background stock can give you a wide variety of results, and can go a long way towards constructing an image that's naturally cohesive. However, there is a fine line between 'cohesive' and 'the same thing again and again'. As such, it's important to vary the way you sample base photography. The easiest method is to duplicate the base layer and distort it. This can be anything from simple horizontal and background flips to applying distortion filters like a Twirl or a Wave effect. However, as with many things, prevention is better (and easier) than cure. When you're taking the photographs that will comprise your basis, make sure you take multiple shots from various angles. This way, although you are sampling the same scene, you will have a selection of angles and perspectives to work with, ensuring that your piece doesn't become staid because of repetition.

Using the channels

ALTHOUGH ZOOMING IN on a photograph and carefully using the Pen tool to trace a stock image will typically give you the best and most accurate result, there are some things that simply cannot be extracted from their backgrounds like this. Hair is the best example, but detailed and slightly opaque objects such as grass and clouds can be similarly difficult to try and outline. Fortunately, you can manipulate an image's channels in order to make a superbly detailed and accurate alpha mask. Open up cloud.jpg from the CD and bring up the Channels palette. Duplicate the Red channel and ensure that all others are hidden. Now, alter the Channels Levels (Cmd/Ctrl+L) by dragging the Shadow and Highlight sliders towards the centre. By simply Cmd/Ctrl-clicking the channel, you can get a perfectly accurate selection of the cloud, and can subsequently copy it into the main document.

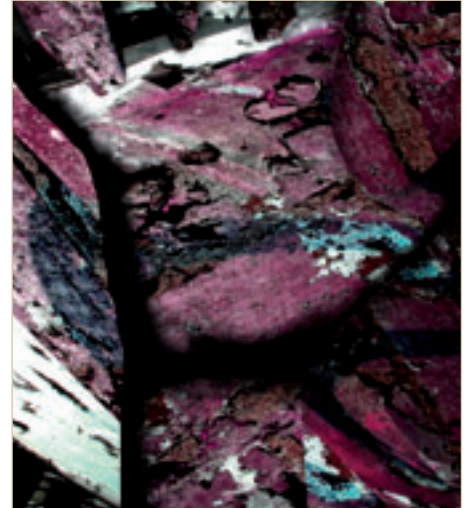


10 Shadow

Cmd/Ctrl-click either Hand layer to get a selection, then create a new layer. Fill with 100 per cent black and deselect. Apply a Gaussian Blur (Filters>Blur>Gaussian Blur) of 30-40 pixels. Drag the layer behind the other hands, and offset it down and to the right to match the light source. Create a new layer set here, and drag all of the Hand layers into it.

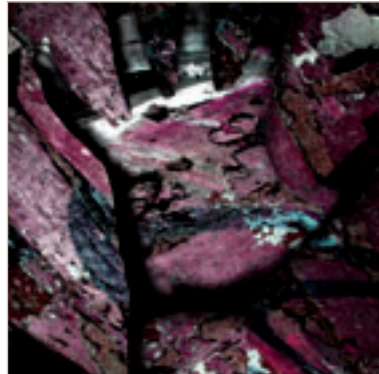
11 Strip sample: part one

Using the Line tool (U), draw a two-inch thick line on a 45-degree angle into a new layer. Cmd/Ctrl-click the layer to get its selection, and then sample a busy part of the background. Paste to a new layer and position over the white section in the lower left-hand corner.



13 Shape sample: part one

To break up the monotony of the background, let's introduce a shape sample. Hide the Hand layer set, and either sketch a shape in a new layer or import the one we prepared earlier from shape.psd on this month's CD.

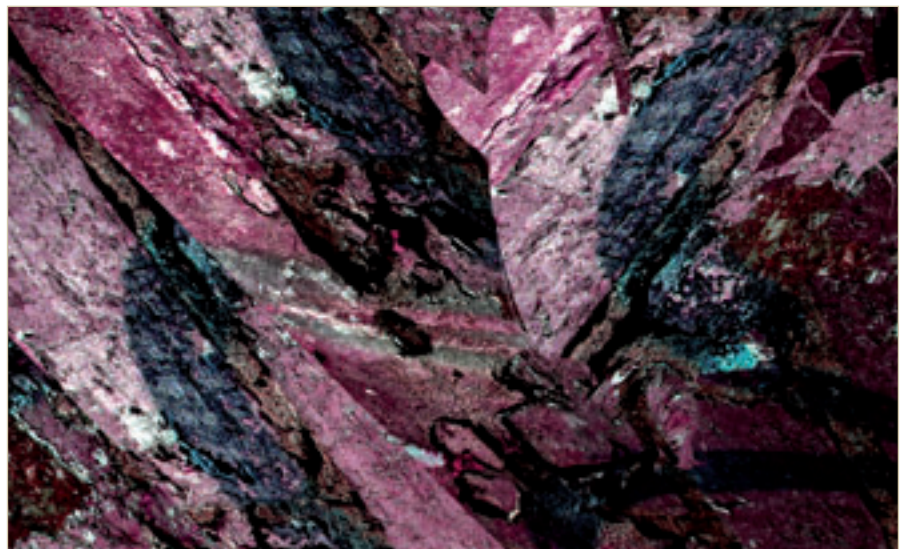


12 Strip sample: part two


Repeat the process, sampling from a different part of the image. The best part of resampling is that it enables you to easily and quickly fix up weak parts of an image. Now experiment with blending modes – Multiply is especially effective.

14 Shape sample: part two

Cmd/Ctrl-click the Shape layer and transform the selection until you have an effective sample. Copy and paste to a new layer, then flip the layer vertically (and/or horizontally) to add a higher level of texture contrast. Position this layer at the top-right of the image.

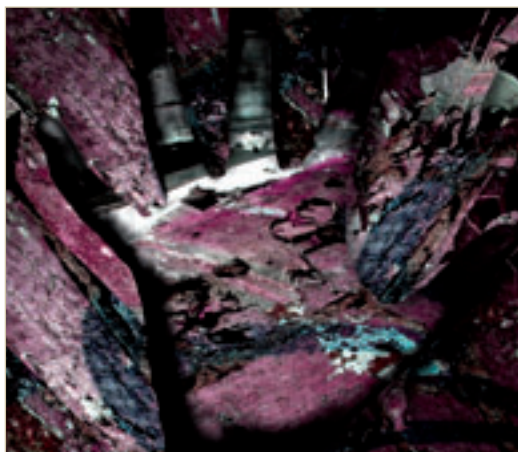


Layer Sets

 **EVERYBODY SHOULD MAKE** good use of the Layer Sets feature. It should be written on the Photoshop disc! We'd go so far as to say that this should be the first commandment of Photoshop: build elements within layer sets. Navigating your way through a Photoshop document is made a hundred times easier when you go to the small effort that it takes to add and then name a layer set for each aspect of your image. Editing is also simplified because you can switch multiple layers off with a single click, or even change the entire set's blending mode at will. The Layer Sets function is one of those fundamentally wonderful features that you will never stop using once you start. You'll even wonder how you ever managed without it!

15 Shape sample: part three

Using the same technique as in step ten, add a Shadow layer behind this shape sample, again positioning slightly down and to the right to maintain a consistent light source. Create a new layer and brush out any small unwanted sections using a black brush, then reintroduce the Hand layer set and make sure everything looks balanced.

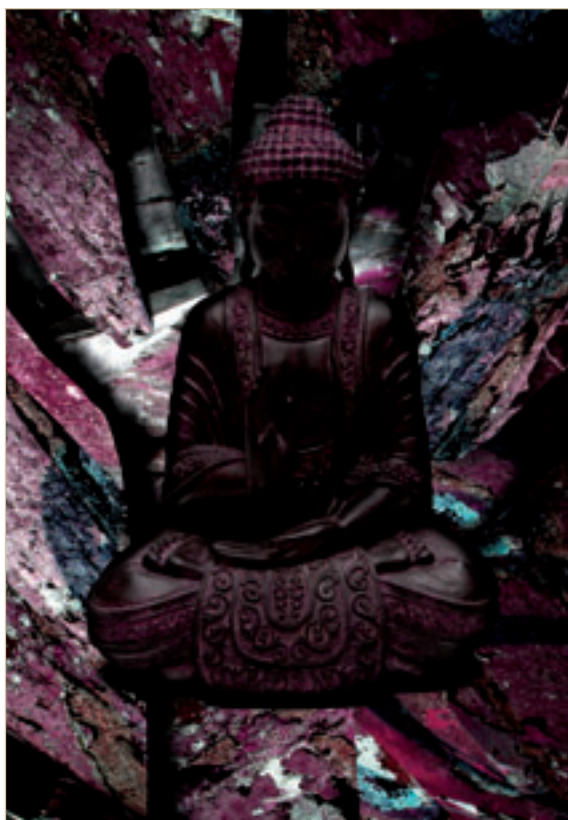


16 Buddha: part one

Open up buddha.jpg from this month's CD. As with the hand at the start of the tutorial, zoom in close and carefully make an accurate trace around the figure with the Pen tool, copying and pasting into a new layer when you have completed it. Duplicate this layer into the main composition.

17 Buddha: part two

Adjust the Levels on the Buddha in much the same way as the wall, with the Shadow and Highlight sliders moving towards the spikes, and the mid-tones moving slightly towards the highlights. Adjust the Hue/Saturation to Hue as -50 and Saturation as -30, so that it sits nicely on top of our background.



18 Color Balance

Now hit Cmd/Ctrl+B to bring up Color Balance. Tweak the Highlights and Midtones towards Cyan, and the Shadows slightly towards Magenta. Resize the figure (Cmd/Ctrl+T to Free Transform, holding Shift to lock Height/Width proportions) so that it looks like it belongs in the palm of our hand.

19 Buddha's threshold

Use the Threshold technique (see the boxout on page 63) to create a Threshold Highlights layer. Add a Layer Mask and use a Grunge brush to put a couple of holes in the highlight. Duplicate the base Buddha layer and rotate it 15 degrees counterclockwise. Set it behind and to the left of our central Buddha. Duplicate and flip horizontally to flank the right side.



20 Objects enter the fray

Open up objects.psd from this month's CD. Duplicate each layer into the main composition and arrange them carefully behind the Buddha figure. Try to accentuate the natural lines of the hand by placing the objects in complementary positions on similar angles. Add shadows to each where appropriate.

21 Smaller samples

Use these 3D object layers to make fresh shape samples of the background. Try using the technique discussed in the Resampling images boxout (page 64) to get more varied results. Splice these in and around behind the Buddha; experiment to see what works best for you. Placing some above the 3D and some below will give you the best results.



Adjustment layers

THROUGHOUT THIS TUTORIAL, we have individually altered aspects of layers, such as their Levels, Color Balance and Hue/Saturation. This is frequently necessary, especially when dealing with a disparate selection of photography. However, it's possible to simply use one global adjustment layer to apply a universal effect to all underlying layers. Make sure that you experiment to see if this is possible when composing, because it can save you a lot of time and effort.

22 Clouds

Open clouds.jpg from this month's CD and use the Channel Selection technique (see page 65) to extract the cloud. Duplicate into the main work and set the Blending mode to Screen. Dot around the piece, flipping horizontally occasionally to avoid a cloned look.



23 Wrapping up!

Our hand has become a little lost, so let's duplicate the Shadow layer and invert it (Cmd/Ctrl+I). Set it up and to the left on around 50 per cent Opacity to give a nice glow effect. To unify the piece, add a Color Balance adjustment layer. Set Shadow inputs as -17, 0, 17 and Highlights to 0, 0, 15 to finalise the palette and complete the blending of the elements.



THE BRIEF

ON THE CD

Tutorial files:
Any files you need will be on the CD

TUTORIAL OBJECTIVE

Use and modify a Dreamweaver CS3 HTML layout

TIME REQUIRED

30 minutes +

SKILL LEVEL



Speed up page creation with HTML layouts

CREATE WEB PAGES IN DOUBLE-QUICK TIME USING PREDEFINED, STANDARDS-FRIENDLY, CSS-DRIVEN HTML LAYOUTS

THE VAST MAJORITY of web pages are created using the same basic layouts. One column, two columns or three columns with headers and footers and sidebars make up the vast majority of web page layouts in one combination or another. Throw in fixed widths and liquid layouts and this is about every base covered. If the same basic structures are to be used on a regular basis, then why not create a set ready to reduce page design time. This is exactly what Dreamweaver

CS3 has done, providing users with over 30 essential HTML layouts. The two-column fixed, right sidebar, header and footer sample used throughout the tutorial is just one example of what's on offer. Others include one-column fixed, centred, two-column liquid, left sidebar and three-column absolutely positioned, header and footer to name a few. Here, we aim to show you how you can take any of the HTML layouts and create stunning, pro-class pages in double-quick time.



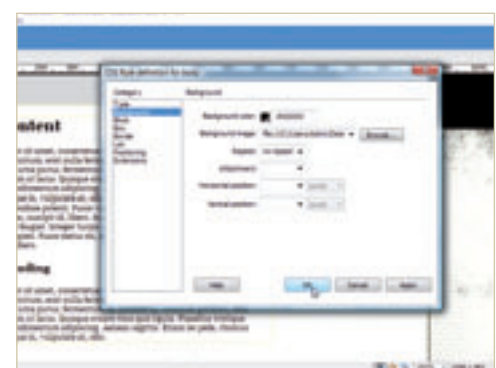
01 Select a layout

To start the page-building process, head to the File menu and select New. From the New Document dialog window, select Blank Page>HTML. We have chosen to use the two-column fixed, right sidebar, header and footer layout. Select and press Create to view the new page.



02 Define body text

The first step to a far prettier page starts with defining the body tag. Double-click body in the CSS Panel to open the Rule definition window. Select the desired font – we have chosen Georgia – and the desired size, ie 12, and press Apply to make the changes.



03 Big background

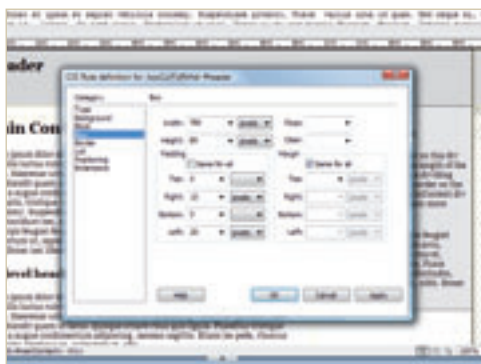
Now switch to the Background category and hit the Browse button. Select the background image, press OK and Apply to add the image. Select no-repeat from the Repeat list as only one instance is needed. Change the Background color to black to blend with the image.



YOUR EXPERT

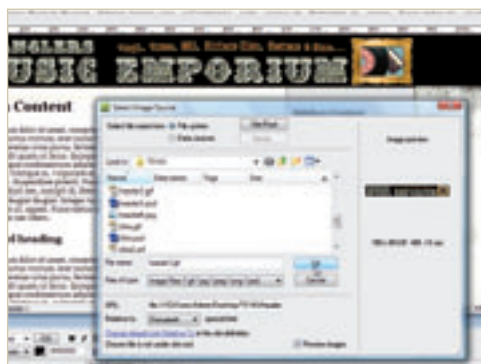
Steve Jenkins is a keen designer and developer, who started creating websites after attending Bournemouth University and loves tackling the most testing of Dreamweaver problems. To see a sample of Steve's work, take a visit to www.thesouthend.co.uk.

Speed up page creation with HTML layouts



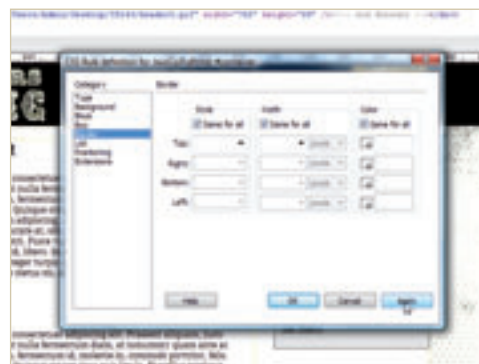
04 Matching header

The header is to contain an image that continues the flow of the background image. To adjust the height, first double-click #header in CSS Styles. Select Box and add the appropriate width and height to match, in this case 780 by 89 pixels. Press Apply to change.



05 No padding please

The #header tag incorporates 30 pixels of padding, which makes the tag overrun its intended 780-pixel target. Set the padding to zero for all and press Apply. Next select the Header text and h1 tags via Code view and delete. Now head to the Insert menu and add the header image.



06 No borders

The #header tag is inside the #container tag, which boasts a one-pixel border. This puts the header tag out of line by one pixel. Double-click #container followed by Border, remove all references to the border and press Apply. Save the file and Preview in Browser (File>Preview in Browser).



07 Main content

The first step is to get rid of all the header tags starting with mainContent. Delete this via Code view and add the title to be used. Now delete the h2 level heading, again via Code view. Now insert a div tag (Insert>Layout Objects>Div Tag) after the </p> of the first paragraph.



08 Creating content layout

After the closing </p> of the second paragraph, insert a div tag as before. Copy the second paragraph of text including the paragraph tags, <p> and </p>. Paste after the closing div tag just added. The newly added div tags will be styled later to create a divider between the text.



09 New text style

Each of the sections in #mainContent is to have a title with the same style. Head to the Text menu and select CSS Styles>New. Name the class 'titles', press OK and choose the font, size, style and colour. Press OK. Select the top title and apply the new style from the Style list in Properties.



10 Add image

We are now going to add an image to the first section of text. Place the cursor at the beginning of the text, head to the Insert menu and select an image. This will displace the text, so click on the image and select Left from the Align list in Properties. Now delete any text that overruns.



11 More images

Apply the same process to the remaining sections of text. All the images are butted right up to the text, so padding needs to be added. Go to Text>CSS Styles>New, name the class 'imgpad'; press OK. Select Box, add ten pixels to Right and press OK. Select the images and add the new class.



12 Styling the div tags

Go to Text>CSS Styles>New and name the class borders. Press OK and select the Border category. Now uncheck the Same for all check boxes and select dashed from Style and Bottom. Add one to Bottom, select colour and press OK. Now select div tags, apply style and delete text.



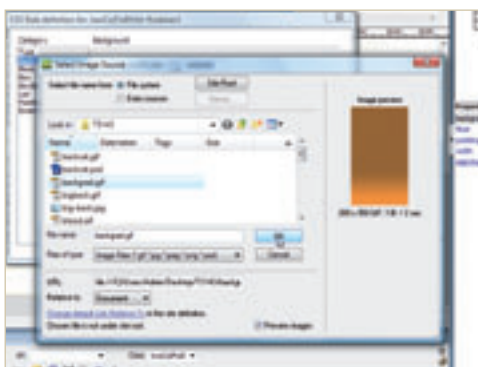
13 Padding and titles

To complete the mainContent tag, head to the CSS panel and double-click #mainContent. Select the Box category and add ten to Top under Padding. Press Apply and OK. Add titles to the two untitled sections and style with the same style used in the main title. Delete body text to fit.



14 Sidebar time

First select the Sidebar 1 Content text and delete via Code view. This is to make sure the h3 tags are deleted as well. Now place the cursor before the first <p> tag, head to Insert and select an image to add. Now select the image, press the right arrow (on the keyboard) and insert a break.




15 Sidebar background

At the end of the first paragraph, insert another image after the closing paragraph tag. Select the images one at a time and centre them by selecting the Align Center icon in Properties. To complete the sidebar, double-click sidebar1 and add a background image and matching colour.

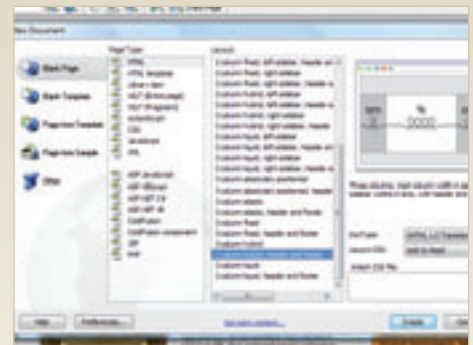
IN DETAIL

Dreamweaver CS3 layouts and templates

With over 30 HTML layouts ready to be taken advantage of, designers will be creating pages in half the time. Plus, all the layouts are ready to become templates with a single click

 THE HTML LAYOUTS in Dreamweaver CS3 provide a rich and varied selection, catering for almost any design need. The beauty of the layouts is in that they not only come with one, two and three column combinations, but also mix up the measurements. Fixed widths in pixels are popular with many designers and these are well-catered for. However, for those looking for a little more flexibility, per cent and ems are given plenty of scope. Per cent is an ideal solution for those who want to cater for all resolutions, while ems is great for scalability. However, CS3 doesn't stick with the obvious (which is good news for the ambitious) and mixes and matches both options, creating what it likes to call a hybrid. For example, the two-column hybrid, left sidebar, header and footer provides the main column in per cent while the left sidebar width is in ems. Another example lies in three-column hybrid, column and footer; this dedicates the left and right columns to ems, while the central column is given over to per cent. This kind of flexibility means the users are getting plenty of scope for well-designed standards-compliant pages without the hassle of creating from scratch.

The Dreamweaver CS3 HTML layouts are not just dedicated to a one-off design. The program introduces even more workload-reducing flexibility by placing the same 30 plus layouts under the HTML Template banner as well. This gives the option to take any layout, redesign as desired and add a few editable regions to create a master page for even quicker page design. Plus, as soon as a template is created, it adds itself to Page from Template in the New Document dialog window. Not only does this assist with speedy web page design in the future, it gives a designer the option to create a library of templates. These can be used for personal use or make a great brochure to show prospective clients. Alternatively, they could be sold on to third parties, who can take your genius and add their own skew.



Add flexibility and scalability by choosing one of the many HTML layouts that use per cent and ems



Use the Page from Template option in New Document to open templates created with the new CS3 HTML layouts



16 The footer

To complete the page design, first double-click #footer in the CSS panel. Next add a background image and then select the Box category to adjust the height for the image to fit. Now delete the Footer text and add the appropriate text links and company information.



17 Finishing touches

Make the links active by adding the desired hyperlinks. Now create the styles needed to style the text – try two different colours and make the company info slightly smaller. Select the text and apply the style. Replace all the default text with your own, save and preview the page.

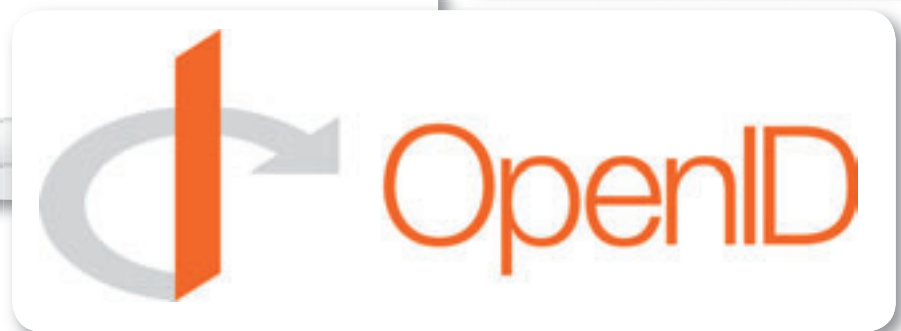
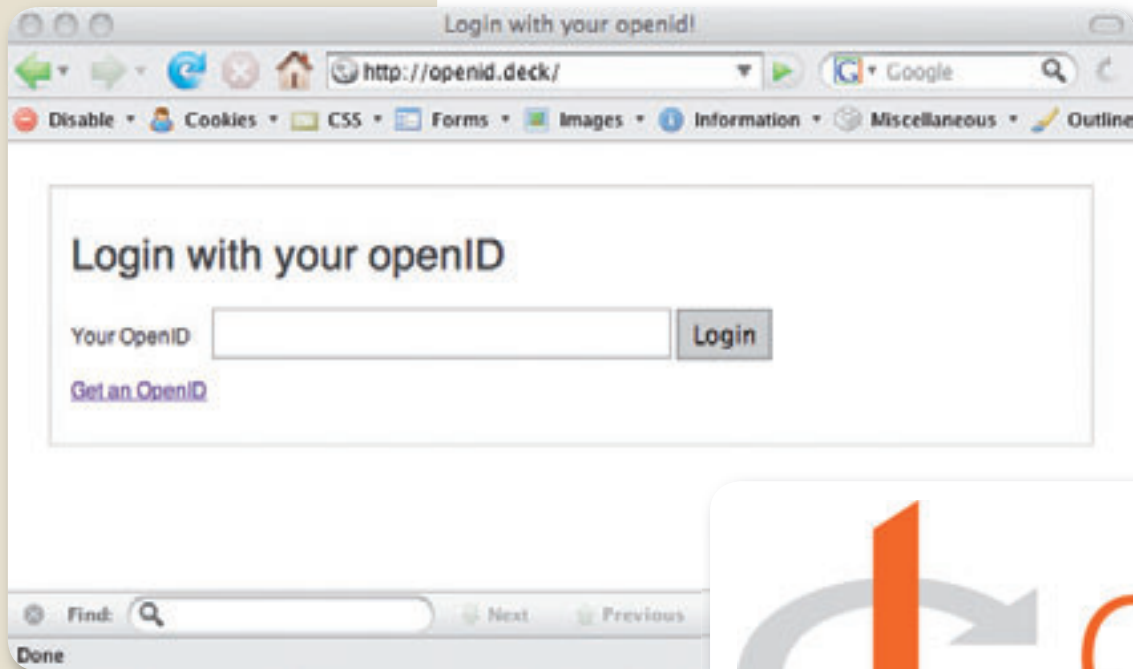


As featured in

Tutorial



Dreamweaver CS3



THE BRIEF

ON THE CD

Tutorial files:
All the files you will need
are on this issue's CD

TUTORIAL OBJECTIVE

Learn how Open ID can enable the
authentication of users on your site

TIME REQUIRED

One hour

SKILL LEVEL



Enabling single sign-on using Open ID login, PHP and MySQL

ENABLE YOUR WEB APPLICATION FOR OPEN ID TO LET YOUR USERS LOG IN WITHOUT HAVING TO REMEMBER YET ANOTHER PASSWORD

THINK ABOUT THE number of username and password combinations you have to remember on a daily basis – bank logins, social networking sites, Flickr, Twitter, Basecamp and so on. The more security-conscious of us will accept that using the same username and password isn't a great idea, as if you use that combination on an untrusted site, they could use it to log in as you into everywhere else. We would rather be storing more useful things than passwords in our brains, so we're very happy that Open ID is becoming a popular way for websites to authenticate users.

So what is an Open ID? You can get an Open ID by various methods; the simplest is to choose a trusted Open ID provider and sign up with them. You might also find that one of the sites you already sign into is an Open ID provider – AOL, LiveJournal and most recently Yahoo! can all act as your Open ID. You will then be given a username, something like <http://yourname.myOpenID.com>. When you log in on an Open ID-enabled site, you simply enter this URL into their login box. The site will then redirect out to your Open ID provider where you will log in and the provider

then checks that you are happy to give the other site your details. You will then be sent back to the website and are logged in.

The benefits to users are that they don't need to remember lots of different sets of login details, and can also keep the actual password details on one trusted site. For the site owner, you don't need to store password details on your site and deal with forgotten passwords and so on. If you have built a password login system for a site before, then enabling Open ID just means a small shift in thinking – for storing a username and password on your site and writing a script to check them, to firing out a request to an external site and getting information back as to whether your user is logged in or not. You can still tie any information specific to your site to a user, by linking that information to their Open ID in your database.

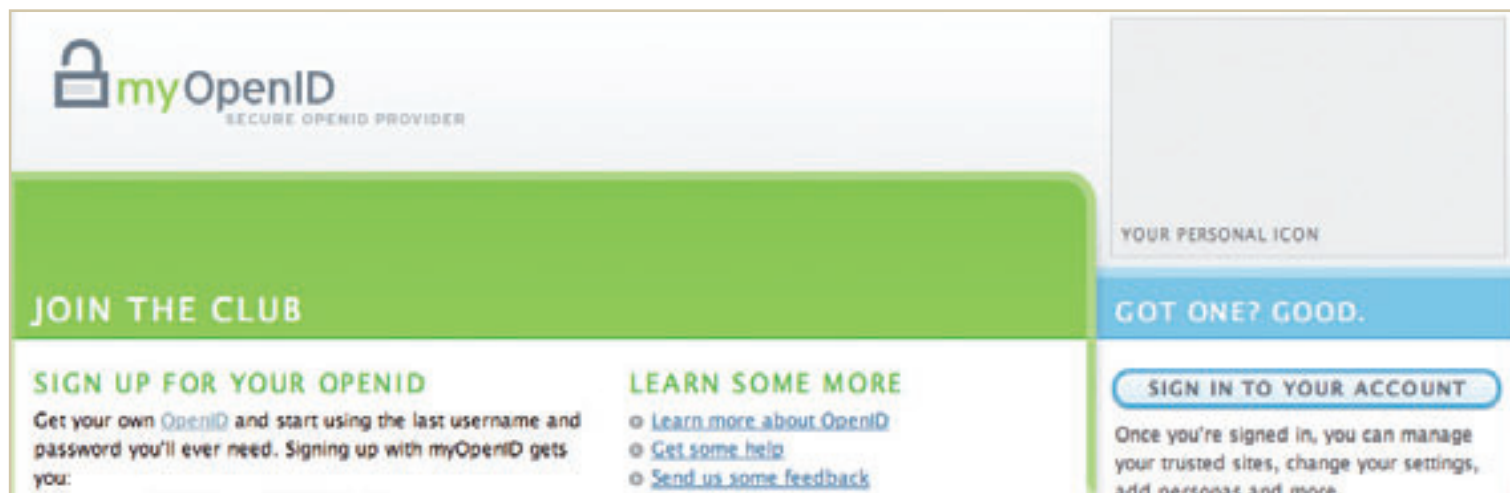
So now you know what Open ID is, this tutorial will have a look at how you might enable your site for Open ID logins. We'll be using PHP and MySQL, although the principles are the same whichever language you choose.



YOUR EXPERT

Rachel Andrew is a director of UK web development consultancy edgeofmyseat.com, doing front and back-end web development for design agencies. She is also the author of a number of books such as *The CSS Anthology*, and is a member of The Web Standards Project.

Enabling single sign-on using Open ID login, PHP and MySQL



01 Get your Open ID

The first step is to have an Open ID to use to test your sign-on. If you already have an Open ID or are signed up for a site that gives you one, then you are all set. Otherwise, sign up at a provider such as www.myopenid.com and get your own Open ID URL.



02 Download the PHP class

We will use a PHP class in order to simplify the process of communicating with the Open ID provider. The class we are going to use is the Simple Open ID Class that is available from www.phpclasses.org/browse/package/3290.html. The version of the class we have used is available in the code sample, however, if you are going to use this in a live application, check the site for any updates to it. In the zip that you have downloaded, the file you will need is `class.openid.v2.php`. Save this into your site, naming it anything you like.

03 Create a form

In a new PHP file, add a form; all we need is a field for the user to enter their Open ID URL and a Submit button. Set the form to post back to itself for this example. We've also added a link to [myopenid.com](http://www.myopenid.com) so the user can go and get an Open ID if they don't have one yet.

```
<form action="index.php" method="post">
<h1>Login with your openID</h1>
<div>
    <div><label for="openid">Your OpenID</label><input
type="text" name="openid_url" id="openid" class="text" />
    <input type="submit" name="login" value="Login" class="btn"
/></div>
    <p><a href="http://www.myopenid.com/">Get an OpenID</a></p>
</div>
</form>
```

04 Posting the form

We now need to deal with what happens when the user posts the form containing their Open ID. At the very top of this script inside PHP tags, include the class we downloaded earlier and create a new instance of that class.

```
require('class.openid.v2.php');
if ($_POST) {
    $openid = new OpenIDService();
```

05 Set up the request

In addition to checking whether the user is valid, we can ask the Open ID server to send us back some information about the user, such as their email address, full name and gender. The user needs to have already entered this information into their profile and agree to send it to you when they get to the Open ID site. The following lines of code set the user's identity (this is the URL they entered into the text box), the site that is asking to be authorised, some required fields that we need and some optional fields.

```
$openid->SetIdentity($_POST['Open_ID_url']);
$openid->SetTrustRoot('http://' . $_SERVER['HTTP_HOST']);
$openid->SetRequiredFields(array('email','fullname'));
$openid->SetOptionalFields(array('dob','gender','country'));
```

06 Redirect to the Open ID provider

We redirect out to the provider setting, the URL that we want the user to be brought back to after completing their sign-on process. In our case, that is this same script we are posting out from but you might also have a different script to handle logins in a full application. If anything goes wrong at this stage, just write out the error information to variables so we can see what happens.

```
if ($Open_ID->GetOpenIDServer()){
    $openid->SetApprovedURL('http://' . $_SERVER['HTTP_
HOST'] . $_SERVER['PATH_INFO']);
    $openid->Redirect();
}else{
    $error = $openid->GetError();
    $error_code = $error['code'];
    $error_string = $error['description'];
}
}
```




07 Testing the redirect

You should now be able to enter your Open ID into your form and be taken to the Open ID server to perform the login. After logging in, the server will let you decide whether to authorise this site once, always or cancel the request. We can also choose what information we send back to this site.

08 After login

If you allow the authorisation on the Open ID server, you should find yourself back at your script. In the address, there will be a query string containing information sent back from the Open ID server. This information will inform us whether the login was successful and if it gives us some information about the user.

09 Checking for successful authentication

The below code goes after the closing bracket of the if statement, checking to see if we have a Post. It runs when the user is redirected back from the Open ID server. If we have the parameter openid_mode in our Get, then we check to see if it has a value of id_res. This means that we have an authentication. The first thing to do is to create a new instance of the Open ID object to check that this really is a valid user and not just someone forming a correct query string to try and log into our site. We do this using the ValidateWithServer method, which will return true or false. Put that value into a variable to check.

```
elseif($_GET['openid_mode'] == 'id_res'){
    $showform = false;
    $openid = new OpenIDService();
    $openid->SetIdentity($_GET['openid_identity']);
    $openid_validation_result = $openid->ValidateWithServer();
```

10 A valid login

If our variable \$openid_validation_result is equal to true, then we have a valid login – hooray! Now we can do whatever we want to do with the information we get back from the server. In our case, we are just going to get the details from the Get and write them out into variables. If you were integrating Open ID into your site authentication, you would now insert this information into your database and continue exactly as if you had authorised using a username and password on your own site – except that you don't need to worry about storing passwords. We are setting a variable named 'status' to VALID so that we can check this later on our page when we display the result of the authentication.

```
if ($openid_validation_result == true) {
    //get the users details from the GET
    $country = $_GET['openid_sreg_country'];
    $dob = $_GET['openid_sreg_dob'];
    $email = $_GET['openid_sreg_email'];
    $fullname = $_GET['openid_sreg_fullname'];
    $gender = $_GET['openid_sreg_gender'];
```

IN DETAIL

Become an Open ID provider

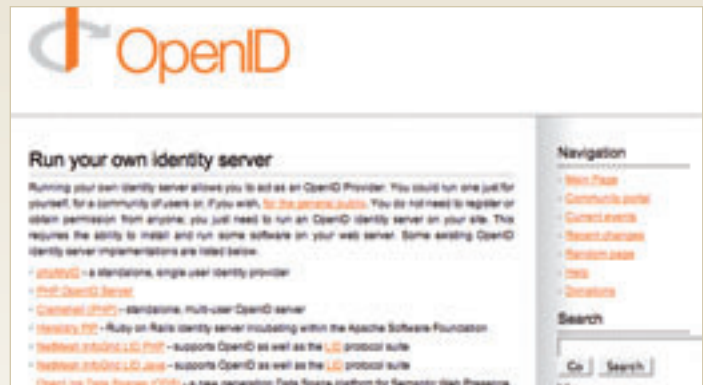
It is possible to become your own Open ID provider rather than using another trusted site to do this job for you. You'll need a good knowledge of PHP and a web server

ANYONE CAN RUN their own Open ID identity server; you don't need permission to do this and you can run the service just for yourself, for people you know or as part of the service that your website offers. If you operate a trusted website with a community of users who already log in, running an Open ID server will mean that they can use their identity on your site to log into other sites. This means that you're not just adding a new feature to your site, you're adding credibility as well.

As we found when learning how to enable users to login using their Open ID, there have already been a large number of classes and libraries developed in a variety of languages that make running your own identity server easier. In fact, if you simply want to set up a standalone server on your web server, then it can be as simple as uploading some PHP scripts and editing a few variables. You can then be fully in control of your own identity on the websites that you visit, with the comforting knowledge that no third party knows your Open ID password.

If you want to integrate the Open ID server with existing user accounts on your site, this is going to take some development as you will need to work out how the server will work with your existing data. But with a number of very well-featured libraries out there, you should be able to achieve this without too much pain, and becoming an identity server for your users is a great addition to your site.

There is a list of libraries available on the openID.net wiki at http://wiki.openid.net/Run_your_own_identity_server. If you simply want to run your server for your own identity, then <http://siege.org/projects/phpMyID/> is a good choice. There is a tutorial to help you get up and running with it at www.masuran.org/2008/01/14/run-your-own-OpenID-server.



The openID.net wiki maintains a list of libraries and frameworks that can help you become your own Open ID provider



The phpMyID project is a single user standalone library that lets you act as your own Open ID provider

Enabling single sign-on using Open ID login, PHP and MySQL

```
$identity = $openid->GetIdentity();  
  
$error_code = '';  
$error_string = '';  
$status = 'VALID';  
  
}
```

11 Dealing with errors

We need to deal with any errors that might occur, such as an invalid authorisation or some error generated by the server. If we write these to variables, we can find out what happened. In a live site, you need to make sure your user knows what to do if the error is caused by an incorrect login. You might also want to log errors to a database table or text file so you can see if anything is happening often. If the error has been caught by the object, then it can be retrieved with the GetError() method that returns an array.

```
elseif($openid->IsError() == true){  
    $error = $openid->GetError();  
    $error_code = $error['code'];  
    $error_string = $error['description'];  
    $status = 'ERROR';  
}else{  
    $error_code = '';  
    $error_string = 'INVALID AUTHORIZATION';  
    $status = 'INVALID';  
}
```

12 User cancelled request

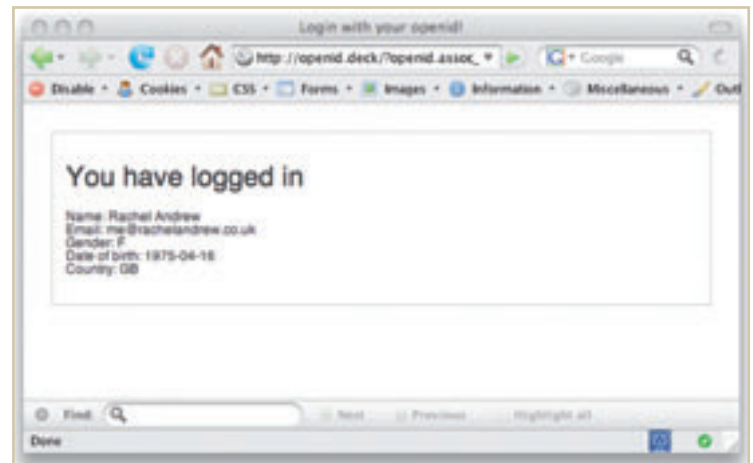
If you deny the authorisation on the Open ID server, then the value of openid_mode will be 'cancel'. In this situation, the user has cancelled the request and so you cannot then log in. You would need to give the user some information in this situation, perhaps giving them contact details if they have concerns about the information that you want to access.

```
else if ($_GET['openid_mode'] == 'cancel'){  
    $showform = false;  
    $error_string = 'USER CANCELLED REQUEST';  
    $error_code = '';  
    $status = 'CANCELLED';  
}
```

13 Showing the information

For the purposes of this article, we will just display the information that has been returned – or the error message generated – so you can see that the login has worked. At the top of your script (just below the include of the class), add \$showform = true; Then wrap the form in your page with an if statement checking for \$showform.

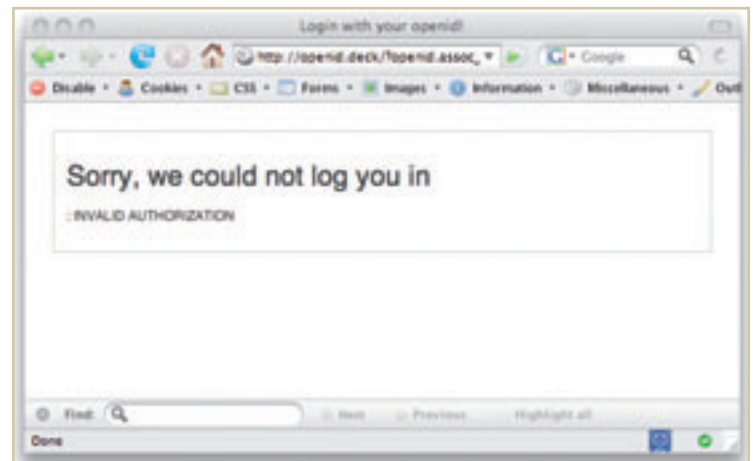
```
<?php  
if($showform) {  
?>  
<form action="index.php" method="post">  
<h1>Login with your Openid</h1>  
<div>  
    <div><label for="openid">Your OpenID</label><input  
type="text" name="openid_url" id="openid" class="text" />  
<input type="submit" name="login" value="Login" class="btn" /></div>  
    <p><a href="http://www.myopenid.com/">Get an OpenID</a></p>  
</div>  
</form>  
<?php  
}  
?>
```



14 Display the returned information

If our status variable is set to Valid, then we have the user details. Echo them out to the page as proof of the successful authentication.

```
else{  
    if($status == 'VALID') {  
        echo '<h1>You have logged in</h1>';  
        echo '<p>Name: ' . $fullname;  
        echo '<br />Email: ' . $email;  
        echo '<br />Gender: ' . $gender;  
        echo '<br />Date of birth: ' . $dob;  
        echo '<br />Country: ' . $country . '</p>';  
    }  
}
```



15 Error display

The following code will print out the error messages that have been received. These messages are more for debug purposes, so don't forget to display more friendly and helpful error messages to your users, in case they are having problems logging in.

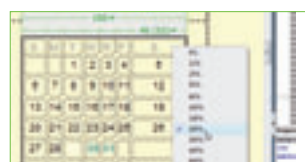
```
elseif ($status == 'INVALID') {  
    echo '<h1>Sorry, we could not log you in</h1>';  
    echo '<p>'. $error_code .': ' . $error_string . '</p>';  
} elseif ($status == 'CANCELLED') {  
    echo '<h1>Sorry, we could not log you in</h1>';  
    echo '<p>'. $error_string . '</p>';  
}  
}
```


Tennessee Vacation

www.tnvacation.com



TOP TIP



Zoom in for perfect positioning of on-screen elements

When dealing with intricate, delicate or hard-to-see elements on a page, Dreamweaver provides the option to zoom in on the current page. Running along the bottom of the workspace is a status bar. This offers information such as the name of the current div tag or element, size of the page and estimated download times. Sitting alongside is the Set Magnification drop list. Click the accompanying arrow and select the desired size.

Tennessee Vacation is dedicated to the state of Tennessee and gives a comprehensive insight into what it has to offer. If a visit to this great Southern state is on the cards in the future, this is the site to visit. The site boasts the standard home page, as shown, but the site is divided into four microsites for specific seasonal information for visitors.

The site is very much a model of contemporary web design techniques, including a current favourite, background images. To create the design appeal of the site, the body tag gets things started with a repeating-background image. The header image is split into three different elements: the logo, links and search facility. The search facility is part of the Google Custom Search that is currently at the beta stage. This offers a free, advert-enhanced version with limited design options. Users can specify exactly what pages to search, hence the custom tag. There is also a paid-for version that allows users to integrate the code into their page design.

The site's layout is, as you would expect, the domain of div tags and CSS. Essentially it is a single column with a header and footer, which is nice and simple. Flash creates the dynamic content and even tables get a look-in to help create the site's overall appeal.

Flash Movie

A favourite for most website motion, Flash Movie is given an outing offering links to a number of destinations

Background support act

Tennessee Vacation is no stranger to background images, making liberal use of them for the major graphics



Creating lists

Use the Unordered List and List Item tags to create great-looking lists

Lists are very much a part of the web design life cycle and there are several methods for implementing them into a page. On a base level, the break tag
 can be used but this lacks the power of alternative HTML tags. There are a number of tags that are generally used in list creation. Typically, these are the OL and UL tags. The OL tag, Ordered List, is generally used for lists that need items to be placed in a specific order, such as recipes. The more commonly used option is the UL tag, Unordered List, which simply creates lists. Inside the UL tags another HTML tag, LI, is



implemented. This is the List Item, which has an opening and closing tag for each item in a list. To create a list via Dreamweaver, head to the Insert menu (Window>Insert) and select Text. This will present the relevant tags. Now place the cursor, add the UL tag and as many LI tags as needed.

Image maps

Adopt the Rectangle, Circle or Polygon Hotspot tool for well-defined image links

The more image-intensive sites become, the more need there is for image maps. In its most basic form, there is a rectangle, which essentially uses four co-ordinates, one in each corner. Circle is a slightly different proposition as it uses three co-ordinates – the horizontal and vertical position of the centre and the radius of the circle. For more than the basic shape, there is the Polygon tool. This uses pairs of co-ordinates, specified as horizontal then vertical positions. This will contain as many sets as needed to create the right shape. Dreamweaver makes the process



incredibly simple. It provides a Hotspot tool for each option. Rectangle and Circle involves selecting and drawing in the desired position. The Polygon tool allows users to click on as many points as needed to create the shape. To move and modify, the Pointer Hotspot tool needs to be called into action.



YOUR EXPERT

Steve Jenkins is a keen designer and developer, who started creating websites after attending Bournemouth University and loves tackling the most testing of Dreamweaver problems. To see a sample of Steve's work, take a visit to www.thesouthend.co.uk.

Site doctor

Diagnosing the tricks behind dotcom designs



Custom search

The Google Custom Search has been implemented into the site to present Tennessee Vacation's specific results

Rollover extravaganza

The Navigate By Interest box adopts an adventurous approach for rollovers, with different shades for each link

STEP BY STEP

Google Custom Search

Harness the power of Google to create a search engine tailored to your needs



01 Google Co-op

Currently in beta, Google Co-op is a platform that enables users to customise the web search experience for their own website. To get started, head to www.google.com/coop/cse and press the Create a Custom Search Engine button. Be aware that you will need a Google account for this.



02 The setup

Sign in and add information as required – Search engine name, Search engine description, Search engine keywords, etc. Next, select the What do you want to search? option, and choose Only sites I select. Now add the URL of the site, making sure you add /* after the address for all pages and press Next.



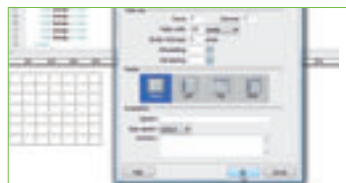
03 Google gadget

Now add a query in the Preview section to test out the search. If you're happy with the results, click Finish followed by Home page under Search engines I've created. Now click Add this search engine to your blog or web page. Adjust the properties, hit Get the code and copy into a page. Done and done!

Table time

Adopt a table for those elements that need lots of rows and columns

The once-popular design tool, the table, has seen its power slowly disappear as the div tag and CSS take hold. However, it hasn't been completely forgotten and there are moments when it proves to be an ideal design advocate. There is a perfect example on the Tennessee Vacation home page in the shape of the calendar. This uses a background image to create the graphics effect, but a table is used to place initials and numbers of the days of the month. Any element that needs extensive rows and columns is often best served by a table. Adding a table to a page is also a simple concept

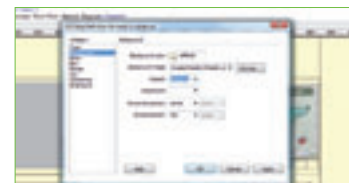


in Dreamweaver. Head to the Insert menu and select Table to open the related window. Now select the desired number of rows and columns and the desired width. If creating a table, for example, with seven columns, try using a fixed width of 210 or a derivative of seven for evenly spaced columns.

Big on backgrounds

Enhance the aesthetics of a page with layered background images

The background image has become a staple diet of web design and Tennessee Vacation is no exception. To create the initial background, the site uses a single small-sized image that is attached to the body tag. Further div tags overlay the body background image and use a selection of background images that have been sliced up for quicker downloads. Adding a background image to the body tag creates the basis for a page. Whether creating a new page or modifying a current page, head to the CSS panel and double-click body. This will present the



CSS Rule Definition window; from here, select the Background category. Click Browse to add the desired image and a repeat option (repeat-x is horizontal and repeat-y vertical). To position the background more accurately, the Horizontal and Vertical position options can be chosen.



THE BRIEF

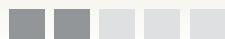
TUTORIAL OBJECTIVE

In our second ColdFusion tutorial, we are going to learn more about CFML

TIME REQUIRED

Two hours

SKILL LEVEL



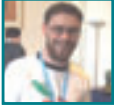
Understand ColdFusion markup language **PART 2**

NO DRAG-AND-DROP HERE... WE'RE GETTING OUR HANDS DIRTY WITH PURE CFML IN THE SECOND PART OF OUR COLDFUSION SERIES

LAST ISSUE GAVE a fast-paced introduction to ColdFusion. In that tutorial, we saw how to install ColdFusion, had a very quick look at some basic syntax and saw how you could pull information from a database and display it in an AJAX-style data grid, not using many lines of code.

In this tutorial we are going to dive a little deeper into the world of CFML, the ColdFusion markup language, which is the tag-based language we use to build ColdFusion applications.

ColdFusion allows us as developers to get work done and get it done fast. This has always been ColdFusion's big advantage over the other languages out there, and it continues to be one of its major strengths. However, to become truly proficient with ColdFusion, or indeed any other language, you need to get to know the language. In this tutorial we are going to look at creating variables, conditional statements, looping, querying databases and some basic debugging.



YOUR EXPERT

Andy Allan runs Fuzzy Orange, a consultancy firm specialising in ColdFusion. An instructor and speaker at conferences, he is also the brains behind the Scotch on the Rocks conference. You can find out more about Andy at www.fuzzyorange.co.uk.

Understand ColdFusion markup language

01 Introducing CFML

The ColdFusion markup language is a very simple, yet incredibly powerful tag-based language. We can use any text editor we wish to create ColdFusion files, and the three primary choices are Adobe Dreamweaver, Macromedia Homesite and CFEclipse. However, to keep things really simple, we are going to use Notepad.

```
<html>
<head>
<title>Hey, Where's the CFML?</title>
</head>
<body>
We don't even need any CFML in this file for
it to be considered a ColdFusion file. As
long as it has a .cfm extension, ColdFusion
will look to process it.
</body>
</html>
```

04 <cfoutput>

The most important tag in the entire CFML language is undoubtedly <cfoutput>. This tag tells ColdFusion to process the text between the <cfoutput> and </cfoutput> tags. Without these tags, ColdFusion won't process anything and the code will be sent to the browser as is. Viewing the example below in your browser will show the difference.

```
<cfoutput>
#Now()#<br />
</cfoutput>
#Now()#
```

07 Variable names

Like every programming language, variable names must follow a set of rules as to how they are named. The code snippet below outlines the proper ways of naming your variables, but this will be fairly commonplace for anyone who has used another language such as PHP, Java, C#, etc.

```
<!-- variable names can contain alphanumeric
characters, however the first character
must be a letter, dollar sign($) or an
underscore.-->
<cfset myvar1 = ""/> <!-- this works --->
<cfset 1myvar = ""/> <!-- this breaks --->

<!-- Variable names cannot contain spaces
--->
<cfset email_address = ""/> <!-- this works
--->
<cfset email address = ""/> <!-- this breaks
--->
```

02 ColdFusion tags

CFML consists of two fundamental elements, which make up how you use the language: tags and functions. Tags, which are identified by coding blocks starting with <cf>, allow you to perform actions such as retrieving data from a database or performing some kind of conditional operation. Let's take a quick look at some tags.

```
<!-- Set a variable --->
<cfset firstname = "Andy" />
<!-- If firstname = "Andy", output to screen
--->
<cfif firstname IS "Andy">
<cfoutput>
I guess your name is #firstname#
</cfoutput>
</cfif>
```

05 Identify CF expressions

Although ColdFusion knows it has to process the content between the <cfoutput> tags, we still have to let ColdFusion know what instructions we want it to execute. We do so by identifying strings wrapped in hash symbols (the # character). Any other text should be sent straight to the browser, unprocessed by ColdFusion.

```
<!-- ColdFusion will execute the Now()
function, as delimited by the # symbols. The
rest of the text will be sent straight to
the browser. --->
<cfoutput>
The current date and time is: #Now()#
</cfoutput>
```

08 Variable types

Variables can hold many different types of values. They can be simple values such as integers, strings or Booleans, or they can be complex types such as arrays, structures or objects. Ultimately, you can stuff any value inside a variable. Take a look at a few examples below.

```
<!-- String --->
<cfset firstname = "Andy" />
<!-- Integer --->
<cfset age = 30 />
<!-- Array --->
<cfset myArray = ArrayNew(1) />
<!-- Structure --->
<cfset myStruct = StructNew() />
```

03 ColdFusion functions

The other important element of the CFML language is functions. You can have built-in functions as well as user-defined ones. For now we will concentrate on those that come with ColdFusion. Functions can process data, manipulate strings, perform calculations and so much more. Let's take a look at a few.

```
<!-- Output the current date and time --->
<cfoutput>
#Now()#
</cfoutput>
<!-- Convert the following text to upper
case --->
<cfoutput>
#UCase("although this is lowercase,
ColdFusion will convert it all to upper
case")#
</cfoutput>
```

06 Variables 101

Variables are quite simply containers that store information. The information may be text, numbers or even objects – though let's not concern ourselves with them just yet. A variable has two parts: a name and a value. You use the name to refer to the value. That's it. Let's now create a few simple variables.

```
<cfset firstname = "Andy" />
<cfset lastname = "Allan" />
<cfset age = 30 />
```

09 myVar = MYVAR

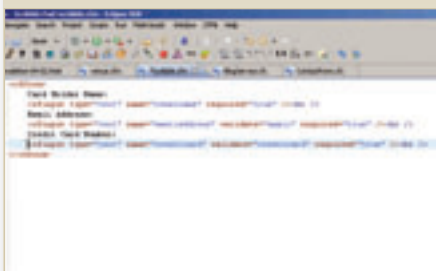
One important aspect we should point out early on is that ColdFusion is case-insensitive. ColdFusion doesn't care whether you refer to a variable as 'firstname', 'FirstName' or 'FIRSTNAME'. ColdFusion will treat them all as one and the same. The same applies when using ColdFusion's built-in tag and function library.

```
<cfset firstname = "Andy" />
<cfoutput>
#firstname#<br />
#fIrStNaMe#<br />
#FIRSTNAME#
</cfoutput>
```


TECHNIQUE

Fresh, funky CFML tags

CFML allows us to do some great things quickly. Here's a few examples...



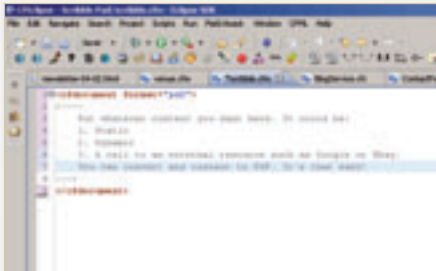
01 Data validation

Use `<cfinput>` instead of a normal `<input>` tag to perform data validation normally not available to us without writing our own JavaScript. We can validate dates, email addresses, credit cards, etc. We can also validate against our own regular expressions.



02 Charting

ColdFusion has the ability to produce high-quality interactive charts using the `<cfchart>` tag. With a huge variety of formats, including pie, bar, line and scatter, we can output our charts as either JPEG, PNG or Flash. Great for impressing management!



03 Make a printable page

It won't be a shock, but with ColdFusion under the Adobe banner, there is great support for the creation and manipulation of PDFs. Using the `<cfdocument>` tag, we can generate printable content directly from web pages with little coding.

10 Variable scoping

One more important aspect of variables is their scope. When we refer to a variable's scope, we are talking about where the variable exists. In the examples we have shown so far, each of these variables is referred to as local page variables. We can actually refer to these variables in two different ways – check out the code below.

```
<cfset firstname = "Andy" />
<cfoutput>
<!--- Both of these refer to the same variable --->
#firstname#<br />
#variables.firstname#
</cfoutput>
```

12 Order of precedence

The question is, if we have `variables.firstname` and a `url.firstname`, which will ColdFusion use? Is there an order of precedence, and ultimately, should we scope our variables or let ColdFusion work it out for itself? Well, there are both pros and cons for prefixing your variables, so what should we do?

```
<!--- Which of these will ColdFusion display? --->
<cfset variables.firstname = "Andy" />
<cfset url.firstname = "Ben" />
<cfoutput>
Who's going to win? Will it be the Variables scope or the URL scope?
<br /><br />
The winner is ... #firstname#
</cfoutput>
```



14 Why did Andy win?

Andy wins. But why? The reason is simple. When you ask ColdFusion to process an unscoped variable, ColdFusion looks through a predefined lookup list of scopes, and in this case Variables obviously comes before URL. You can find the full scope lookup list at http://livedocs.adobe.com/coldfusion/8/html/docs/Variables_32.html.

11 More about scoping

So we've now seen the fact that you can refer to local page variables in two different ways. When we assigned the prefix 'variables' to the start of the variable name, we were telling ColdFusion to look explicitly in the variable's scope – the local page scope. There are a number of other scopes we can specify.

```
<!--- This is just a small selection of the scopes available in ColdFusion. If you try to run this code, you will get errors as the variable won't exist in the different scopes --->
<cfoutput>
#variables.firstname#
#form.firstname#
#url.firstname#
#application.firstname#
#session.firstname#
</cfoutput>
```



13 Andy wins!

Using prefixes improves performance. Telling ColdFusion which scope to look in means you are cutting down the amount of work ColdFusion needs to carry out. Also, if you have a variable existing in multiple scopes, the only way to be 100 per cent accurate is to scope your variable.

15 If... else

As you start using CFML more and more, you will undoubtedly come across the need to perform some sort of conditional operation. This is where our new friend `<cfif>` comes into play. Like 'if' expressions in other languages, `<cfif>` performs an action if something is true and potentially another action when a condition is false.

```
<cfset firstname = "Andy" />
<cfif firstname IS "Andy">
    Hey, you're Andy!
</cfif>
What have you done with Andy?
```

16 If... but...

The code in the previous step was fairly self-explanatory, but just to recap: we used `<cfif>` to detect if the variable named 'firstname' was equal to the value 'Andy'. What you may find strange is the syntax used to perform the comparison. ColdFusion uses the operator `IS` or `EQ` to perform comparisons.

```
<!-- ColdFusion has a number of other
comparison operators. -->
<cfif x NEQ 10></cfif> <!-- If x is not
equal to 10 -->
<cfif y LT 10></cfif> <!-- if x is less than
10 -->
<cfif z GT 10></cfif> <!-- if x is greater
than 10 -->
```

17 The <cfloop> tag

The name of this tag gives away what it does, however, `<cfloop>` allows you to loop over lists, arrays, structures, files and query record sets. Adobe have made `<cfloop>` such a powerful tag, and we will examine a few examples.

```
<cfoutput>
<!-- basic index loop, displaying the value
of i on each loop -->
<cfloop from=1 to=10 index="i">
The value of i is: #i#
</cfloop>
<!-- Let's now create a list and loop over
it -->
<cfset days = "monday,tuesday,wednesday,thurs
day,friday,saturday,sunday" />
<cfloop list="#days#" index="i">
#i#<br />
</cfloop>
</cfoutput>
```

18 Looping over a file

The next bit of trickery we are going to look at is looping over the contents of a file. We will use just a plain basic text file filled with nonsense, and we will loop over its contents, line by line. This particular looping function is new in ColdFusion 8.

```
<cfoutput>
<cfloop file="c:\boot.ini" index="line">
#line#<br />
</cfloop>
</cfoutput>
```

IN DETAIL

CFEclipse – an Eclipse plug-in for CFML

In order to enhance your skills and properly get to grips with CFML, you really need a quality editor to help you along the way. Enter to the stage, CFEclipse!

TO KEEP THINGS simple, we've been recommending using a basic text editor to write your code. The one downside is that you don't get the benefits of a fully blown editor with features such as code folding, snippets, task lists, code colouring, auto insertion, short cut keys and more.

CFEclipse (www.cfeclipse.org) is one such editor that provides you with all those features. An open source and completely free plug-in for the Eclipse platform, CFEclipse was originally and remains built by members of the ColdFusion community.

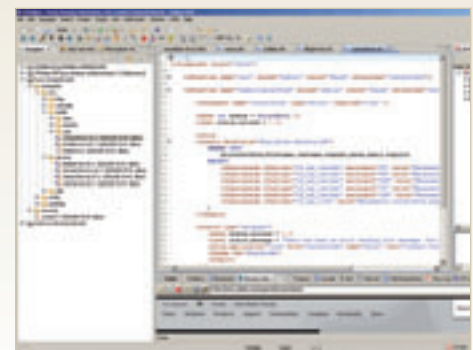
As we've been working through this tutorial, we've had to manually type the various CFML tags and attributes without any help. While this is great for learning, it would also be useful to have our editor provide us with a list of tags, and correspondingly, a list of attributes for our chosen tag. This alone is a great time-saver and CFEclipse will do this for us. In fact, not only will it give us the tags and attributes for ColdFusion 8 (the current version) but it can also provide the tags and attributes for earlier versions (5 through to 7), as well as those for the alternative CFML engines out there, BlueDragon and Railo.

If you open Eclipse on any seasoned ColdFusion developer's machine, you will find not just CFEclipse but also a wide variety of other plug-ins covering such features as Version Control (Subclipse), Task Management (Mylyn), AJAX (Aptana) as well as CSS, JavaScript, SQL Integration and so on. Eclipse and CFEclipse really have become a one-stop shop for ColdFusion developers.

To get started with CFEclipse, head over to the website, follow the instructions on how to get the plug-in, watch the screencasts, read through the Wiki, and if you get adventurous, get involved. You can download the entire plug-in source code, add features, fix bugs and contribute back to the community. We know that Mark Drew, lead developer on the project, would really appreciate it!



Visit www.cfeclipse.org to get the plug-in, as well as watch tutorial-based videos on how to use it



CFEclipse in action with a number of projects on display, as well as a number of open files

19 Commenting your code

Commenting your code is something most developers hate. Let's be honest, it's just not cool. Cool or not, it's a very important aspect of developing. Not only will it be useful for others picking up your code down the line, it'll be handy for you when you look at it again in six months!

```
<!-- ColdFusion comments are just like HTML
comments, only they use three dashes instead
of two.
```

```
The great thing about ColdFusion comments is
that they are never sent to the browser, so
you can put anything you like here.
-->
```

20 <cfdump> is a great tag

Quite simply, it lets you output the content of any variable to the browser. The query dump is particularly interesting as it gives you the data and some additional information.

```
<!--
Let's create some variables to dump
1. String
2. Array
3. Query
-->
<cfset firstname = "Andy" />
<cfset myArray = ["Andy","Elvis","Yoda"] />
<!-- This requires you have the
documentation and examples installed -->
<cfquery name="myQuery" datasource="cfartgal
lery">SELECT*FROMart</cfquery>
<!-- Dump the contents of string, array and
query -->
<cfdump var="#firstname#" />
<cfdump var="#myArray#" />
<cfdump var="#myQuery#" />
```


Tutorial

21 More <cfdump>

The <cfdump> tag has a number of additional attributes that we can use to do different things with the output. You can use the top attribute to display only the top X rows, or you can use the output attribute to send the output to a file rather than the browser.

```
<!-- Dump the contents of string, array and
query using some of the additional <cfdump>
attributes -->
<cfdump var="#firstname#" />
<cfdump var="#myArray#" output="c:\
arrayoutput.txt" />
<cfdump var="#myQuery#" top="5" />
```

24 Displaying the data

To display the data returned by our ColdFusion query, we simply use the <cfoutput> tag. You should be fairly comfortable with this tag by now. One handy attribute of the <cfoutput> tag is the query attribute and this allows us to specify the name of an existing query, whose data it will display.

```
<cfoutput query="myQuery">
    #artid# | #artistid# | #artname#
    | #description# | #issold# | #largeimage# |
    #mediaid# | #price#<br />
</cfoutput>
```

27 Debugging our code

We've already seen the fantastic <cfdump> tag, which is incredibly useful for debugging code as it allows us to dump the values of any type of variable. Another well-used debugging tag is <cfabort>. <cfabort>, quite simply, stops all processing.

```
<cfquery name="myQuery" datasource="cfartga
llery">
    SELECT
    *
    FROM
    art
</cfquery>
<cfabort showerror="Stop processing after
the query" />
<cfform>
    <cfgrid query="myQuery"
    name="mygrid" format="html"></cfgrid>
</cfform>
```

22 Accessing databases

As we saw in the previous tutorial, accessing databases in ColdFusion is really, really easy. We will be using the <cfquery> tag to send some really simple SQL to ColdFusion, asking it to send back some data. Here's the code for a simple query that returns all the rows from the art table.

```
<cfquery name="myQuery" datasource="cfartga
llery">
    SELECT
    *
    FROM
    art
</cfquery>
```

25 Formatting the output

We've outputted our data but its format is somewhat ugly. We could use tables or CSS to make things a little nicer, but here we're going to revisit our AJAX data grid and display the data in a format we can sort, and potentially edit (too advanced for now unfortunately).

```
<cfform>
    <cfgrid query="myQuery"
    name="mygrid" format="html"></cfgrid>
</cfform>
```



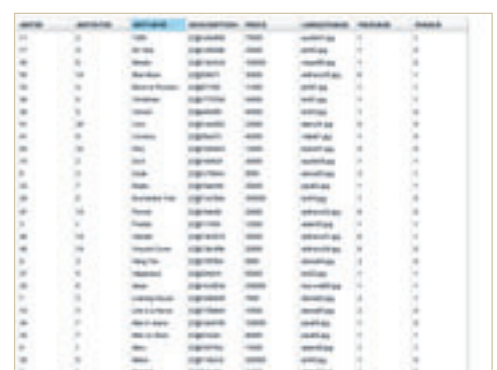
28 How <cfabort> helps

We can use <cfabort> to halt processing at any location in our ColdFusion page. This allows us to check and see if our code actually works up to that point, and if so, we can then move our <cfabort> tag further down the page to the next potential troublesome line.



23 How it works

The <cfquery> tag sends the SQL statement to the data source specified in the datasource attribute. The data returned from the database is placed into the variable specified in the name attribute. The data source is defined in the ColdFusion Administrator, set up during installation.



26 What's this <cfform>?

Think of <cfform> as a normal <form> tag on steroids. The ColdFusion version allows so much more functionality including Flash Forms, data validation, rich text editor and in this case, an AJAX data grid. Yes, we've produced an AJAX grid without writing a single line of 'Ajax'!



29 To finish

The combination of <cfdump> and <cfabort> is invaluable to your learning of CFML. There are more debugging tags and techniques available to you in ColdFusion (see the Debugging page in the Administrator and documentation at <http://livedocs.adobe.com>) but these will get you by.



REVIEWS

A sleek, sexy, shiny selection of salivating products on show for you this month – what more could you ask of your dear friends here at *Web Designer*?



ASUS A33

www.asus.com

from **£999**

THE LINE BETWEEN home computing and entertainment has definitely been crossed. Catering to users who want to enjoy true HD audio and video in their homes, ASUS's Digital Home System A33 is one step above the traditional definition of a media centre PC. Integrating a 5.1 channel amplifier with HDMI interface, it delivers an astounding multimedia entertainment experience.

Designed to be the multimedia hub of a living room, the Windows Vista Home Premium-powered A33 allows compatibility with most current audio, video and Bluetooth devices. With its varied support of the latest HD audio formats, including SACD Hybrid, DVD Audio, HDCD and XRC, the A33 provides up to 24 bit/192KHz sample rates to deliver awesome sound performance.

In regards to TV management, the A33 comes with an EPG (electronic program guide) and two channel TV tuner cards. The former makes quick program searches/reviews and series pre-recording settings extremely intuitive and easy, while the latter enables simultaneously recording two channels or the viewing of one channel while recording another. All functions are easily accessible via the three-in-one infrared remote control. What's more, the colour 2.4-inch TFT display on the front panel displays the clock and real-time system information such as movie or song titles, making multimedia management a joy.

- Pros:** High-end multimedia features and an ultramodern design makes this one of the most inventive media centre hubs to date
- Cons:** Unfortunately a low-profile design comes at the expense of limited storage capacity and expandability. We'd also like it to be quieter

Verdict:



Apple Time Capsule

www.apple.com/uk

from **£199**

AS A PROFESSIONAL Mac user, you'll have a lot of data stored on your hard drive. If you're sensible, you back up this critical data in the event of a disaster. If none of this is making sense, then read on.

Apple's Time Capsule automatically and wirelessly backs up everything on one or more Macs running Leopard, the latest release of Apple's Mac OS X operating system. Time Capsule combines an 802.11n base station with a hard disk (either 500GB or 1TB) and can be configured to back up your Macs automatically every hour of every day, so all your irreplaceable photos, movies and documents are automatically protected and easy to retrieve if they are ever lost.

Time Capsule features a sleek design with a built-in power supply and connections to print wirelessly to a USB printer. In addition to being a backup device, Time Capsule is also a full-featured Wi-Fi base station, making it very easy to create a secure wireless network for up to 50 users and set security restrictions such as internet access limits for children's computers.

With Time Capsule, Apple has effectively captured the market for Mac users looking for network-attached storage devices. But as it's a single-drive product you can't expand the storage capacity with another drive. Fair enough given the price, but it's disappointing you can't replace the single hard drive yourself.

- Pros:** Seamless data backup is a dream come true. Apple has made an easy-to-use and effective product for protecting your data
- Cons:** If the drive fails, you'll need to take it to an Apple Store for repair so your wireless network goes down as well

Verdict:





Garmin nüvifone

www.garmin.co.uk

TBA **GARMIN HAS TAKEN** personal navigation and communication to the next level with the does-everything nüvifone. The nüvifone is an all-in-one touch-screen device that combines a mobile phone, web browser and cutting-edge personal navigator.

The nüvifone has a wide range of relatively advanced features, but is a snap to use thanks to Garmin's experience in consumer products. The device is also the first of its kind to integrate 3.5G mobile phone capability with an internet browser, data connectivity, personal messaging and navigation functions.

The 3.5-inch touch-screen display reveals three primary icons – Call, Search and View Map. Calls are obviously initiated by tapping the Call button and selecting a name from the contact list or by using the on-screen keypad. But when the nüvifone is docked onto the vehicle mount, it automatically turns on the GPS, activates the navigation menu and enables hands-free calling so that you never miss a beat in the conversation.

If that's not enough, the built-in camera lets you take a picture that is automatically tagged with the exact latitude and longitude reference of where the image was taken, allowing you to navigate back to the location or email the image to a recipient who can navigate directly to the location. Other functions include a built-in video camera, MP3 and MPEG-4/AAC player. Forget the iPhone; there's a new – smarter and more practical – kid on the block.

Pros: The breakthrough product that mobile phone and GPS users worldwide have been longing for – a single device that does it all

Cons: Garmin's first attempt at a mobile phone is brilliant, but it's not as slick as an iPhone and the MP3 is basic

Verdict:



Apple Mac Pro

www.apple.com/uk

from **£1,749**

APPLE'S FASTEST EVER desktop computer has landed. The recently revised Mac Pro is gargantuan in size and packs a mean punch to boot. Games look like they did on a Windows-based PC about three years ago, but creatives should be salivating.

Destined for those chained to their desk rather living on the road, the new Mac Pro is all about power. It includes two of Intel's new 45-nanometre Quad-Core Xeon processors running up to 3.2GHz and showcases a new system architecture that delivers up to twice the performance of its predecessor. If that's not all, check out the powerful new graphics chipset, support for up to 32GB of system memory and a whopping 4TB of internal storage – perfect for creative professionals and 3D digital content creators! With support for up to four graphics cards, the new Mac Pro can drive up to eight 30-inch displays for total eyeball meltdown!

Encased in the ever-gorgeous aluminium enclosure, the Mac Pro makes connecting external devices a snap thanks to five USB 2.0 ports, two FireWire 400 ports, two FireWire 800 ports, optical and analogue audio in and out, dual Gigabit Ethernet ports and a headphone jack. When backing up data and sending work to clients, the 16x SuperDrive with double-layer support (DVD±R DL/DVD±RW/CD-RW) should come in handy. Every Mac Pro includes Leopard, the sixth major release of Apple's operating system.

Pros: Lust after this machine if you're a professional designer, digital media hobbyist or simply into great design

Cons: There's not much flexibility in configuration options, especially for 3D design, and Apple's support plan is a little weak

Verdict:





Killer feature
The world's thinnest laptop without sacrificing either a full-size keyboard or a full-size 13-inch display

Apple MacBook Air

www.apple.com/uk

from **£1,199**

WE ALL KNOW Apple doesn't like to do things by the book. Whenever the company launches a new product, it generally stops the computing world in its tracks. So when Apple launched a brand-new laptop in the middle of January, it turned the mobile market on its head.

The MacBook Air is the world's thinnest laptop, measuring an unprecedented 4mm at its thinnest point, while its maximum height of 19mm is less than the thinnest point on competing laptops. It also has a stunning 13.3-inch (1,280 x 800px) LED-backlit widescreen display, a full-size and backlit keyboard, built-in iSight video camera for video conferencing and a spacious trackpad with multi-touch gesture support so you can pinch, rotate and swipe (think iPhone). Did we forget to mention it weighs a minuscule 1.36kg?

It's not the most powerful system on the market, but it does include a 1.6GHz or 1.8GHz Intel Core 2 Duo processor with 4MB L2 cache, and includes as standard 2GB of memory, an 80GB 1.8-inch hard drive and the latest 802.11n Wi-Fi technology and Bluetooth 2.1. The backlit keyboard is great for dimly lit environments such as aeroplanes, studios or conference halls, and a built-in ambient light sensor automatically adjusts the brightness of the keys as well as the display brightness for optimal visibility. Up to five hours of battery life is available for wireless productivity.

Every MacBook Air includes a micro-DVI port so you can connect to Apple's gorgeous 20-inch or 23-inch Cinema Displays to extend the desktop or connect to projectors and other displays

via DVI, VGA, composite and S-video adaptors. There's only one USB 2.0 port for plugging in peripherals or charging an iPod or iPhone, and you'll have to live without a built-in optical drive. There is, however, a headphone jack and Apple's MagSafe Power Adaptor, designed especially for mobile users.

The MacBook Air isn't the most powerful or feature-rich laptop, but its dual-core processor and memory are more than adequate for web surfing, multimedia playback and productivity tasks, so you'll be able to work on web designs and enjoy multimedia playback with absolutely no slowdown or stuttering. The 80GB hard drive included in the standard model is a little restrictive if you work with lots of large files, and the only other option is a 64GB solid state hard drive. The benefits of the solid state drive are that it has no moving parts, lower power consumption and improved reliability. Nevertheless, it's an innovation that won't come cheaply and we reckon the price lets it down big time.

Pros: MacBook Air is ultrathin, ultraportable and unlike anything else you've seen, making it the perfect choice for dazzling your clients

Cons: Don't rush in – once you've got over the revolutionary design, the stripped-down connections and features may disappoint

Verdict:





eCommerce

OUR REGULAR SECTION COVERING THE BUSINESS
END OF CREATING PROFESSIONAL WEB CONTENT

THIS Month

ECOMMERCE FEATURE 92
The impact of RIAs on web trading

ECOMMERCE GALLERY 96
The Loworks store is heralded here

HOSTING LISTINGS 98
Find the best package for your site

Quick and easy SSL certification solution

PRONTO SSL OFFER FAST-ISSUE SSL CERTIFICATES FROM BOTH GEOTRUST AND RAPIDSSL, PLUS A FULLY FUNCTIONAL 30-DAY FREE TRIAL CERTIFICATE

IT'S A WELL-KNOWN fact that when it comes to shopping online, customer confidence is key. Ensuring that your site is secure should be of utmost importance to any eCommerce operator, and if you're accepting online payments then you need to be SSL-certified to establish a secure connection between your server and the visitor's browser.

When connecting to a web server over SSL (Secure Sockets Layer), the visitor's browser decides whether or not to trust the website's SSL certificate based on which certification authority has issued the actual SSL certificate. To determine this, the browser looks at its list of trusted issuing authorities, represented by a collection of trusted root CA certificates added into the browser by the browser vendor (such as Microsoft).

ProntoSSL (www.prontossl.com) – a UK firm based in Derby – have just the solution. Instead of having a long wait before receiving your certificate, they buy them in bulk and resell them directly to you at a discounted rate and much faster than if you were to buy directly from the certifying body. ProntoSSL can issue Geotrust and RapidSSL Certificates, uniquely enabling businesses to obtain low-cost, one-year fully functional single root trusted SSL certificates, ideal for websites conducting light levels

of eCommerce. They also offer Wildcard certificates – a single root install SSL certificate that can be used to secure multiple sub domains on a single domain name. The Wildcard allows websites to conduct secure eCommerce with an encrypted SSL connection and is ideal for low-volume, low-transaction value websites.

If you're setting up an eCommerce site, be sure to check out their FreeSSL service. FreeSSL is a fully functional single root test certificate, valid for 30 days – the only fully trusted trial available, and really handy to test everything works properly before going live. Check it out now!



SSL certificates are a must-have for eCommerce sites, as they ensure security and significantly improve customer confidence

Microsoft buys Danger

SIDEKICK MANUFACTURER QUIETLY ACQUIRED BY THE SOFTWARE GIANT

MICROSOFT HAVE AGREED the purchase of Danger Inc., the manufacturers of T-Mobile's Sidekick smart phone for an undisclosed price. Massive in the States and growing in popularity here in the UK, the Sidekick can make phone calls, send instant messages, browse the web and send emails, with a distinctive 180-degrees display that swivels to reveals a full QWERTY keyboard.

Seen by some in the industry as a move to further compete with Apple's iPhone and the emerging Google Android mobile OS, Microsoft's head of entertainment and devices Robbie Back said, "It completes the picture for us in



Microsoft's acquisition of Sidekick manufacturer Danger Inc. puts them in direct competition with Apple and Google

terms of making the transition from just being on the business side of things to being on the consumer side of things." Interestingly, one of the original Danger co-founders, Andy Rubin, has moved to a new job at Google running their mobile venture. Very interesting...

Android OS makes debut

THE FIRST HANDSETS TO BE LOADED WITH ANDROID GO ON SHOW

GOOGLE'S MOBILE OPERATING

system Android has at last been debuted on several handsets at the Mobile World Congress in Barcelona. Manufacturers including ARM, Texas Instruments and NEC showcased the open source Linux-based OS on prototype handsets, an impressively fast three months after the software was released.

Although not the sleek iPhone-contending handsets that many hoped for, UK firm ARM's director Bob Morris was quick to point out that they were trying to show how the OS can run on most phones already available. Korean handset manufacturer Samsung announced they too will be releasing an Android model later this year.

What with Microsoft's Windows Mobile on a massive proportion of handsets, a cut-down version of OS X on the Apple iPhone, Nokia running Symbian OS and, of course, the upcoming Android, it looks like web designers will be in for yet another cross-compatibility headache.



Prototype Google Android handsets have gone on show at the Mobile World Congress in Barcelona



eCommerce



With the popularity of Rich Internet Applications bringing desktop and webtop closer together, Dave Howell asks what the technology means for eCommerce and web designers alike

ANYONE THAT HAS been keeping an eye on the development of rich internet applications (RIAs) will know that they are beginning to make themselves felt in the online retail space. eCommerce sites have been looking for the next big thing in their market sector and RIAs could offer the interactivity that commercial sites have been waiting for. The wall between the desktop and the webtop is finally crumbling.

The Web 2.0 paradigm that has moved through the web to create the social networking sites that have become part of the fabric of the internet is now taking on a more commercial stance. What began as a social phenomenon is quickly becoming a commercial imperative as well. However, Actinic CEO Chris Barling says, "There are several drivers of rich internet applications. They are the availability of bandwidth, the availability of budget and the roll-out out of eCommerce across mobile and other devices. There are some limits to what will be deployed, as the cost of developing both features and content is an issue for all retailers. We have yet to see the balance between cost and benefit emerge."

Mark Jeffries, CTO Fasthosts Internet also commented, "Newly developed RIAs are sure to enhance the eCommerce process further by making online shopping a more interactive and visual experience. Web 2.0 promises greater interaction and user participation, and online communities will feature heavily. eCommerce websites will need to evolve and integrate in order to offer a broader and more compelling user experience."

Nigel Grace, managing director at Human Factors International says, "Companies have traditionally controlled how their products, services and brands were portrayed online through their website's design and content. RIAs provide new ways to interact beyond the constraints of standard web technologies. In terms of eCommerce sites, these collaborative capabilities enable businesses to create a sense of community on their websites to draw customers in. At the same time, they give customers more control over their online experiences with companies and their brands. eCommerce sites must make use of the principles of emotional design and persuasive architecture. Companies need to understand the power of online communities to drive business to their site and utilise attributes such as consumer reviews to influence customers' decision-making."

Andrew Shorten, platform evangelist at Adobe says, "We've already seen that rich internet applications can make a huge impact on eCommerce websites when used to overcome usability issues imposed by technical limitations with HTML; for example, making a selection from large product inventories, configuring complex products with thousands of different permutations and navigating through the order/checkout process are all areas where RIAs have been used with great success. The adoption of RIAs will continue as companies connect the relationship between the quality of the user experience with the increased sales and profits."

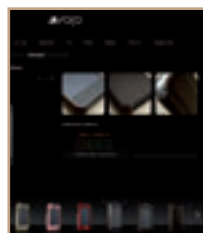
The use of RIA techniques can already be seen. Sites like Volkswagen UK (www.vw.co.uk/used_cars/find), Siblu Holidays (www.siblu.com/price_and_book.php), Anthropologie (www.anthropologie.com) and

"As the web and desktop merge, designers and developers need to work together to deliver the next generation of RIAs"

Increasingly, commercial websites are using more media to enhance their sites and differentiate themselves within an increasingly crowded marketplace. QVC now use embedded video to link customers to their TV store, but ever more sophisticated technologies that RIAs offer will place some of this functionality on the desktop.

Harley Davidson (www.harley-davidson.com/pr/gm/customizer/launchCustomizer.asp) all illustrate how RIAs can be successfully be introduced into a commercial site and enhance its usability, as Ané-Mari Peter, managing director and co-founder at on-idle (www.on-idle.com) describes, "RIA technology is about improving usability.

LIVE RIAs CURRENTLY 'DOING THE BUSINESS'



Vaja

www.vajacases.com

Possibly one of the best eCommerce RIAs currently live, as it not only presents products in a very distinct format but also allows customisation and eye candy, which would be not possible in HTML design



Domino's Pizza

www.dominos.com

This site is built around the great idea of allowing users to actually create their own pizza. However, after five minutes of playing it turns out that composing your pizza might be more fun than the actual food!



Harley Davidson

<http://customizer.harley-davidson.com/>

Customisation is king here. Potential customers can pick a stock model and play with it to their heart's content until they have refined it to become exactly as the one they imagined



INTERVIEW

Sebastian Zarzycki,
software engineer, Cognifide
www.cognifide.com

Cognifide is a software development consultancy specialising in the delivery of complex content-managed, database-backed websites and applications

WD: Web 2.0 is now a commercial imperative for most online businesses. How much of an impact

do you think the development of RIAs will have on eCommerce websites?

SZ: eCommerce sites should focus on delivering positive shopping experience to potential customers. It can be achieved by providing simple yet effective user interfaces and presenting the product in an interactive way. RIAs, if used well, can greatly improve overall experience. Sites will be competing in delivering rich user interfaces that will make our shopping easier and more fun. But the impact depends on the target audience you aim for. There will be areas where RIA can win a lot and areas where it doesn't matter.

WD: Do you think web designers will have to become desktop app developers as well as traditional web developers in a world where the desktop and the webtop merge?

SZ: Traditional websites and applications are here to stay – this will not change any time soon. There are people who still enjoy delivering web applications built using HTML, created almost entirely on server side. But there are also those who choose new technologies and never look back. I think that in the future there will be no distinction between the web and desktop, and we will deploy to both targets using the same technology. There will be tools to allow designer and developer to work together without the need to learn each other's skills.

WD: What do you think will be the key components of an RIA-enabled website in the future?

SZ: Good eCommerce sites, being RIAs or not, should provide customers with all the information they are looking for and should not make them search for too

long. Factors to remember include: load times; accessibility; a clean design (not overwhelming user with pictures and animations) and that interactivity works only when it helps the user.

WD: Do you think there is a danger that RIA technology will overshadow the usability and accessibility of the sites that use these new techniques and technologies?

SZ: Without a doubt. I've seen RIA sites that are actually worse than their simpler counterparts. RIAs are still a new technology and there are obstacles to overcome in order to achieve success. Technology is only a tool. We need to learn how to use it properly and how to make customers accept the evolution.

The problem will solve itself over time – good sites will attract users and others will learn from them.

We must assume that with usability, accessibility is fundamental component – some might argue that it should not even be seen as a separate issue. AJAX offers excellent scope for simple accessibility integration in relation to Flash, but Flash has made great strides to the extent that implementing accessibility is no longer a development headache, simply another cog in the wheel that needs planning, development time and budget like any other component."

Initially, RIAs will bring a seamless execution of the shopping experience to the web for the first time. Simply being able to move through the shopping cart and checkout process is still not as intuitive as it could be. Consumers still complain about system errors and a lack of help when they want to buy something online. RIAs, if implemented properly, should sweep these problems away once and for all. As consumers get used to using apps online just like their desktop counterparts and embrace the online webtop paradigm, they will increasingly demand this kind of functionality on the commercial sites they visit. They simply won't stand for sites that put barriers in their way. After experiencing the ease of use that social networking sites offer, consumers will begin to ask why their favourite eCommerce sites remain in what looks to them as a functional dark age. It is then that RIA development will reach critical mass.

For web designers, RIAs provide a challenge that will mean a major updating of their skills. But does this mean you will have to become a developer of desktop apps

as well as being a more traditional web designer as the demarcation line between the two disappears? Adobe's Andrew Shorten doesn't think so. "What designers will need to do, however, is understand the desktop as a creative medium and how it is both similar to and different from designing content and applications for the browser. With a forthcoming tool codenamed 'Thermo', Adobe is looking to make the process of moving from the visual design of a RIA through to development far easier; as the web and desktop merge, the key will be enabling designers and developers to work collaboratively so as to deliver the next generation of rich internet applications."

Siim Vips, CEO at Modera (www.modera.net) also said, "I wouldn't say that web designers will have to double as desktop application developers – just as a Flash developer doesn't have to specialise as a Rails guru. Most people, not just in the web design industry, have their own specialist areas of interest and expertise. Good RIAs are using CSS skins to control the layout and colour schemes and this should be a part of designers/web coders' everyday routine already."

What is clear is that the user interface will increasingly take centre stage in a commercial world filled with RIAs. From a designer's perspective, whether their creations sit on a server or on a customer's computer may become immaterial as on-idle's Ané-Mari Peter pointed out: "RIA is a godsend for an interface/web application designer. It is unlikely that specialist designers will be able to train in Flash and AJAX to the scripting level required to integrate,

but this is not necessarily a bad thing. The principles of interface design and workflow on which designers had to compromise previously can now be encoded and implemented. Designers can apply traditional design skills and developers can apply new technology. This will ultimately result in faster, more intuitive, more interactive and more thought-through applications – where they are placed becomes almost irrelevant."

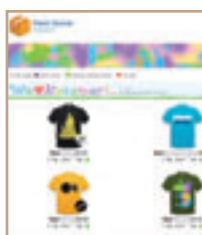
The use of RIAs in a commercial online environment is moving through a trial phase as businesses test the new technologies and techniques that RIAs seem to offer. However, as Actinic's Chris Barling points out, in the end if the new technology doesn't make money for these sites, it won't achieve critical mass. "eCommerce sites are firmly fixed on a simple and highly measurable objective. They are there to make sales. Use of RIA technology must aim at growing sales by either improving the conversion rate or growing the average order value. If they don't achieve that, they may reduce sales, which would be worse than useless. An approach that is definitely wrong is to implement technologies just because they are there. Improving business results should always be the driver."

As a new field of design and commerce, RIAs are the new kid on the coding block, but a kid that looks set to revolutionise how we all use the commercial aspect of the web. What will begin as new and improved shopping carts to reduce cart abandonment and enable online retailers to break the Back button will evolve into a new way of commercialising the web.

Thanks to Tim Gibbon at Elemental Communications and Sebastian Zarzycki, software engineer at Cognifide.



Siblu
www.siblu.com/price_and_book.php
Dynamic websites are moving to one-screen interfaces. This holiday-booking site enables the user to completely ignore their browser's Back and Refresh buttons, keeping all the content in one place



Panic Goods
www.panic.com/goods
Shopping carts are the first real-world use of RIAs. This site illustrates brilliantly how they can be seamlessly integrated into a store for the social networking generation and make eBusiness cool



BCF
<https://store.bcf.com.au/flex/default.aspx>
The use of sliders to filter the goods presented to the customer on this website are just one of the components that RIAs can bring to eCommerce sites. This level of intuitiveness is a major plus point

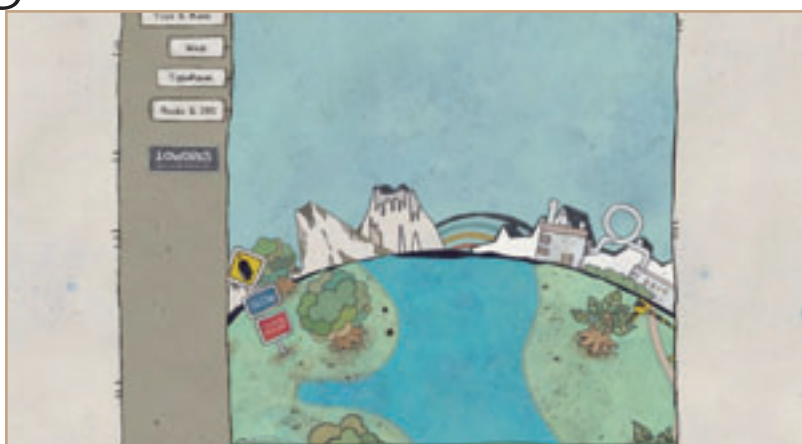
eCommerce gallery

Online stores don't always have to be loud, shiny and like every other established big-name store out there. Loworks prove that your store can be small and unique, while still raking in the dough

Thinking outside of the box

www.loworks-store.org

ON WHEELING YOUR trolley to this online store, you will find a website that is self-assured and unique, but also fun as it brings a refreshing and distinctive look to online shopping. Loworks are a renowned design studio based in Japan, with a distinctive range of creative talents in their arsenal. This website is the company's assault on the online store, and transferring their unique brand of 'scratchy graphics' across to the commercial arena appears to have been an effortless process for them that could have been full of potholes. In the store you will find lots of varied and limited edition products created by the studio, including toys, T-shirts, books and limited edition designer goods, all in keeping with the Loworks brand. The site uses charming interactive and navigational elements displaying all products and shopping information to you with a simple, yet fully functional approach. The site also has fun freebies for you by providing downloadable Loworks-branded wallpapers that sit patiently for their turn alongside the rest of the products. All of us in the office are convinced that the store will prove a great success, and in time will gather plenty of other offerings that you wouldn't necessarily find anywhere else.



The home page has some subtle and amusing interactive elements that you can interact with. We particularly like pushing the little man over!



The site makes it as easy as possible to shop by providing all the help along the way alongside the simplest of navigation

“This is the company’s assault on the online store and appears to have been effortless for them”



portfolio

THE PLACE WHERE YOUR WORK DOES THE TALKING

Clearly influenced by the bold style of KidRobot, Kidd's illustrative skills are evident in this poster campaign work

Paul Jamie Kidd

www.kidd81.com

Skills: XHTML, CSS, sIFR, Java, Adobe CS3

Employment status: Head designer, New Media Choice

Paul Jamie Kidd has been passionate about what he does since he was ten-years old, starting out by designing football kits that caught the attention of Nike and Mitre. 16 years later and inevitably it became his profession, except now he's fully conversant in the language of the web. Graduating from the University of Lincoln in 2002, he has since pulled in numerous awards for the high standard of his work and landed the position of head designer at Lincolnshire-based agency New Media Choice.

Instantly recognisable for his use of bold colours and striking patterns, his meticulous adherence to W3C standards is quickly gaining him recognition throughout the industry. He claims that US toymaker KidRobot (www.kidrobot.com) is one of his biggest influences. "I like being experimental in my approach to design; having fun is key to forming a successful relationship with your work."

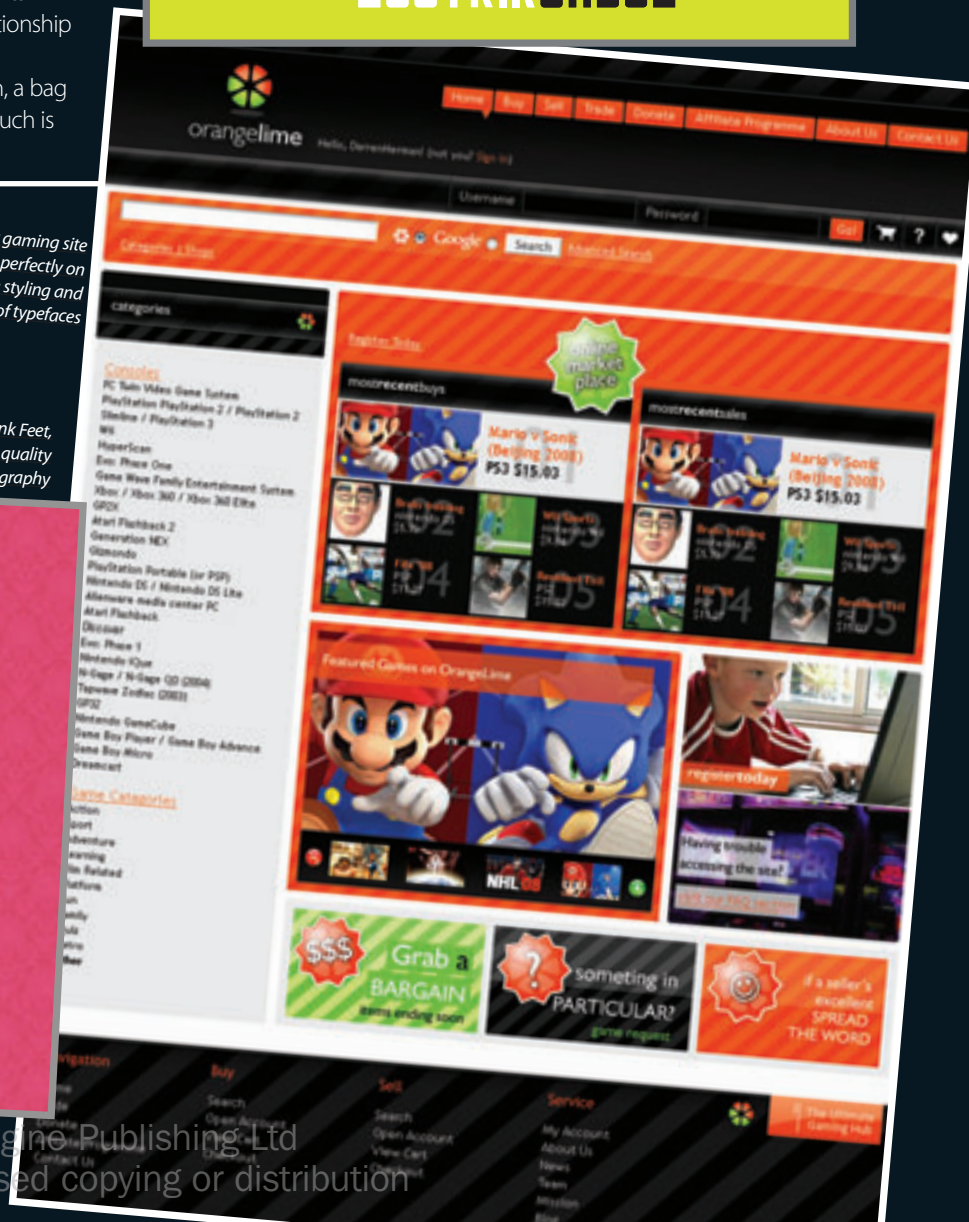
He's also very good at self-promotion; with his portfolio submission, a bag of 'Kidd81.com' badges turned up in the mail. This kind of finishing touch is exactly the thing that will make sure he goes a long, long way.



pink-feet
photography

This concept work for gaming site orangeline is again perfectly on brand, with up-to-date styling and excellent use of typefaces

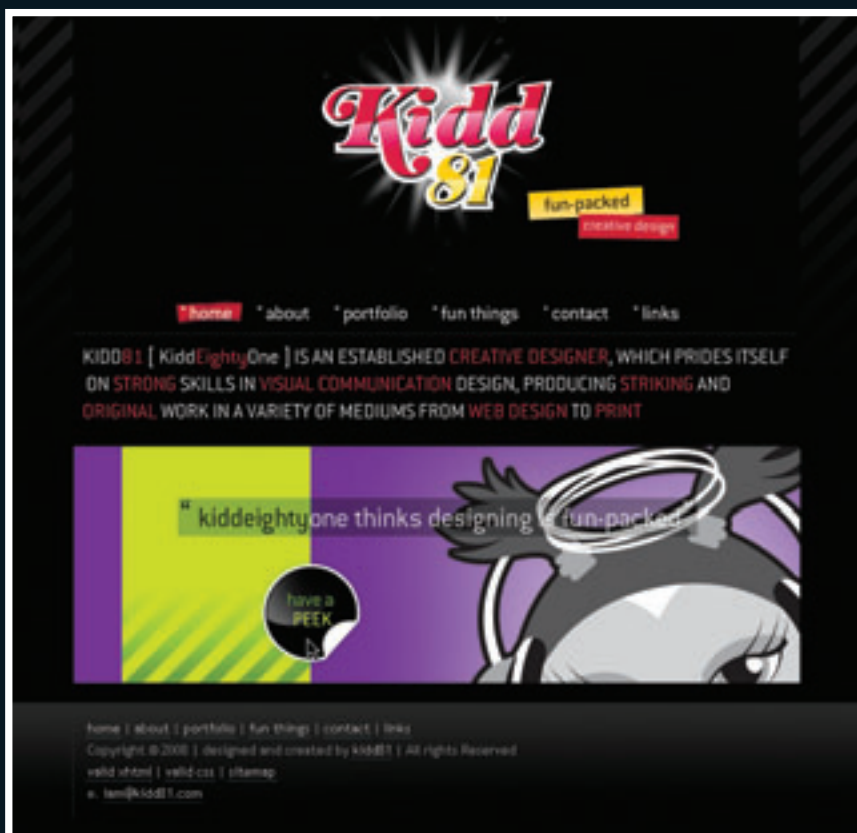
Kidd uses a basic two-colour theme for Pink Feet, perfectly on brand without subtracting from the quality of the featured photography



WE'RE ONLY too happy to introduce the creative outpourings of two more design talents in this month's portfolio - the place where we give you the readers a chance to demonstrate the skills that will hopefully land a successful creative career. Fingers crossed eh?...

MAKE IT HAPPEN!

To keep this section going, we rely on students or freelance designers to put themselves forward. It's great exposure for your talents and every single one of you will be considered, so drop us a line now at webdesigner@imagine-publishing.co.uk



Kidd81.com employs striking colours on a dark background, successfully highlighting the content of Kidd's portfolio and setting the tone throughout

Kidd81

Kidd produced the website for his agency, New Media Choice. Bright and bold while professional and accessible – a perfect combination

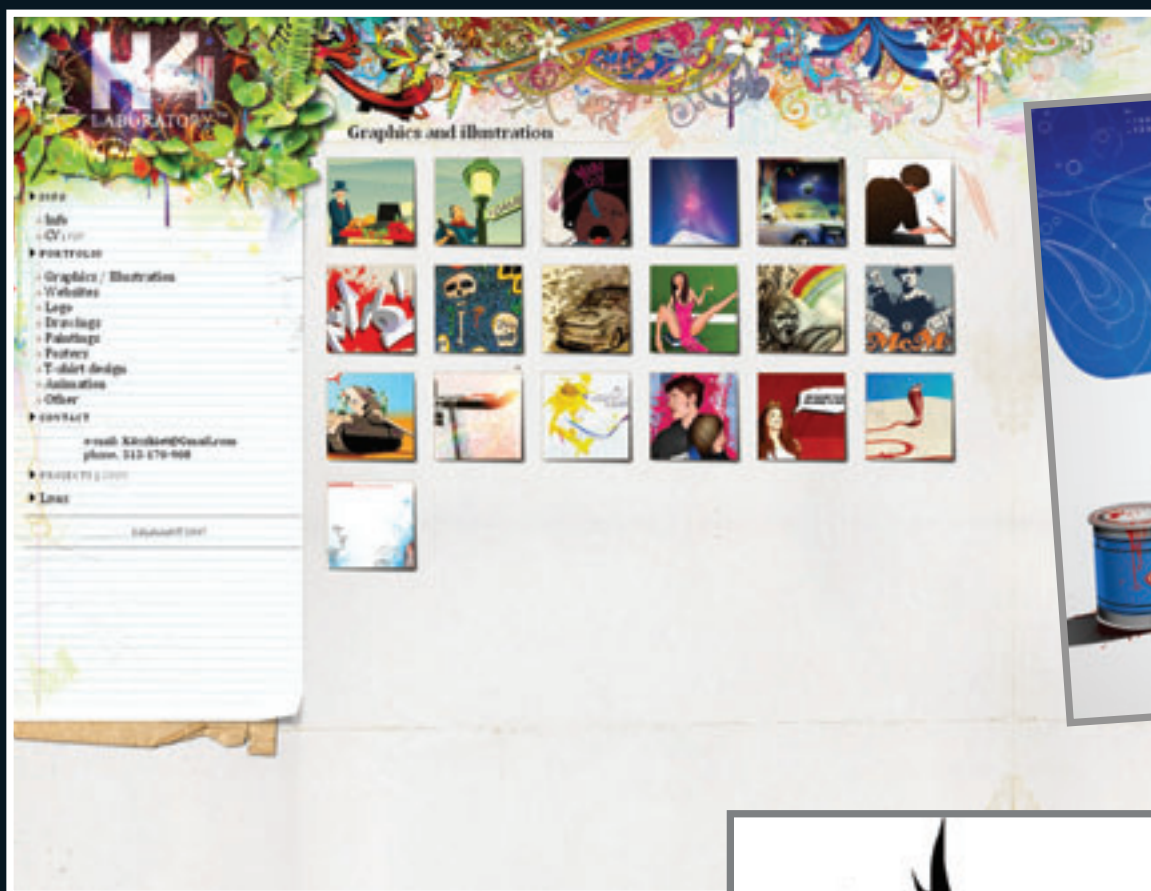


Kidd worked on the website for another Lincolnshire-based client, this time for indie rock band The Peacocks



portfolio

THE PLACE WHERE YOUR WORK DOES THE TALKING



Rakowski's artistic style is vastly varied, with a range of different techniques on display in his portfolio



Inspired by a Spawn comic and created to coincide with World AIDS Day, this is further proof of Rakowski's graphical prowess

Other than the header that continues the welcome screen's theme, his portfolio is simple, allowing his work to do the talking

Maciej Rakowski

www.k4lab.info

Skills: Just about everything...

Employment status: Student

If you're the envious type, look away now – because the work featured here simply screams talent. Let us be the ones to proudly introduce you to 20-year old (yes, you read that correctly) Maciej Rakowski. Currently studying at the Academy of Fine Arts in Łódź, Poland, he is truly multidisciplinary having produced work across a wide range of mediums and in a mind-boggling variety of styles. The fact that he has attended schools specialising in the fine arts since he was 13 is evident – the attention to detail that goes into everything he produces is, quite frankly, astounding.

Rakowski's freehand illustration skills clearly influence the majority of his work; just a quick glance at the Drawings section of his portfolio drive his own style home, somewhere between Salvador Dali and Gerald Scarfe. Frequently employing it as a base for websites, he's also a fan of Swift3D, which brings a radically different finish to some of his designs. Chuck in his fluency in Photoshop, Illustrator, Flash and Dreamweaver, topping it off with his knowledge of print design and you've got a fairly good idea of what the guy can do. Feeling a touch of the green-eyed monster yet? Saying that Rakowski is one to watch would be a gross understatement.





Sort of a Godfather-esque take on Rene Magritte, this stunning illustration defines Rakowski as an artist



Certainly an interesting metaphor, you simply have to love Bo Peep with a boombox...

The welcome screen on www.k4lab.info is astounding, instantly highlighting Rakowski's illustration skills. The Faraway Tree, anyone...?



Rakowski is not afraid to use vibrant colours, or to mix intense detail with minimalistic style – all to great effect



Not limited to one medium, Rakowski has an extensive portfolio that includes website, logo and T-shirt design, posters, paintings, animation and this funky CD cover artwork