

computer arts special



every issue with
dual-format CD-ROM

The definitive guide to Web design • Mac & PC

- **71 Flash tips:** master the Web's hottest property
- **Research:** 8 new tutorials for the top design packages
- **Respect:** learn from profiles of the professionals
- **Rebirth:** how we made the new Computer Arts Website

Web^{100%} design

What is WAP?
And why should you be
excited about it?

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issue 10

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Take a tour of a major

1

Start Here *Welcome to the world's first desktop movie studio—designed to let you create and edit Desktop Movies, or even host a website serving thousands of concurrent video streams—for less than £2,775 ex VAT.**



2

FireWire *With built-in FireWire, you can connect a professional digital camcorder and transfer video in perfect digital quality. Or add high-speed peripherals like hard drives and CD-ROM drives.*



3

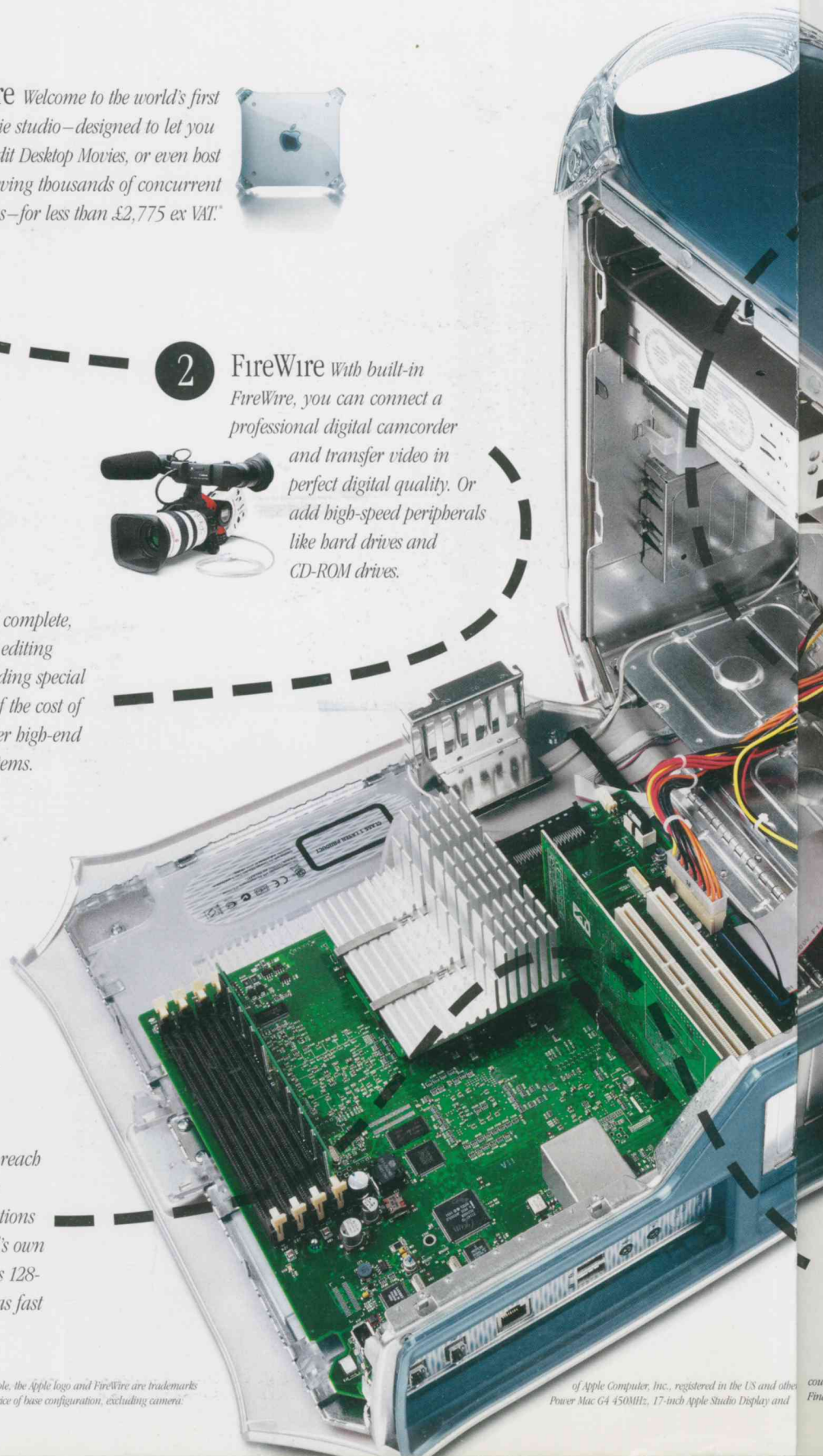
Final Cut Pro *A complete, high-end digital video editing studio in a box, including special effects—at a fraction of the cost of other high-end systems.*



4

G4 Chip with Velocity Engine

*The first desktop processor to reach supercomputer speeds of one gigaflop (one billion calculations per second). Using six of Intel's own tests, the 500MHz G4 (with its 128-bit Velocity Engine) is twice as fast as the 800MHz Pentium III.**



r new movie studio.

7

Endless Storage

Available DVD-RAM lets you archive up to 5.2GB of video on a single disc.

8

Screaming Streaming

Running QuickTime Streaming Server, your Power Mac G4 can host a website running thousands of concurrent video streams.



9

Apple Cinema Display

There's never been a movie screen like this in history. The Apple Cinema Display gives you the brightest, clearest, most inspiring place to work—a stunning 22 inches measured diagonally.

6

Ultrafast Storage

ATA/66 hard disk up to 27GB standard, internally expandable with up to three drives—so you can work with up to six hours of digital video.

5

RAGE 128 Pro Graphics Accelerator

With 16MB of graphics memory, mounted in a fast AGP 2X slot, for accelerated rendering of 2D/3D images.

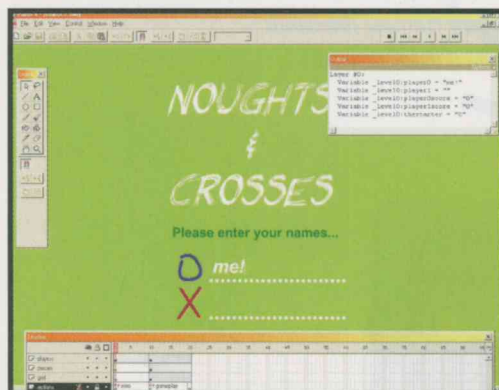


Think different.

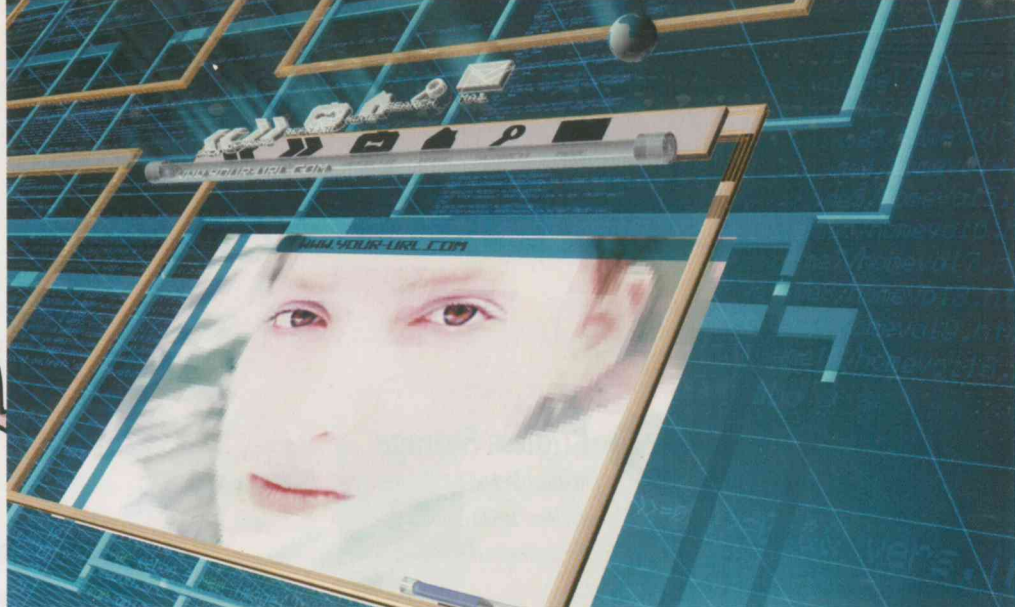
www.apple.com/uk



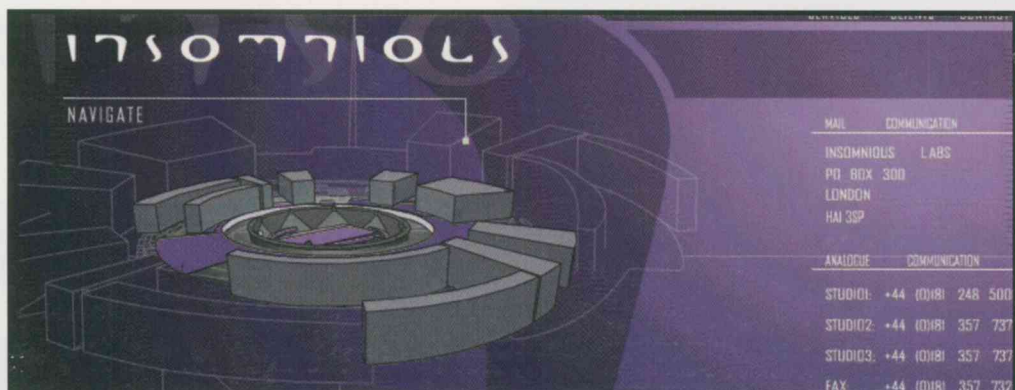
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computer arts Online creative resource **PCPlus.co.uk** **The Complete Guide to Global Computing**

[04.05.00]

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Computer Arts

The resource for computer creatives

FLASH BEAT

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book, tutorials on
Websites,
Photoshop, 3D
textures and
LiveMotion, plus a
free full LiveMotion
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and 5 scanners on
test.

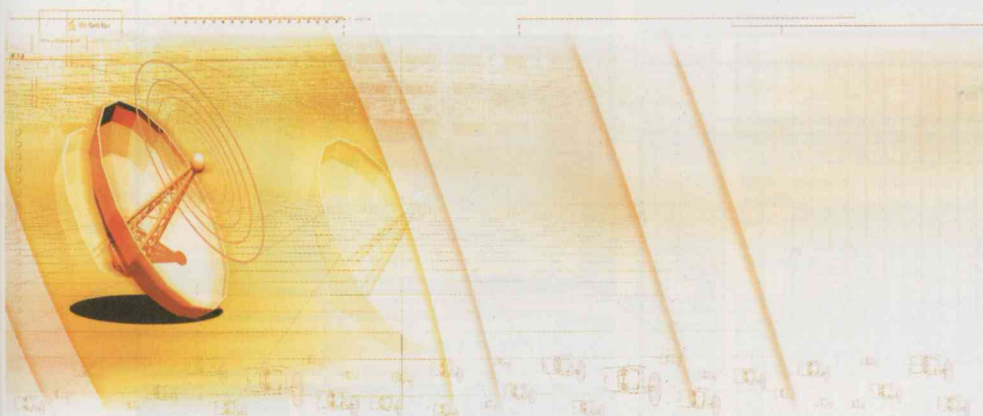
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Carol Ross Bryce... Paint Effects for
Adobe, Wild about WAP, Internet
Time Flash Competition

Tutorials
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Dreamweaver 3 & Fireworks 3, Allen
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\$20k Flash competition!

Dreamweaver 3 tutorial

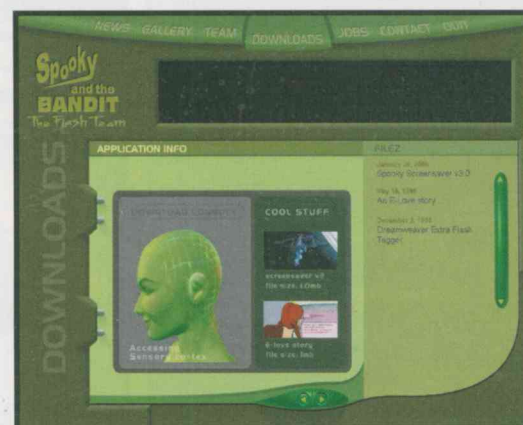
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computer arts special
The definitive guide to art, design and technology

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Full details and credits, page 98

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Netscape Online

THE FREE INTERNET SERVICE IN
ASSOCIATION WITH FUTURE PUBLISHING

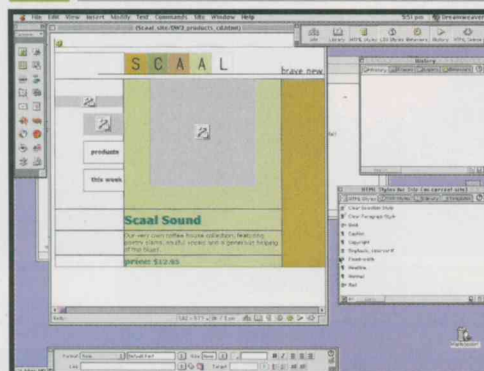
Here's your chance to sign up for the new FREE Netscape Online Service sponsored by Future Publishing. The best of Future Publishing content and FutureNet Websites have been partnered with Netscape Online, one of the Internet's most important brands, to create a great online experience for you.

The CD with this issue of *Computer Arts* contains all you need to browse the Web easily with Netscape Navigator, organise your e-mails with Netscape Messenger, and create great Web pages with Netscape Composer – all free!

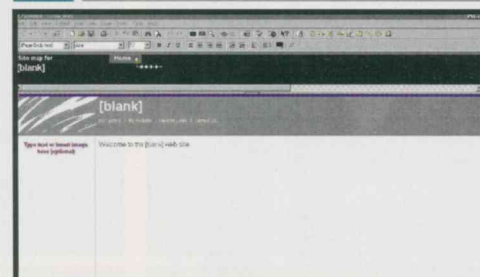
With one click, Netscape Online gives you: Web search capabilities, up-to-the-minute news, live sports scores, finance from FT.com and videogame reviews.



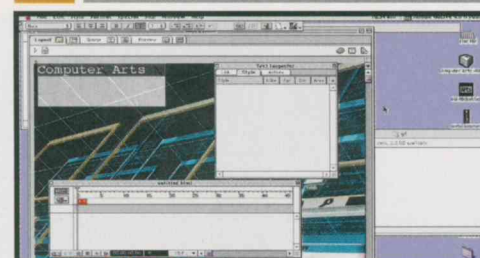
Dreamweaver 3



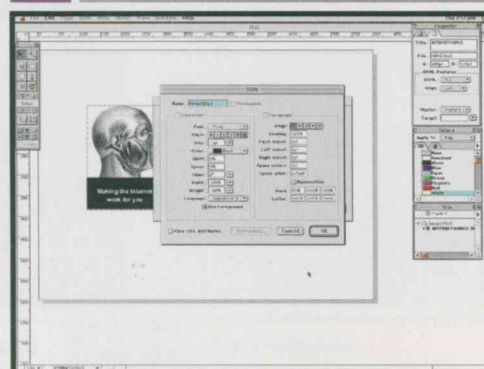
Trellix Web



GoLive 4



Freeway



Websites



CDcontents [10/06.00]

Trellix Web 2.5 (PC)

Complete Web design package. To publish your site, sign up with Fortune City absolutely free by following instructions in the app

Freeway (Mac)

Complete version of this innovative design package that offers a familiar DTP-style interface

Dreamweaver 3 demo (dual)

The most widely-used Web design software – discover why

Fireworks 3 demo (dual)

Versatile Web graphics editing

Flash 4 demo (dual)

Renowned vector animation tool that capable of amazing results

Web Media Publisher (PC)

Complete Web design package, yours for free

GoLive 4 demo (dual)

Adobe's rival to Dreamweaver – and some might say its superior. Find out if you agree

NetObjects Fusion 5 (PC)

Demo of this excellent editor that is well-suited to commercial sites

Freeway 2 demo (Mac)

Tried the full package? Now try the latest version

Sparkle sampler

More than 100 exclusive new Flash symbols from the Sparkle collection, yours for free

computer
arts
special
The definitive guide to art, design and technology



For full listings, contacts and further details, see the inside of your CD booklet or [w] www.computerarts.co.uk

Building Web pages the Freeway

Constructing your own Website doesn't have to involve hours of HTML coding or buying expensive software – this month's cover CD comes with something rather helpful...

On the disc

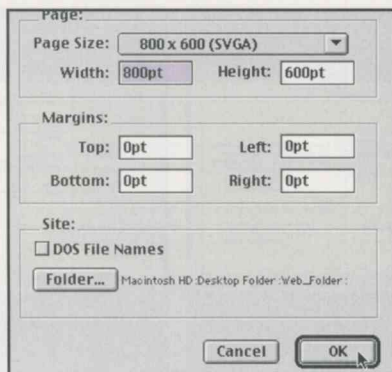
Freeway is a Mac-only Website creation tool, with a QuarkXPress-style interface. On our coverdisc we have a full copy of version one for you to keep, plus a demo of version two. Version three should be available soon, for more information, check out [w] www.softpress.com.

Check your ISP

Before uploading your site, check with your ISP that there are no special requirements as regards naming conventions. This could save you lots of time later on...

Workarounds

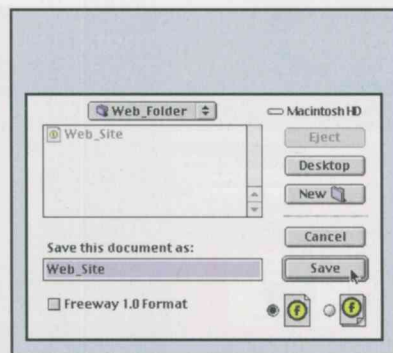
Internet Explorer and Netscape Navigator don't always interpret HTML coding identically. What works in one might not work in the other, so be prepared to spend time finding a workaround.



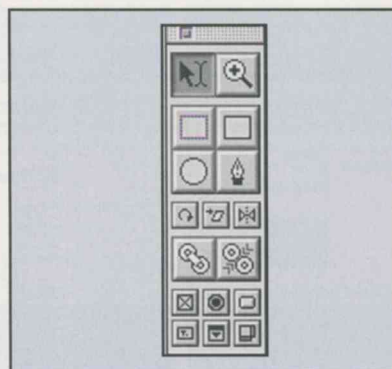
1 First we need to create a new document. Select New from the File menu to bring up the Document Setup dialog. Create a new document of your desired size and create a destination folder for your pages to be stored in. Your finished pages will be stored in this folder.



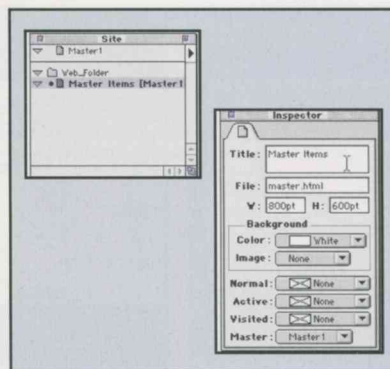
2 This is the first page of your Website. This page is currently untitled, but if you look at the Site palette you will see that it resides within the folder you created earlier. The Tool palette, Inspector palette and Colours palette should appear above the Site palette.



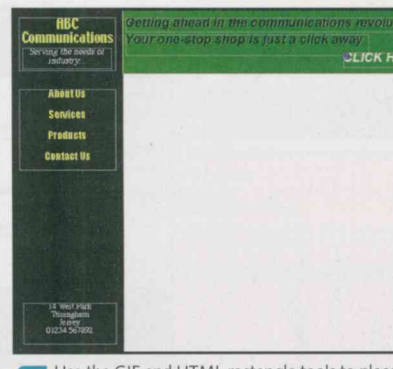
3 It is important to save the document using the Save As command in the File menu. The Freeway document should be saved into the folder created in step 1 – we've named this one simply Web_Site. You will need the entire contents of the folder when it comes to publishing your site, so name and store everything correctly.



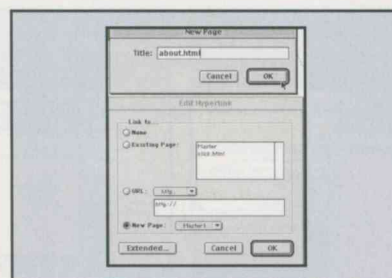
4 Freeway's toolbox includes tools for creating radio buttons and checkboxes as well as text area tools to create forms into which text can be entered and posted to a designated e-mail address. The ones you'll use most often are the GIF and HTML rectangle tools, but each is self-explanatory.



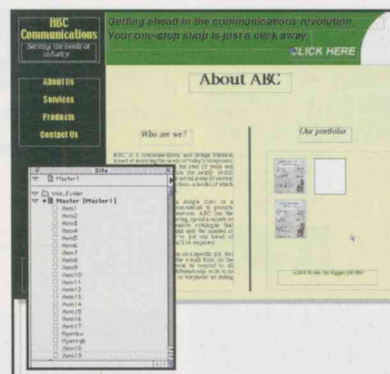
5 To ensure consistency across the site, create a Master page to carry all the objects we want to appear on every page. In the Site palette, click on the Master1 icon to commence editing the Master page. You can then rename the Master page (we've called it Master) in the Inspector palette.



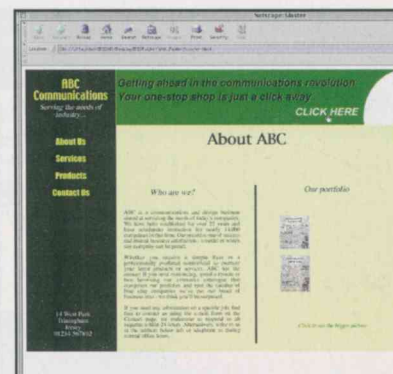
6 Use the GIF and HTML rectangle tools to place text and images on your page. If you want to use fonts of different faces and sizes, enter and format the text in a GIF box and Freeway will convert it to an image for you. Use the Colours palette to control the colour of your box and text, while Apple-clicking on a box enables you to resize it.



7 Once we have the Master page ready, we can add links to and create the other pages of the site. Highlight a line of text which will become a link and select Hyperlink from the Edit menu. We want our untitled page to be the home page, so click the Existing Page radio button and navigate to the Untitled document. Create the rest of the links in the same way, but click the New Page radio button and name them appropriately. The pop-up menu next to it reads Master1, since that page is being used as the base for the new ones.



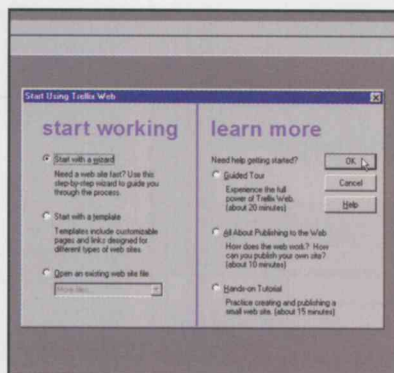
8 You can now use the Site palette to navigate to each page in turn and add the elements unique to that page. Here we've started adding text and graphics (imported into a GIF box) to build up a portfolio. Use the Preview command in the File menu to check how your page is looking.



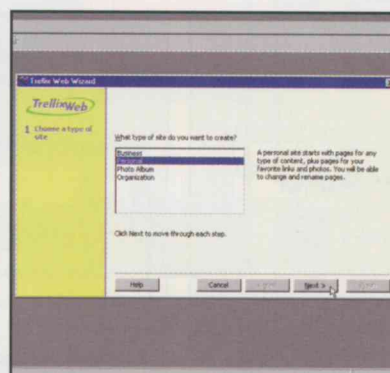
9 This is a preview of the page in Netscape Navigator. Freeway is versatile in that it enables you to add to the site as and when you want and has the facility for simple JavaScript rollovers and so on. Be sure to check your site in both Explorer and Navigator before uploading it.

Part 1: Create a Website with Trellix Web

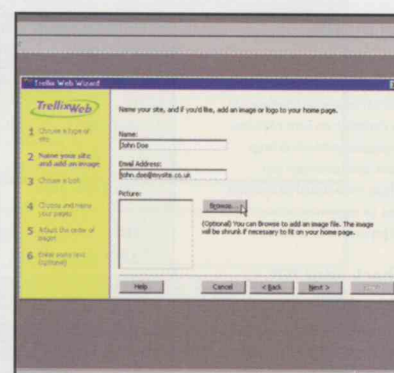
Be a Web Wizard with the full package featured on our coverdisc, which provides a quick and simple way to structure your own Website...



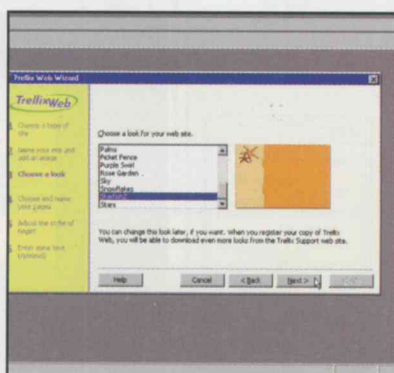
1 When you start *Trellix*, you'll be offered a choice between getting stuck in and learning more about the software. Choose the Start With A Wizard option under the Start Working heading and click OK to continue. This way you can set up the framework of your site in moments.



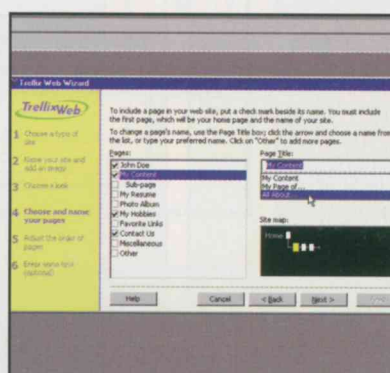
2 The first job is to choose the type of site you plan to construct. *Trellix* provides a choice of four types – Business, Personal, Photo Album or Organization. We're going to build our own personal Website, so highlight Personal and click Next to proceed.



3 Now provide some basic personal details for your site's home page by typing in your name and e-mail address. If you've got a picture of yourself as a GIF, JPEG or PNG file, you can use the Browse... button to locate it for inclusion in your home page.



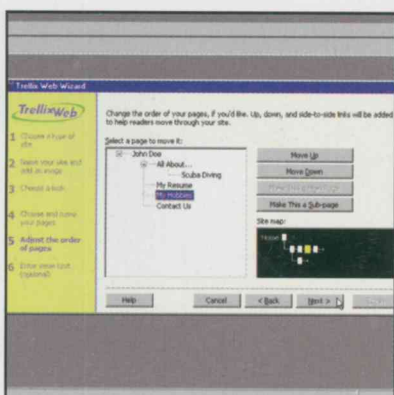
4 Trellix comes with a range of looks that you can apply to your Website. The wizard will preview any look that you highlight. We tried a few but settled on Starfish2 in the end. Registered users of the software can download even more looks from the *Trellix* Website.



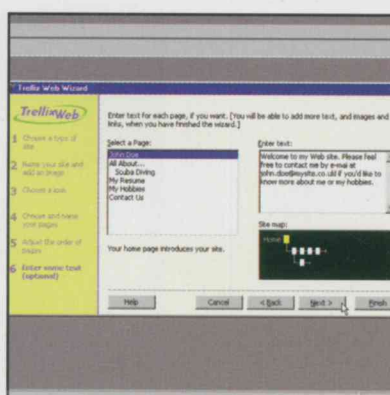
5 The next step is to choose the pages you want to be in your Website. Simply tick the boxes besides the pages you want included as sub-pages of your home page. You can even change the names of your pages by editing the Page Title box.



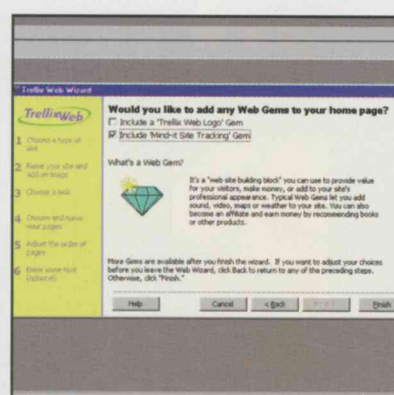
6 You can also use this part of the wizard to add more sub-pages to the first section of your site. Tick the sub-page box and then type a name for your new sub-page in the Page Title box. Notice where this new page is placed in the site map.



7 Now you can swap round the order of the pages in your Website's structure. Highlight a page and you'll see which of the four things you can do to it: move it up, move it down, turn it into a main page or turn it into a sub-page.



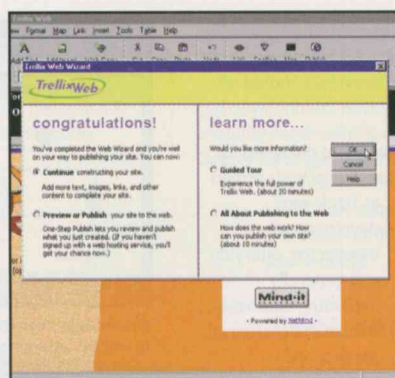
8 Next you can add text to as many of the pages in your structure as you like. Here we're adding some text to the home page. Simply highlight the page in the list on the left and enter the text you want in the box on the right.



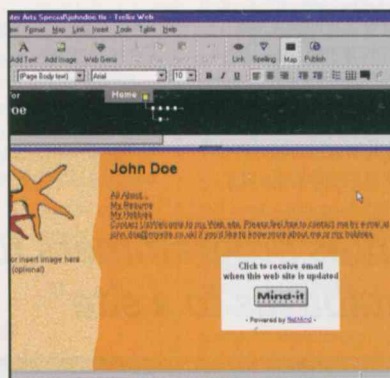
9 This last step is optional but *Trellix* comes with some extra goodies that you can include in your site. Simply tick which of these so-called Web Gems you want and click Finish to complete setting up your Website's structure.

Part 2: Complete your Website

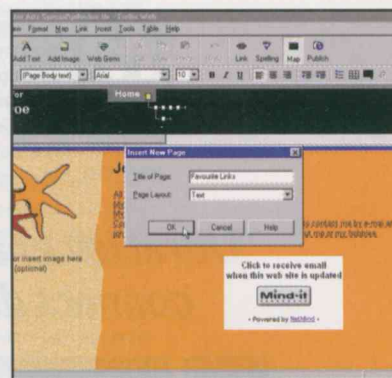
Add the finishing touches to your site with more text, links, pictures and even new pages – *Trellix Web Wizard* makes it easy...



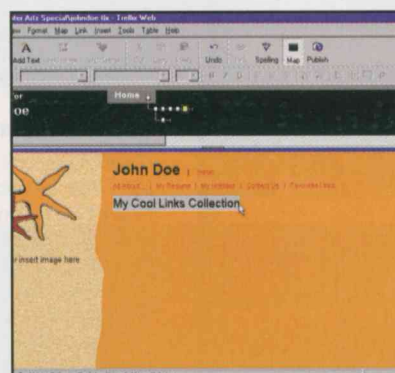
1 Once you've finished using the wizard to structure your Website, you can choose the Continue option to move elements to each individual page. *Trellix* provides tools to help you add more text, images and hypertext links to your site. You can even create whole new pages.



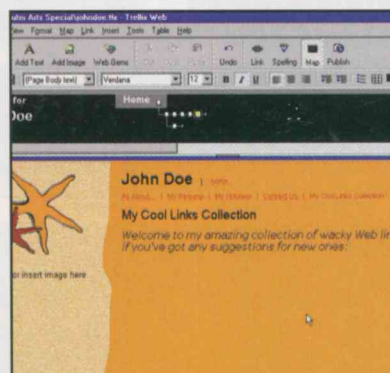
2 It's worth taking a few moments to familiarise yourself with the layout of *Trellix*. You'll find the usual selection of menus at the top of the screen and below that are the main toolbars, a map of your site and an editable layout of the currently selected page.



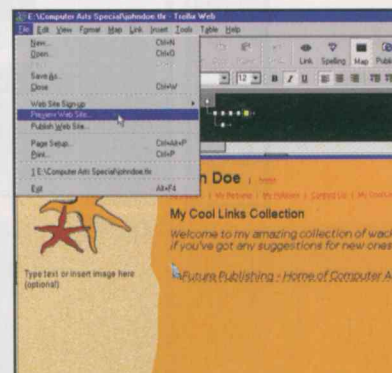
3 First we're going to add a new sub-page of the home page. Check the home page is highlighted in the map and click on the Add Page button in the toolbar. Now type Favourite Links in the Title text box of the Insert New Page dialog box and click OK.



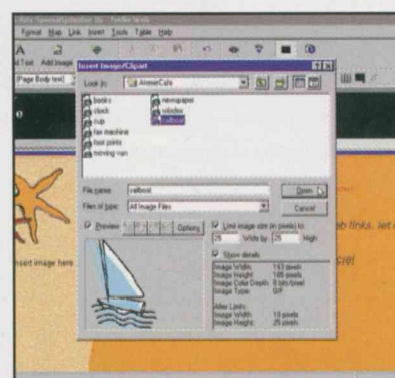
4 *Trellix* goes straight to your new page so that you can start editing it (it also adds a link here from the home page). Next we're going to change the heading to something more exciting. Double-click on the words Favourite Links and edit them to read My Cool Links Collection.



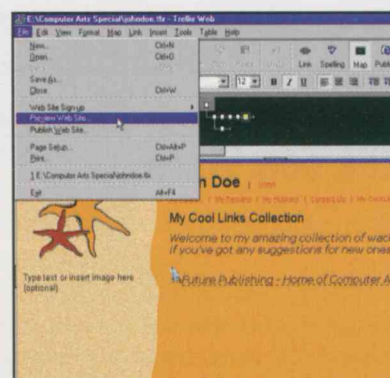
5 Now click in the space below the heading so that we can type some body text. Use the formatting toolbar to select the font, size, style and alignment you wish to use and then type in an introductory paragraph of text.



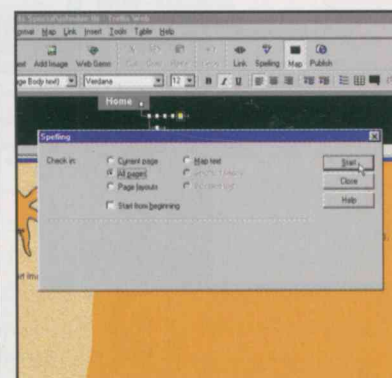
6 Start a new line and choose the Create Link to URL of File... option from the Link menu. Type the Web address in the second text box in the Link Properties dialog box and then enter the text you want to appear for this link in the Displaying text box.



7 Now position the cursor before the link you've just added and click on the Add Image button in the toolbar. Locate the image file you wish to insert then tick the Limit image size (in pixels) to checkbox, enter the dimensions you wish to apply and click Open.



8 Continue to add new elements to your site until you are satisfied. It's a good idea to save your work as you go along. You can also preview what your site will look like in a browser by selecting the Preview Website... option from the File menu.



9 A useful last check is to use *Trellix*'s built in spelling checker to make sure you haven't made any embarrassing errors. To do this, simply click on the Spelling button in the toolbar, make sure the All pages option is selected and click Start.

Macromedia UltraDev

Back-office tool for Web applications unveiled



Macromedia is to launch a new product codenamed **UltraDev**, a development tool based on **Dreamweaver's** core

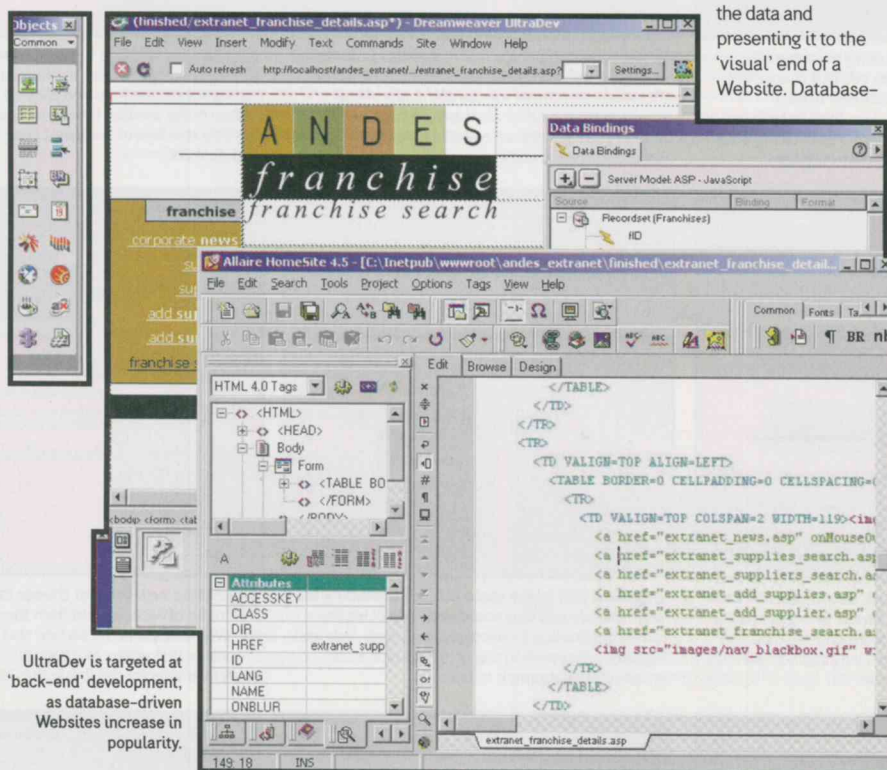
architecture. **UltraDev** enables programmers to quickly create Web applications using ASP, JSP, CFML and more, and connect existing

databases to a site while viewing live data in the workspace.

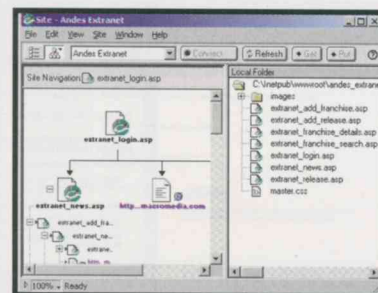
The back end

Unlike **Dreamweaver**, which is designed for creating HTML Websites, **UltraDev** is aimed at 'back-end' development — interfacing, querying and generally exploiting databases, then manipulating all the data and presenting it to the 'visual' end of a Website. Database-

"UltraDev enables programmers to connect databases to a site"



UltraDev is targeted at 'back-end' development, as database-driven Websites increase in popularity.



Macromedia's **UltraDev** is intended to replace **Drumbeat**, although owners will be able to upgrade.

driven sites are becoming increasingly common as, once they're set up, they enable data to be quickly altered and interrogated in an orderly way.

UltraDev takes such development one step further by providing instant feedback on your database application and enabling changes to be made in place, complete with visual and source editing.

Supported servers

UltraDev supports ASP 2.0, Cold Fusion or JSP 1.0 servers including Microsoft IIS, Allaire Cold Fusion and Netscape Enterprise Server. Meanwhile supported database formats include ODBC, JDBC and ADO-based systems such as Oracle, Sybase, Microsoft SQL and Access.

Although **UltraDev** is intended to replace **Drumbeat** as Macromedia's product for Web application development, registered **Drumbeat** users will be able to upgrade for a reduced price. You will also be able to open and edit existing published **Drumbeat** files within **UltraDev**.

The program is due to be launched sometime this month for Windows 95/98/NT/2000 and Mac OS 8.6, price TBA. For more details call Macromedia on [N] 0870 600 1041 or visit [W] www.macromedia.com

Apple's FREE seminars

Discover the latest in compression and streaming for Web broadcasts

Desktop Movies combine the full sensory experience of video with the affordability and ease of use of desktop computing. Now video professionals, content creators, designers, corporate departments, or anyone with a message to communicate can develop highly

effective marketing and training materials for delivery on the Web.

Apple — with partners Macromedia, Terran Interactive, Akamai, Pinnacle Systems, Sony Broadcast & Professional and Sorenson Media — is delivering free Desktop Movies for the Web Seminars in June to help you get

the best from this technology. The focus is on how to prepare and deliver streaming media on the Internet.

If your business is news, corporate communications, sales, education, or entertainment, your organisation will soon be faced with the need to deliver video content — either over an intranet or the Internet. The Desktop Movies for the Web seminars will help you understand how to tackle this exciting new frontier. High-speed QuickTime compression and broadcast tools will be

featured, allowing you to learn how to prepare and deliver quality content.

The topics will include capture and edit, video compression for the Internet, authoring Web pages using QuickTime content, delivery, bandwidth and equipment for broadcast.



Agenda and details at [W] www.computerarts.co.uk
Apple seminar dates are Monday 12 June: Granada Studios, Water Street, Manchester and Tuesday 13 June: Kensington Town Hall, Kensington, London. Registration at [W] www.apple.com/uk/series/movies

Adobe GoLive 5

Adobe's rival to *Dreamweaver* gathers pace

By the time you read this, the latest version of Adobe's increasingly popular Web builder *GoLive* should be available. Release 5.0 promises better stability, cleaner code untouched

by the program, customisability and better site management capabilities.

As before, *GoLive* offers both WYSIWYG and development environments, the latter enabling hand-editing of the code. However *GoLive* no longer reformats inserted code,

which sometimes resulted in broken HTML, but instead simply ignores it and assumes that you know what you're doing.

Graphic editing

GoLive also now offers the capability to re-edit optimised graphics simply by double-clicking, which reopens the file in the native editor and resaves it once you've finished. What's more, the *Photoshop* Web compression engine is built-in, enabling you to optimise PSD files on the fly.

Crucially the program is also now customisable via the included JavaScript SDK, which means you can (with just a bit of programming effort) customise your palettes,

menu items and so on — much like Macromedia's *Dreamweaver*.

The improved Site Builder enables you to almost effortlessly alter a site's relationships, for instance making a child page a parent without having to manually change all the links. A Site Reporting capability pinpoints slow-loading pages and generates multiple browser-friendly versions of your site, among other things.

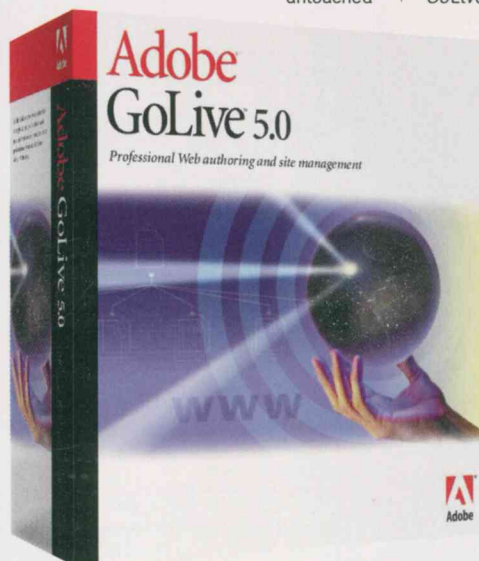
Database friendly

Finally, but importantly, *GoLive* has a dynamic link capability to connect to ODBC-compliant databases — as well as the customary integration with Adobe's other graphics packages.

Adobe is certainly playing the catch-up game for Web design software as compared to Macromedia's ubiquitous *Dreamweaver* and *Fireworks*. It originally purchased the well-regarded *Cyberstudio* 3, as it was then called, from *GoLive* (the company) and quickly followed up with a cross-platform version 4. V5 is the first full Adobe build — and it definitely looks like it's set to be something special.

You can read a full review of Adobe *GoLive* 5 in the July issue of *Computer Arts*, on sale from 14 June.

Adobe *GoLive* 5.0 should be available this month for PC and Mac, price TBA. For more info contact Adobe on [t] 0208 606 4001 or [w] www.adobe.co.uk.



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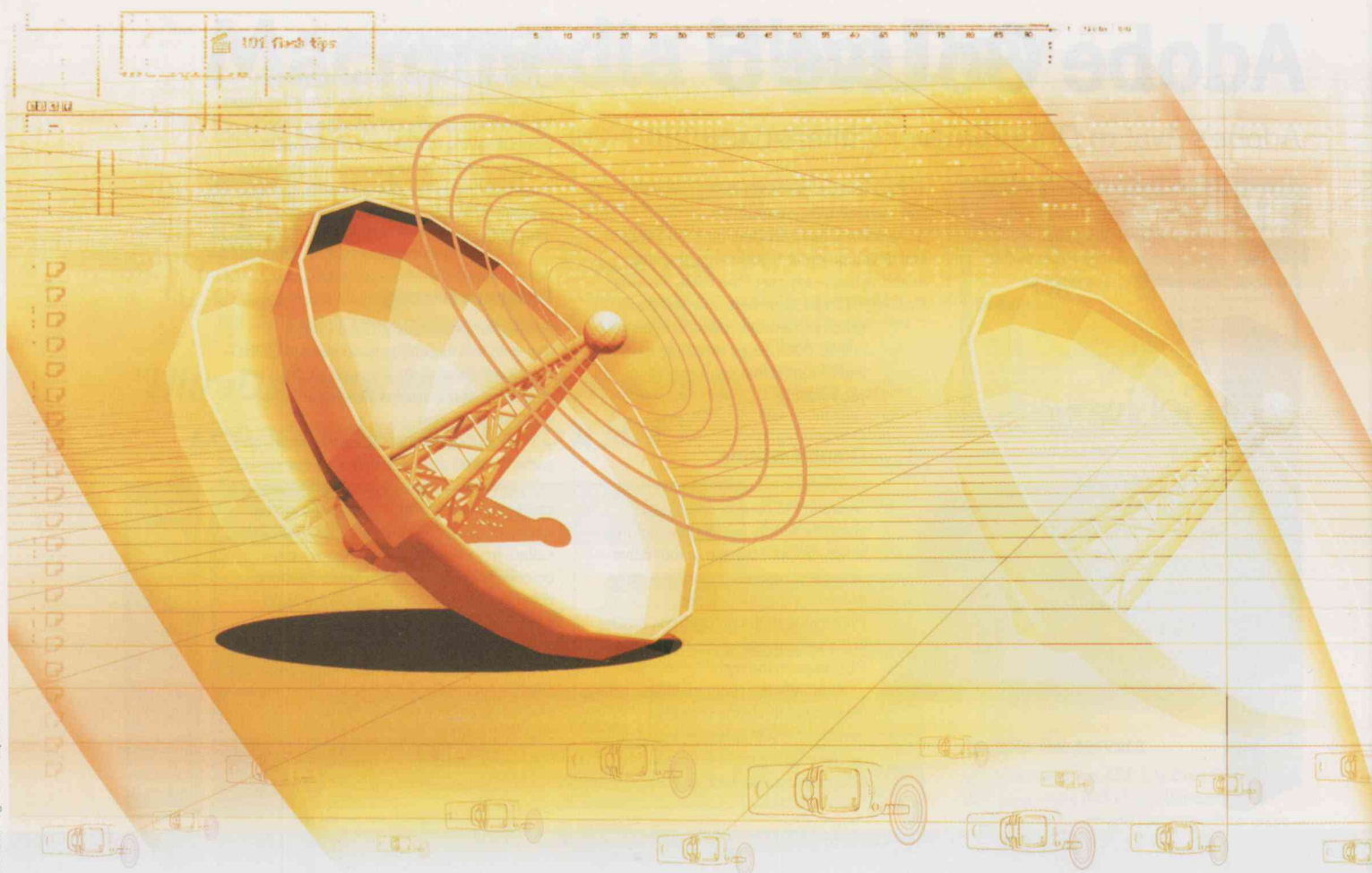
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Zen and the Art of Web Design

You might be handy with *Photoshop*, but it doesn't mean you can create a dazzling Website. So what makes a great Web designer?

There's never been a better time to start designing Websites. In five years, the Internet has shifted from being the preserve of computer geeks to the new medium no one can afford to be without. Britain has witnessed explosive growth and acceptance of the Net — you can't open a magazine or switch on the telly these days without being accosted by Web addresses.

Hand in hand with this popularity has come a huge demand for Web designers who can produce sites to satisfy a whole

spectrum of weird and wonderful design briefs. If you've been considering taking the plunge into Web design, now is the time to do it.

If you already have a background in computer aided design and are familiar with packages like *Photoshop*, *FreeHand* and *Illustrator*, then you have an advantage when it comes to learning Web design. It means you're already familiar with generating and manipulating graphics, as well as understanding the importance of colour usage and font application. But

producing graphics for the Web is a whole different kettle of fish to producing them for print — and graphics are only a part of the equation of realising a successful Website.

The key for designers coming fresh to Web design is to avoid bringing with them the dogma of their previous professions. Good Web design is about flexibility — it's about relinquishing pixel perfect control of a design's appearance and concentrating instead on functionality. Instead of thinking simply about how a Website looks, a Web designer has to think about how it works too — how a user gets around the site, how they find what they want easily, and to ensure that the site is as intuitive as possible.

Navigation aid

Web design is 3D because it's fundamentally about presenting a

collection of information that the user can move around in, rather than merely being visually attractive. Of course, the best sites manage to be both, but functionality should always take precedence over form. You only have to look at the most popular site on the Web, Yahoo! (www.yahoo.com) to see such functionality in action. The appearance would probably make most traditional designers weep, but the design is like that precisely because it's the most efficient way of letting people get the info they want.

Hand in hand with the 3D nature of Web design come the considerations of bandwidth and platforms. The Web isn't nicknamed the World Wide Wait for nothing — all of us have suffered the annoyance of slow loading Websites, and more often than not have given up and gone elsewhere. Web designers have to ensure that whatever they do, it



downloads fast — otherwise you'll lose most of your audience.

Equally, Web pages are seen on lots of different platforms — Windows, Mac and Linux, using *Internet Explorer* and *Netscape Navigator*, to name just the major contenders. Ideally, Websites have to work on all these different platforms so as to ensure the maximum amount of users. If the page loads and everything goes pear-shaped, the users will disappear to somewhere that does work on their machine.

Screen test

Similarly, most designers are used to working with big monitors running at 1024 resolution or higher — but don't forget most ordinary Joes access the Web with a Windows machine running at 640x480 or 800x600. Therefore the sites you design must be viewable in those resolutions as well as your own.

Of course, not all of us can afford a Mac and PC to test our sites on — but we can ensure that sites work OK in both the major browsers and at different

resolutions. More importantly, at least being aware that a site will be seen on other browsers and platforms other than the one you design it on will help in designing it for everyone to see.

In short, if you're coming fresh to designing for the Web, don't try and shoehorn Web pages into what you think is good design for other media. Huge images, cryptic navigation, slow loading pages, sites that only work at a resolution of 1024 or higher — these are all the hallmarks of designers trying to transfer design tenets from other media on to the Web — and making a right mess of it.

The key to good Web design, as with most things, is to go back to basics. It's certainly a good idea to familiarise yourself with a Web editing program like Macromedia's *Dreamweaver* or Adobe's *GoLive*, but don't just stop there. Roll up your sleeves and learn a bit about HTML — Hyper Text Markup Language — itself, the language that holds Web pages together. HTML is super simple to pick up, armed with a good book like Laura Lemay's *Teach*

Yourself Web Publishing with HTML 4 in 21 Days (ISBN: 0672317257), you'll have it sussed in an afternoon.

Under the bonnet

More importantly, once you've got your head round HTML, you'll start planning out Web pages in HTML terms rather

than purely visual terms. Then you can start analysing Web pages you like by using the View Source function and seeing how the designer put it together. This means you're considering a site in terms of how it functions as well as how it appears. Looking under the bonnet of sites you like is an essential part of

The screenshot shows a web browser window with the address bar displaying 'dack.com'. The page has a yellow background and contains several text blocks. At the top, it says 'Flash is evil' and 'Originally Published: September 1, 1999'. Below this, there are sections titled 'Macromedia', 'Gratuitous Animation', 'Splash Screen Renaissance', and 'Flash Sites'. The text is a rant against Flash animations, criticizing their size, lack of accessibility, and overuse. Navigation links like 'home', 'about', 'links', 'flash', 'news', and 'contact' are visible at the top right.

Flash is evil: read one man's rather educated rant against sites using Shockwave.

Sites to see

Go and see what they say about Web design. Then pinch it to use for your own nefarious purposes...

A List Apart

[w] www.alistapart.com



A Web community of Web designers. Despite the site being a perfect example of why you shouldn't use frames, it's full of useful about the complexities of Web design, and has a dead useful discussion mailing list which you can sign up to for free.

Webmonkey

[w] www.webmonkey.com



One of the best all round Web design advice sites. Webmonkey features stacks of tutorials about how to get virtually anything done, plus lots of thoughtful stuff about what the Web is and how to design better for it.

Killer Sites

[w] www.killersites.com



The site to accompany David Seigel's best selling *Creating Killer Websites* book, with lots about making the transference from print design to Web design. It's basically an extended plug for the book, but it's useful nonetheless.

Coolstop

[w] www.coolstop.com



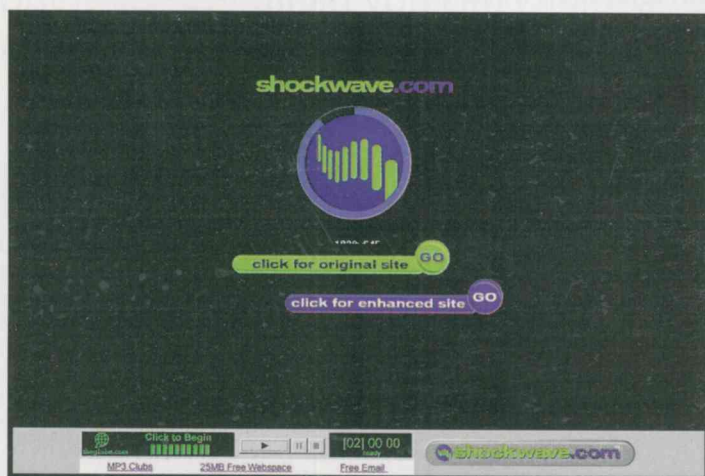
A fabulous directory of generally cool sites with high design values. Worth taking a peek for ideas and design inspiration, although it soon becomes obvious that the 'designer' Website aesthetic is becoming a bit overused.

Use It

[w] www.useit.com



The Website of Web usability guru Jakob Nielsen. Packed with useful articles about how people browse sites, what they like and what they don't like. Essential reading for anyone wanting to get the widest possible audience to their site.



Shockwave.com: a fantastic site that showcases the use of, you guessed it, Shockwave.

WILD FEED TV

verite television



Home | [Introduction](#) | [Gallery](#) | [NBC vs WFTV](#) | [Links](#) | [Feedback](#)

WildFeedTV: TV bloopers piped straight across the Net – a compelling use of streaming video.

creating good site designs yourself. With over a billion pages out there on the Web, there's a lot to learn from. Equally it's essential to realise that your site doesn't exist in isolation – people will be coming to it from all manner of other sources, whether they be on-line or off-line, but they'll also be coming with expectations of how your site should function.

There's a reason why left hand navigation is virtually ubiquitous on Websites – not only because it works as an efficient method of ordering a site's main sections, but also it's because what surfers are used to. Imagine how peeved you'd be if every time you booted up your computer the desktop icons were in a completely different place from last time. So it is with Websites with weird and wonderful navigation – they confuse and disorientate the user, so giving them less impetus to explore the site.

This is the main reason why frames have fallen from grace in recent times. While they allow initially easier

navigation by keeping the navigation bar on screen at all times, they make bookmarking individual pages within the site impossible and also make the back button go awry. Most sites simply position the navigation bar on each individual page, so keeping it available at all times and allowing for easy bookmarking.

Make it easy

Remember that surfing Websites is not a linear experience, where people enter at the front, go through the middle and leave at the exit. People can arrive and exit from your site via any page. Don't try and force them to do otherwise – ensure they have that navigation bar against which to orientate themselves and know they've arrived at a different site. If you present it coherently, they may well start exploring the rest of the site. In short, if you're catering to the widest possible range of Web users, make it easy for them. Of course, if you're not out to attract everyone to

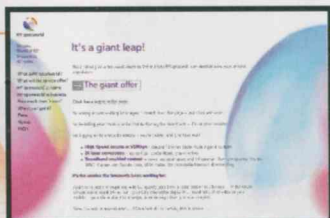
There's a reason why left hand navigation is ubiquitous – it's what surfers are used to



Yahoo – the most popular site on the Net. And yes, it is designed to look like that...



If you're not properly kitted out, a stern warning about having the wrong plug-in greets you at The Remedi Project.



High speed Net access is finally here with BT's Open World.



Balthaser Web design company: one of the most impressive Shockwave demonstrations.

Most people on the Web have no interest in design – it's a tool and if it goes wrong they'll blame you

your site, then you can design more to the audience you have in mind. There are some fantastic sites like the Remedi Project [w] www.theremediproject.com and Balthaser [w] www.balthaser.com that exploit the uses of Shockwave to the full. These are bandwidth intensive sites that are designed for high end users – that is, people who understand the Web and its many idiosyncrasies and always have the latest browser and plug-in versions.

Remember that the vast majority of people using the Web have no interest in the Internet per se, just as they don't care about the computer that they use at work. Both are just tools to get things done, and if it goes wrong, they'll blame your Website rather than their own lack of knowledge.

Flash is evil!

As such, it's important to only use these elements where they're needed. Too often Web designers get carried away with the impulse to add dynamism to their pages with wholly inappropriate Shockwave intros to their site or animations. These might be mildly entertaining the first time but they soon get annoying, especially if they stop the user getting to the information. Have the humility to look long and hard at your Website designs and ask yourself, 'Would I actually use this site?'. It's also worth reading the personal but pertinent meditation *Flash Is Evil* at [w] www.dack.com/web/flash_evil.html

Plug-ins are great if they deliver content on demand – that is, if the user asks to see the animation or the video clip, rather than it being thrust upon them – Shockwave.com and wildfeedtv.com are two good examples of this. Deliver the content that your users want to see, not what you think they should see. Unless you're building a site for a niche audience, make sure

people can get at the content without needing plug-ins. For more about designing with and without plug-ins, see the Investigation in issue 39 of *Computer Arts*. See page 93 to obtain back issues.

While Shockwave and other plug-ins such as RealAudio, Quicktime and Java applets are commonly considered cutting edge Web design, they're actually blunting it. The real cutting edge is to be found in designers who can produce pages that are 5k or less in total download size, as the recent massive response to the on-line design competition at [w] www.sylloge.com/5k showed. The need for tiny file sizes is becoming increasingly important as more and more sites become database driven, especially e-commerce Websites. Because databases take a while to display all the information asked for, it's absolutely critical that the Web page which contains that information loads fast.

With high bandwidth ADSL Net access now about to happen in the UK with BT's Open World scheme – see [w] www.btopenworld.com for more information, perhaps designers' worries about file sizes, bandwidth and download speeds are finally over? Unfortunately not. As people get used to having greater bandwidth, they'll be expecting even more from the Web – perhaps not in terms of sites having more bells and whistles, but in being able to access several Websites simultaneously and expecting them all to download instantly.

The big screen

Certainly the high end niche sites will be able to become even more radical with full screen streaming video and the like, but that won't change the fundamental point that not all sites require such multimedia. Why insert a

Suffering surfers!

Five sites that break cardinal rules of Website design. Read 'em and weep...

Diverse

[w] www.diverse.co.uk



Diverse's otherwise lovely site is marred by its front page demanding that you have the *Real Audio* and *Flash* plug-ins to see their intro movie. It's unnecessary as the site works fine without either plug-in, so why scare off users?

Zercon

[w] www.zercon.com



This discount clothes site is a frames nightmare. If you think of folk with small screens, half of their monitor will be taken up at all times with the horribly oversized logo and drop down navigation, leaving very little room to display the goods for sale.

Boo

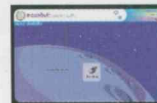
[w] www.booboo.com



Pop-up windows and slow loading pages make Boo's on-line shopping experience a confusing mess of a Website. Far too much effort put into trying to impress users with a cool site rather than getting on with showing them their streetwear.

Moonfruit

[w] www.moonfruit.com



A real Shockwave shocker, this one. Aimed at complete beginners on the Web, Moonfruit seeks to help people build their first Websites using pre-built *Flash* bits. It takes an age to do anything on the site because you have to wait for each stage to load.

First Active

[w] www.firstactive.co.uk



Even more awful than Moonfruit, First Active's financial services site is built entirely in Shockwave and makes you sit drumming your fingers for several minutes before anything happens. When it does, it's not worth it.

Please standby.

OK, the judging is not quite done. We apologize for the delay; the results will be a few days late.

You can still play:

A different 5k entry every time.
(Up to a certain point anyway;
there are only so many entries.)



For those of you without JavaScript or with a taste for more sober and serious presentation, [here's a more straightforward list](#) (117K – my apologies; there were many entries).

Design a Web page under 5k in size? Designers took up the challenge at [w] www.sylloge.com/5k

pointless Shockwave animation when you can ensure the whole front page of your Website appears in one second flat? This increased bandwidth will be exploited by the best Websites on a user demand basis, but more importantly, it will also be used for the simple purpose of making the Internet we know actually work far faster than it currently does.

In conclusion, good Web design, like any discipline, is something that has to be practised and mastered. While it's easy to pick up the rudiments of putting a Web page together, creating a cohesive, easy to use site is a different matter entirely. The essential questions

are: can it be seen anywhere by anyone? If you can create a Website that at least acknowledges the issues of accessibility, usability, download speed, platform and resolution, then half the battle's been won.

Starting from scratch

Designers who can transfer their relevant skills from other disciplines to Web design while at the same time recognising that they have to start from scratch will become the people most in demand over the next few years. By being able to understand and switch between 'old' and 'new' media, these designers will be in the rare position of being able to produce projects that work across and exploit their differences, rather than being hampered by them. **CA+S**

Web wonders

Five Websites that thought about their visitors before they built anything

Computer Arts

[w] www.computerarts.co.uk



The revamped *Computer Arts* site is a model of functionality and elegance. Easy to use and yet still unmistakably part of the CA brand, as well as being chockful of easy to access info for anyone using any screen resolution.

Easyjet

[w] www.easyjet.com



Simple needn't mean tawdry. Easyjet lets you book a flight within seconds with its crisp, clear layout and superbly simple functionality. No fuss and no hassle — no wonder they do over 60 per cent of their business on-line these days.

Gamespot

[w] www.gamespot.co.uk



Excellent use of HTML text gives Gamespot an unmistakably vivid, bold appearance, without sacrificing fast download speeds. It's amazing what you can do with a bit of colour, a couple of fonts and some thought.

Steve Double Photography

[w] www.double-whammy.com



Superslick showcase of Steve Double's photography. Intelligent use of DHTML that works in both *Navigator* and *Internet Explorer* to give the history of each photo by rolling over it. Alternative version provided for older browsers too.

Egg

[w] www.egg.com



The on-line bank presents a bold visual identity along with clear, concise navigation to the various services it has on offer. The black and white photos look striking but download superfast.

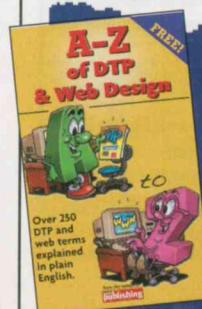
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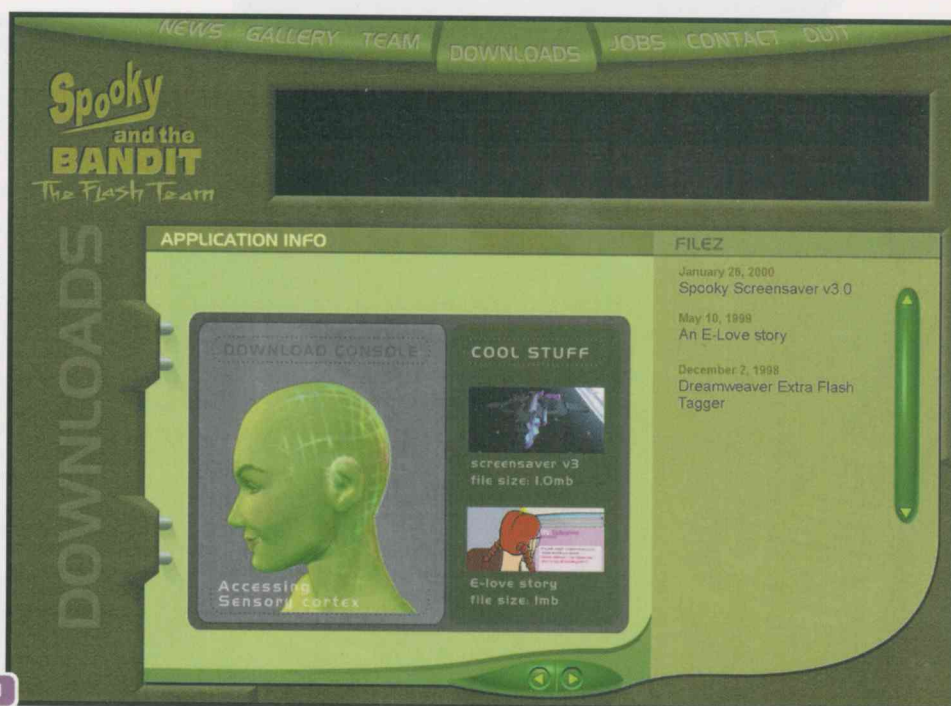
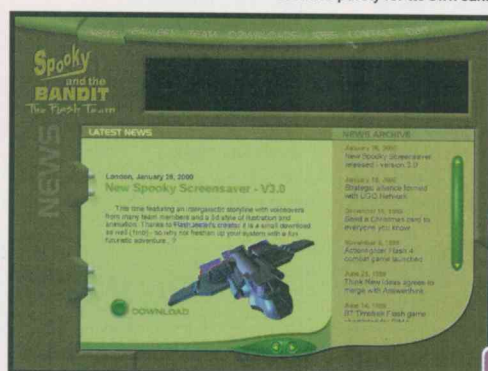
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[1] You don't have to sacrifice substance for style according to *Flash* producers, Spooky and the Bandit. Looking through Spooky's list of completed works, it's clear that the group spends a lot of time being creative purely for its own sake.



Spooky and the Bandit

The grand masters of *Flash* reveal the secrets of their success...

Back in the mists of time, when multimedia was young and dinosaurs should have walked the Earth, two college students made a life-changing discovery. It was called *Futurewave Splash*, and their chance discovery has helped to change the way many Websites are presented today.

Spooky and the Bandit is the name adopted by an all-star *Flash* production team who started working with the program before it was even called *Flash*. The group consisted of four people, two of whom used the pseudonyms Spooky and Bandit when playing the venerable computer game *Duke Nukem*. Although only two of the four, Dave Williamson and Mike Jones, are still members of Spooky, the *Flash* production team they formed continues stronger than ever.

Talking about how they originally started, Mike Jones recalls, "Dave and me started our craziness together. We were at college together and while I was waiting for a flat, I dosed at his place and we discovered *Splash Animator* together. It's another one of those Web stories, where two guys at college get their first exposure to the Internet, decide in their own arrogance, 'we can do so much better', then buttonise everything with *Kai's Powertools Spheroid Designer* like it's going out of fashion. Then our visual studios manager said, 'Guys, you've gotta see this.'"

What the manager had to show the guys was the MSN Microsoft Network Website, which at that time was created using *Splash Animator* and required the *Splash* plug-in to view it.

Mike continues enthusiastically, "The navigation was the thing that really rocked my world. It had a navigation bar and when you clicked on it, the whole thing expanded and when you rolled the cursor over the buttons, they glowed slightly. Everything was responsive. Looking back, it was twinkly. But seeing that, I thought, 'This is going to be so big.'"

As Dave observes, "At that time, there was just no way you'd be able to produce that using any kind of other programming script."

Learning curve

So to cut a long story short, the boys started working with *Futurewave Splash Animator*, which soon after was bought by Macromedia and became *Flash*. They became part of an on-line community of developers who were learning how to use the program, and who were all exchanging ideas and tips. But it wasn't all happiness and light. Mike says, "In the past, the Spooky name has had a kind of pseudo stigma attached to it. Not because we'd done anything wrong, but because we were producing things in the early days, that a lot of people are only just managing to produce now using *Flash 4*. We'd be chatting away in a newsgroup and we'd say 'Hey, take a look at this'. And it would just go quiet and no one would reply. Then we'd check our logs and see 700 or 800 people had downloaded the file."

Professional jealousy?

"I don't think it was professional jealousy — I think it was more of a shock. We were doing things that people

thought were impossible. We just clicked — it was as simple as that. There's no hidden trick to being able to use *Flash*. If you click with a program, it just makes sense and *Flash* doesn't make sense the same way that other programs do."

"Mind you," chimes in Dave wryly, "Have you seen Banja.com? They say in all their blurb, 'The first point and click adventure', but they actually contacted us and asked how we did our point and click adventure in *Flash* 312 months before, so we said, 'Okay, but yours is still the first, yes?'"

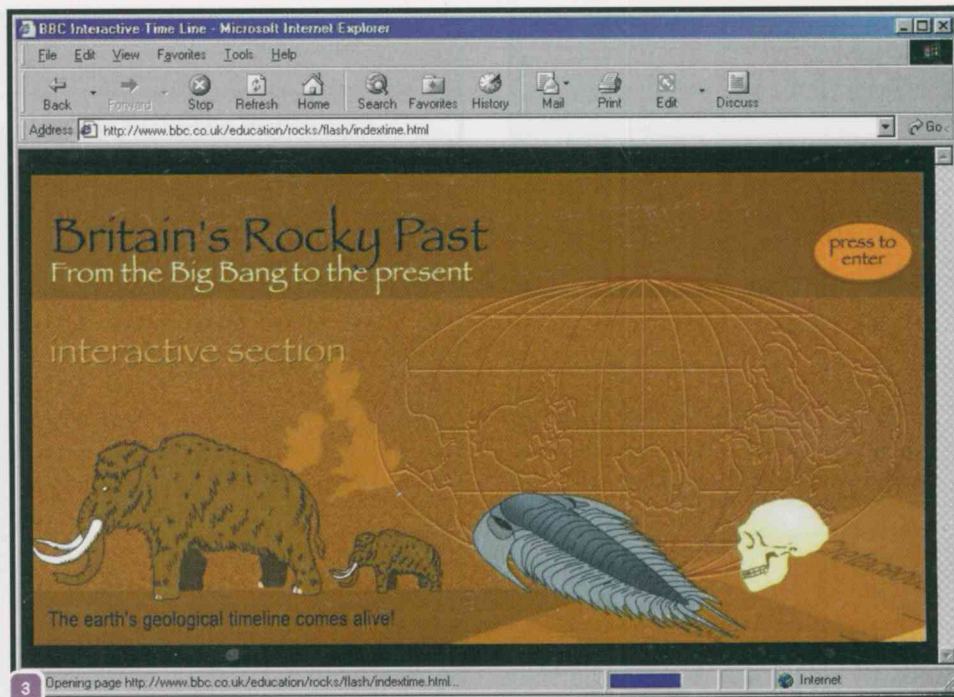
So just who is Spooky and the Bandit now? Well, in one sense, the team has done the big corporate thing and become integrated into the company Answerthink. When we asked what type of company Answerthink was, everyone in the room laughed heartily. Mike explained, "It's because we're a new media agency. But what does that mean? We could take a lot of titles. It's a new industry and people haven't quite sorted their labels out yet. One company's definitions are completely different to another company's."

Richard Stevens, Spooky's producer, and the most political of the interviewees, added, "All the large companies are looking for the best model, and I don't think anyone's found the best model for a way to set up a Web or Internet agency."

So Spooky is just a company brand name then? All present firmly assert that it's more than that. Says Dave, "In a sense, Spooky is the sum of the people in this room. It's also the *Flash* production department within Answerthink."

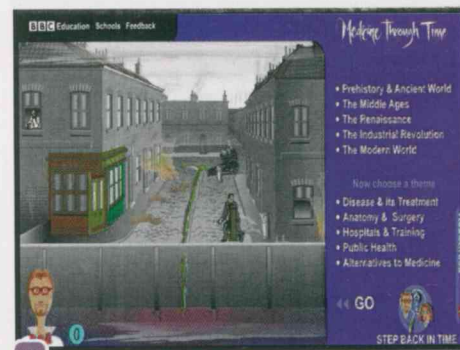
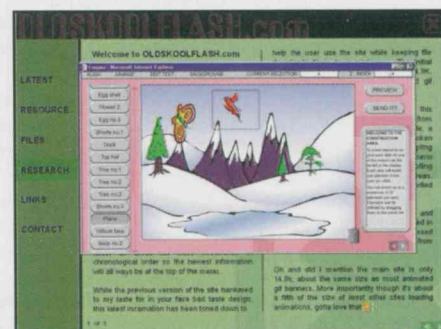
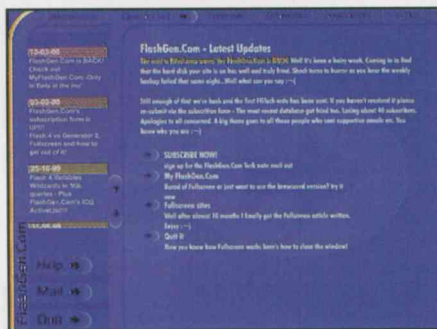
"But," rejoins Richard, "It still has an ethic and in some ways that holds even truer now that there are so many people doing *Flash*. It's about the decision to make *Flash* content fully integrated and not just make it bells and whistles. We want to turn it into useful, resourceful tools and experiences."

Mike adds, "Spooky is about using technologies and doing things that we wouldn't normally get to do for



Lost in Bandit country

What do members of Spooky and the Bandit get up to when they're out of the public gaze? It's all revealed at their home sites...



[2] Action Fighter is an example of just what can be achieved using Macromedia Flash.

[3+4] Flash is ideally suited to rich-media education sites such as these for the BBC.

(clockwise) [w] www.bizcuitman.com - Todd Routson (animator), [w] www.flashgen.com - Mike Jones (programmer), [w] www.testbild.com - Chris Glaubitz (programmer), [w] www.oldschoolflash.com - Dave Williamson (programmer).



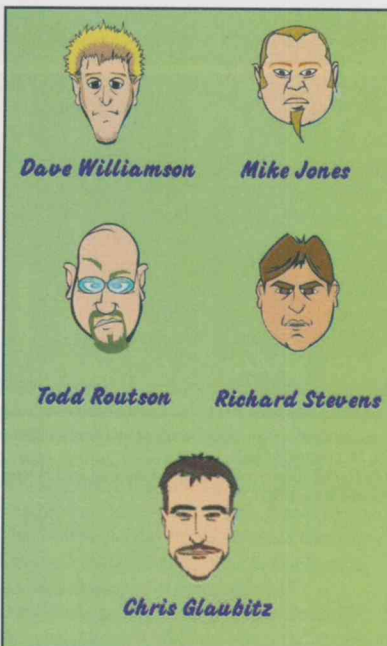
An artist's perspective

Says the team's animator, Todd Routson, of classical art training, "I consider my strong point to be character animation and cartoons. There are so many *Flash* animations out there that are just badly done. If you take *Flash* and combine it with proper animation skills, you can come up with a great result that doesn't kill your file size. But your average monkey working on *Flash* wants to tween: 'I click here, I click there, I say animate, and it moves.' That's not animating. That's just making something move across the screen. If you see a classically trained animator versus a guy who can program *Flash* and *thinks* he can animate as well, you'll see the difference..."

At this point Mike jumps in, "Todd should know... he started as one of the guys who *thought* he could animate. Then he got to see someone who really could, and now he really can too!"

Todd agrees, "We had a couple of guys that came in who produced some top notch illustrator drawings that looked like something from a textbook but they moved. It was incredible. Put traditional illustration skills together with *Flash* and it's incredible."

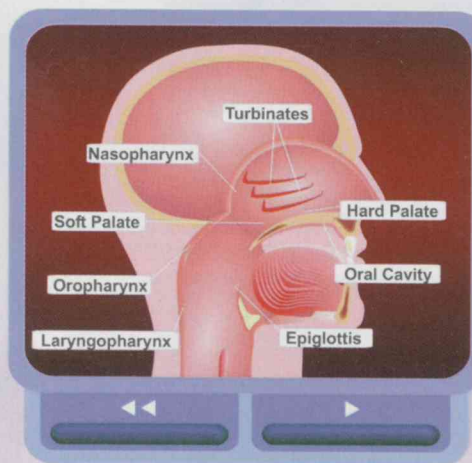
Mike adds, "A good designer is a good designer, and that carries through everything that they do."



Welcome to the subject of "Throatology", our interactive guide to the body's response to infections of the throat.

The micro-organisms that cause throat infections tend to enter the body via the nasal passages, as illustrated in the cross-section diagram opposite. Let's now zoom in on these to see how an infection can occur.

Press play to continue.



clients on the business side." He gestures towards the *Action Fighter* game running on the monitor. "Take this for example. This is Chris's baby. It's insane, but no client would ever ask him to do that."

Action Fighter is a full on-line *Street Fighter*-style combat game that runs entirely over the Internet and has been exclusively created by Chris Glaubitz, Spooky's German team member. Although Chris doesn't speak much, beneath his quiet exterior lies an intellect as sharp as Mike and Dave's wit. He comes over as the archetypal hacker-turned-programmer type, although it's a stereotype he denies. The other team members clearly hold him in high regard, despite their own significant achievements and prowess when it comes to creating *Flash* code.

Mike sums up the team's attitude best when he says, "Chris makes scary things. It's as simple as that. He's dangerous in a well-lit room, and I'd hate to get him in a dark one! You give him *Flash* and he'll produce the most extravagant and amazing code you've ever seen."

Warming to the theme Dave adds, "He's one of those sick people that knows how maths works!" Mike comes back, "Yeah, we're all the thickies. He's the one that actually understands all of this."

United we stand

Watching the team banter like this, one gets a sense of genuine camaraderie between them, and it's easy to see how such a tight-knit group can work so well. They've earned their reputation, and Mike seems justified when he says, "Very few people can program *Flash* really well and the people in this room probably represent one of Europe's most experienced teams."

This time Richard isn't just reciting the corporate line when he says, "You'd be hard pushed to find a better team than you have in this room right now." There's genuine pride in the achievements of the group. We asked Chris if he minded sharing hard-earned

programming tricks with the rest of the world. He said, "I have no problem sharing my source code with people, but the number of people who can understand and utilise it is very small. Most of those could maybe write the code themselves."

However, as Dave comments, "We always keep some little tricks to ourselves. They don't stay secret long once people see them and they all start working out how we did it. Then, just when they claim to have cracked it, we'll go on the newsgroups and announce how we did it. It's like a game. It's about kudos."

We wondered whether or not there were ever conflicts between Spooky's vision and a client's requirements. Richard said, "When you're working for a client, there's always a certain amount of compromise. You're trying to deliver the best for the client and hopefully you can persuade that client that you know what's best for him better than he does."

Mike adds, "There are always hurdles, the pros and cons that can be brought to the party with the technology. You wouldn't go to a client and say, 'I'm going to build you a Website and I'm going to use *Flash* or HTML'. That's like saying 'I'm going to the toilet and I'll be back in a minute.' I'm not interested if you're going to the toilet. The client has an objective and it's up to us to achieve that. We wouldn't say, 'This is *Flash*, you will use it'. That's not what we're here to do. We're here to marry up the best technologies from all the Web has to offer. We also have traditional designers and HTML coders."

So to the future. Do the team members see themselves all going away and setting up as solo operators? "Definitely not," says Dave. "The days when one guy could do everything are gone. Now it's about bringing together an effective team. Allying yourself with the right specialists. We're happy here." **ca-s**



For more information about Spooky and the Bandit, check out the group's Website at www.spookyandthebandit.com

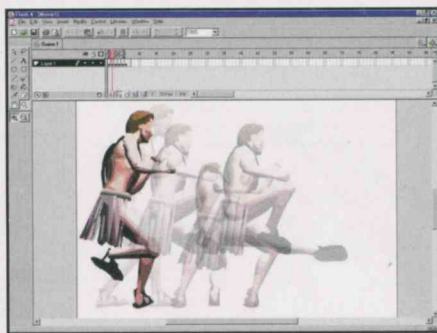


Action stations

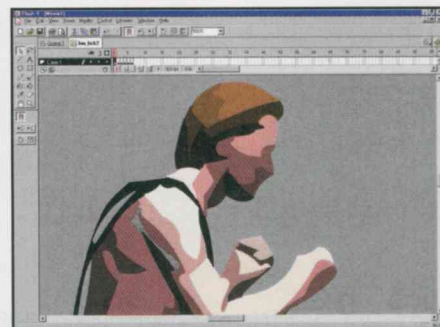
One of Spooky's most impressive achievements is an on-line game called *Action Fighter*. The impressive thing is the fact that it was written using a language designed for multimedia and that the whole thing runs on-line. Creator Chris Glaubitz explains how he did it...



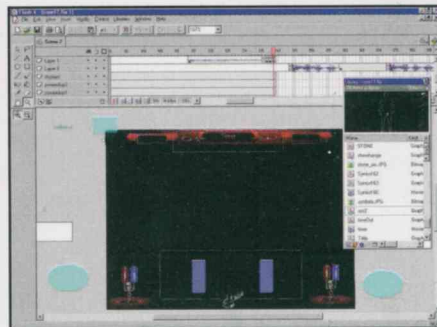
1 The first step was to create a rough mock-up. At this stage, the fighters can only move forwards and backwards. It gives a first impression of the speed of the final game. Because it's designed to be accessible via the Internet, the file size is all-important, so this is the time when we can see if there are likely to be any problems.



2 We used *Poser* to model the character animation. Each movement phase of every fighter has to be modelled in *Poser* and imported into *Flash*. The timing of each move is very important to give the right impression of speed and agility in the game. Each character also has to move inside its boundaries and hit in the same spots.



3 Once a fighter has been imported as a bitmap, it has to be traced and cleaned up by hand. Because file size is a constant challenge, we converted every fighter from bitmap format into a much more compact vector format. Not only does this keep the file sizes to a minimum, it also maintains scalability at all screen resolutions.



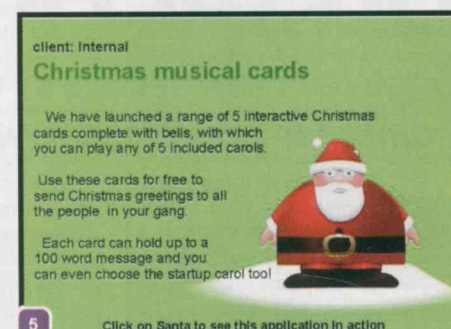
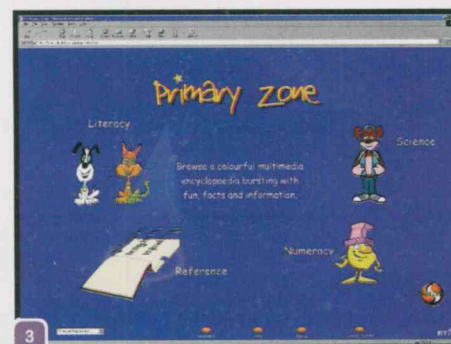
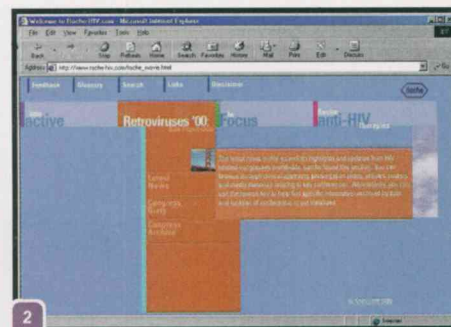
4 The basic engine of the game is born. Each of the two fighter models and the background image are streamed in during the game and are now represented by boxes. The code for things like collision detection, score counting and artificial intelligence are also divided in several movie-clip symbols.



5 Now that the game is playable, we need to add artwork and coding for the menus, intros, outros and transitions. Although mundane, all of this 'prettification' is vital because as they say, 'first impressions last'. The game is now ready for a first public beta test. This is when we allow our friends and colleagues to thrash the game in order to find any bugs before its general release.

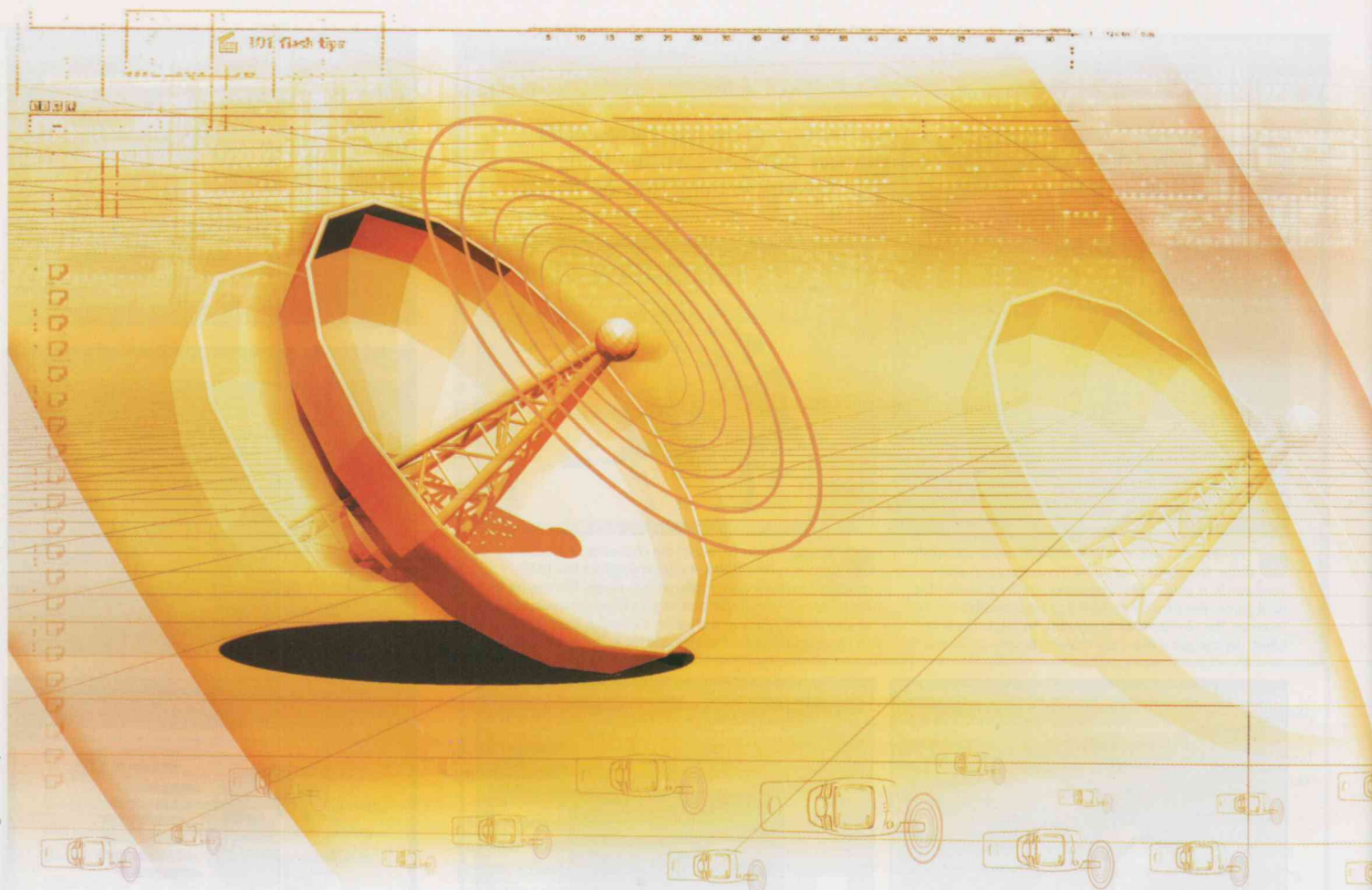


6 Of course, no program is ever bug-free and our beta test has revealed some bugs for us to track down. But knowing there's something wrong and tracking it down are two entirely different things. Errors in the game threaten to stop the whole project so I spend two long weeks trying to find the needle in the haystack, or rather which of the variables dumped on the screen is not correct.



1 Spooky seems to have done a fair share of work for pharmaceutical companies, who have an unquenchable thirst for medical animations!
2 For our money, this understated Website for Hoffman La Roche is one of the best ever. You can find it at [\[w\] www.roche-hiv.com/roche_movie.html](http://www.roche-hiv.com/roche_movie.html)
3 *Flash* is great for graphically rich sites designed to appeal to children. This one is for BT.
4 Spooky says that *Flash* is not about doing big, showy sites. This tennis site uses one of Spooky's subtle *Flash* interfaces.
5 The Interactive Christmas Card Maker is a great example of the way that Spooky is having fun with *Flash*.

Illustration: Magictorch. Telephone: 01273 202147



Art for Arts' sake

Discover a few secrets as we reveal how the new *Computer Arts Website* was built...

It's one thing to design a five or ten-page brochureware site of the kind that small companies are keen to commission these days — you know, striking graphics, most likely a bit of fancy *Flash* animation, and if your client's really on the ball, a cautious nod in the direction of e-commerce. For the majority of Web design firms, this still seems to be the staple diet.

But all that's about to change. From the sophisticated e-commerce operations of the dotcom upstarts (think *lastminute.com* and *jungle.com*) to the 1000+ page media and information sites (think *ft.com* and *askjeeves.com*), there's a whole different ball game

going on right now, and it's responsible for the most powerful sites on the Web today: the database-driven Web, coupled with clever ways of offering lots of information in uncluttered Web pages with links too enticing to resist.

The brand new *Computer Arts* site, at www.computerarts.co.uk, is one such operation, and we're going to let you in on a few secrets about how we made it. You see, it's just a matter of time before the realisation filters down to your everyday client that this is the only sensible way to handle information and sell products. So it's just a matter of time before your chance to pitch for such a project lands in your lap — and this could mean big bucks for you.

But the question is, do you have the skills and design know-how to take on a large-scale project when it comes? As a designer, chances are you won't need to understand the intricacies of back-end development, but you'll certainly have to work very closely with the back-enders (plan on at least ten phone calls a day), and you'll have to be aware of whole host of design issues — both opportunities and hurdles — relating specifically to database-driven sites. Indeed, the more you understand about what the back-end developers are doing, the easier your job will be, and the better the results you'll get.

What you will have to be extremely skilled at, however, is finding ways to

display and navigate visitors around an ever-increasing number of pages without it becoming one almighty ruck. Viewers want the content, and masses of it, by all indications — but with a minimum of effort involved in finding exactly the bit they're interested in right now. And that's not an easy thing for a designer to achieve.

Database details

You'll be familiar with HTML and JavaScript, but the *Computer Arts* site also uses ASP with server-side VBScript and includes. These sound scary, but the principles are simple — ASP enables us to create a single HTML page and then use VB to control what text, images and so on appear in it — these are taken from the database.

So if you read the popup news stories at [\[w\] www.computerarts.co.uk/news](http://www.computerarts.co.uk/news), you'll see Web pages with different text and images — but in fact, there is only one news story page. When you click on the popup link, the URL contains information after a question mark —

[w] www.computerarts.co.uk/news/storyaa.asp?id=1234 for instance — which tells the server which news story it is you want to read.

The server then puts the HTML pages together with the appropriate content from the database on the fly, and sends it down the line to your screen. If you check out the source of these pages, you'll see no evidence of this at all —

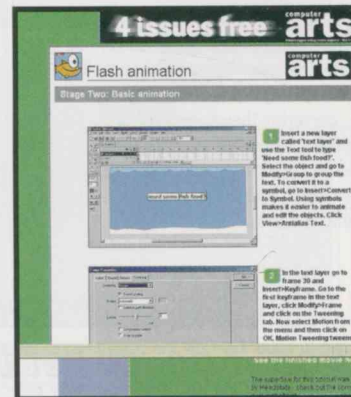
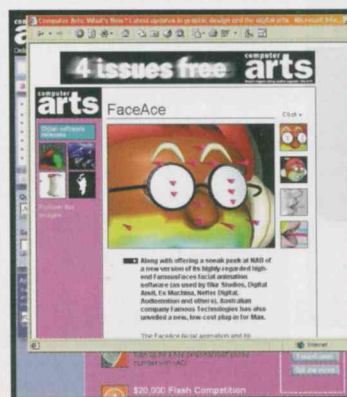
you just see what looks like a normal Web page.

In a similar way, the date that appears at the top of the navigation on all the main pages of the *Computer Arts* Website doesn't have to be updated every day. It's created by just a few lines of VBScript, which are processed on the server — which means that if you look at the source as it arrives in your

browser, you'll just see normal formatted text for the date.

Server-side includes, meanwhile, are especially useful if you have the same item appearing on a lot of different pages. They are fragments of HTML — a single table, say — which you create as a separate HTML file, and then reference in the true HTML documents that are meant to contain them. When

you request the page, the server inserts the include into the Web page at the right place, and sends it to you as a seamless Web page. All the navigation bars throughout the *Computer Arts* site are created as a series of includes, for instance. This means that if we need to add a new button, say, we only need to change the right include file, instead of going through every page.



The new *Computer Arts* Website is designed to be easy to use while simultaneously presenting a lot of information. Planning for this sort of thing probably takes longer than the actual implementation.

JavaScript for designers

Scared of it? Don't be – JavaScript can make your life much easier...

In this age of *Flash*, it's easy to forget JavaScript, especially since its ways and means seem less than intuitive to the designer. But that's a mistake, as JavaScript is an incredibly powerful yet simple language, offering control over almost every aspect of the way your visitor's browser behaves. Even if you have to get someone else to actually create the scripts, it's well worth knowing some of the creative uses you can put JS to.

The *Computer Arts* site uses JavaScript on every single page, if only in some cases to check the page isn't in someone else's frames. We also used it to run the amazing

two-hourly updated news ticker at [w] www.computerarts.co.uk/news, and the rather clever widget at [w] www.computerarts.co.uk/mag/getbackish.asp, where you can see a preview of the back issue you're interested in buying. You have to go to [w] www.computerarts.co.uk/mag/backish.asp and click on one of the issues there to see the effect. Feel free to View Source and check out the scripts we used to make these happen – although do please credit *Computer Arts* if you use any part of them.

Simpler, though, for the JavaScript-novice designer, are the pop-up windows throughout the site, at

[w] www.computerarts.co.uk/news and in the tutorials section, [w] www.computerarts.co.uk/tutorials. The JavaScript for these is simply...

```
<script><!--
function ca_popup(theurl){
pop=window.open(theurl,'popup','to
olbar=yes,location=no,directories=
no,status=yes,menubar=no,scrollba
rs=yes,resizable=yes,copyhistory=
no,width=595,height=470')
}
// --></script>
```

That goes in your HTML head. Then for the links you have to put <A href="javascript:ca_popup('theurl')"


```
<script><!--
//ca_framecheck
if
(window.location.href!=top.location.
href){
top.location.href=window.location.h
ref
}
// --></script>
```

And that's it! Another good trick for designers is to create text that changes when you roll over different images – as live text rather than GIF image rollovers, to save download time. This allows you to convey masses more information in a page, with more exciting interactivity, and without your design becoming cluttered with too much text. Check out the left-hand bar in the Web profile pop-ups, via [w] www.computerarts.co.uk/websites.

To do this, you have to create a layer, give it a name, and put the words in that. Then you can write in a JavaScript – for *Internet Explorer*...

```
function
ca_changertext(thenewtext){
thelayername.innerText=thenewtext
}
or for Navigator:
function
ca_changertext(thenewtext){
eval(document.thelayername.docu
ment.write(thenewtext))
}
Change 'thelayername' to whatever
the name of the layer is, and in your
<A href> tags for the rollovers, put
onMouseover="ca_changertext('new
text')". Substitute 'newtext' for
whatever you want the rollover text
to be, keeping the single quote
marks. Et voilà!
```

News

Just in...

[02.05.00]

Total Publishing update: Paul Kurzeja of Create magazine, the forthcoming CA sister mag for web designers, talks about cutting edge web, while Tyler Brule of Wallpaper fame talks about Line. More in Events

[Click for full list](#)

Headlines

We used functions for changing the text in a layer to make the newsflash scroller on the main News page, at [w] www.computerarts.co.uk/news

Which issue(s) do you want?

Hold down Control to make a multiple selection OUTTEST

Issue 44, May 2000
 Issue 45, June 2000
 Issue 43, April 2000
 Issue 42, March 2000
 Issue 41, February 2000
 Issue 39, Winter 2000
 Special 08, DV Special
 Special 09, 3D Special



We used JavaScript a great deal – to control the covers on the Back Issues page, at [w] www.computerarts.co.uk/mag/getbackish.asp for instance.

Working like this is essential if you're creating a large site, like *Computer Arts*, which contains about 100 true HTML pages (many of which could contain any number of different articles – currently they spawn about 1000 different downloadable pages). It's essential, because otherwise you'll never get this site finished, let alone be able to update it regularly!

Making use of the database also means we can have all the Website's navigation, teasers, and headlines on hub pages update automatically. For instance, the Tutorials page at [w] www.computerarts.co.uk/tutorials is programmed to automatically display the latest tutorial put on-line in each category. The Headlines page at [w] www.computerarts.co.uk/news is a

similar story, as are about ten other hub pages in the site. And the tips in the tutorials section are automated in a similar way. You simply put your article into the database once, then apply some code to the hub with a logic that says, 'Find the four database entries in this categories with the latest entry dates, get the words from the strap line column for each, and put them in the HTML with this formatting.'

Big design

Designing around a database can be quite tough, and involves a great deal of planning and discipline. The first major hurdle is planning how to structure the

database – what different fields do you want? The whole thing can seem very abstract until you've actually got a tangible site up and running.

The second issue is that much of the design needs to be done before the database building can go far, and you need to be specific about the databased elements you need and their attributes – for instance, a heading, a strap line, how many images and at what size, whether you want ALT text for images, and so on.

It can also be hard to go back and change aspects of the design of databased parts of pages once the site is running – using a different design for each article is simply out of the

Planning is essential, otherwise you'll never get the site finished, let alone be able to update it

question. On the plus side, however, a skilled back-end programmer can code a single page to show different graphics depending on the date, how an article is categorised, and so on.

As a designer you can take full advantage of this to introduce variety in the graphics that appear on your Web pages, and make pages and links from them more meaningful to your audience. And this is essential if you're going to make a large site comfortable for your viewers to use.

Tree-style navigation structures permeate every nook and cranny of cyberspace, and are quick and convenient for users who know their way round the site well. But the fact is that most users don't, and people like amazon.com because you can browse back and forth. It feels like thumbing through a dictionary, and less like sorting through a filing system.

Which is why amazon.com tells you a number of other authors you might enjoy when you're looking at a particular book. It's about offering links to similar and related things, and quite possibly to entirely different areas of the Website.

Categorise to survive

This is where insightful information design coupled with a database becomes extremely powerful. On the *Computer Arts* site, everything is categorised in several different ways – what type of article it is: news, tutorial, and so on; what areas of design it relates to: Web, 2D, 3D and so on; what time period it's relevant to, and more. This means that we can now design in a widget which groups any one article together with a network of other articles according to different criteria. If you're looking at a piece of news about *GoLive*, we can have the news page show you links not only to other news pieces, but also to *GoLive*-related Web tutorials, Website profiles and so on – and all both automatically and dynamically in response to you. Powerful stuff, and far more intuitive for the curious user than the traditional tree structure.

Building this kind of back-end system does involve an significant investment of work and forethought, as well as hard cash, at an early stage – we spent three intensive months developing the *Computer Arts* site before it went on-line. But you can bet that it will pay off in your hit count in a short time, and it's a surefire way to impress a client.

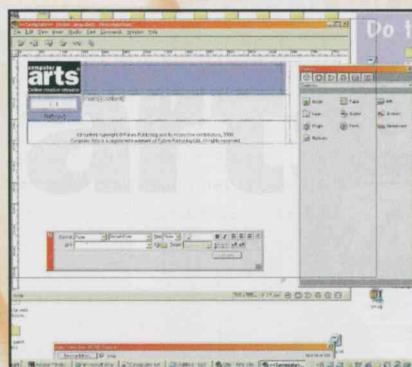
Check out the new look *Computer Arts* website at www.computerarts.co.uk. Send any questions to nick.nettleton@futurenet.co.uk

Using Dreamweaver templates

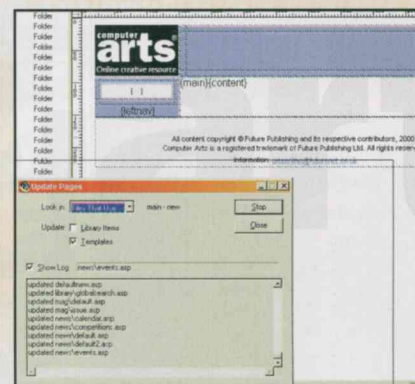
If you're developing a large site, it's essential to use templates, otherwise you'll have to apply every overall design tweak that you make to every single page by hand. This makes *Dreamweaver* templates essential

Back it up!

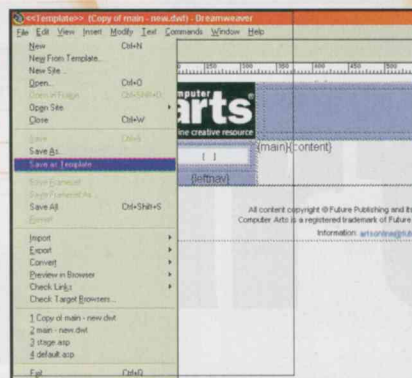
Just one thing – always back-up your whole site before changing a template and applying it to your pages. That way you won't be kicking yourself if something goes wrong...



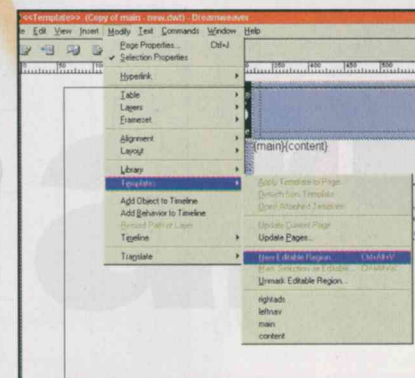
1 The idea of *Dreamweaver* templates is that you create a 'shell' page with parts that don't change at all from page to page – logo, ad, navigation for instance. Then within this page you create 'editable areas', in which pages attached to the template can contain anything at all.



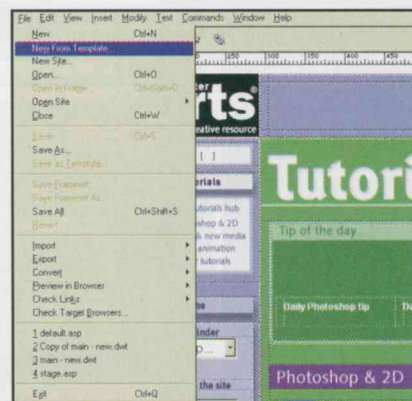
2 Then if you need to make a change to overall design of all your pages attached to that template – change the logo size, say – you just open and amend the template page, and *Dreamweaver* automatically updates all the pages attached to the template.



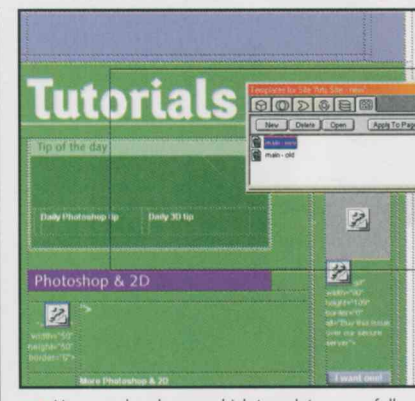
3 To create your template page, you simply start a new document and create the design and layout just as you would a normal HTML page. Then use *File>Save as Template*, ignoring any warnings, to turn it into a template.



4 Next you specify which parts of the page are editable areas, using *Modify>Templates>New Editable Region*. You give the area a name, and you can have a number of these editable areas in your page – including in the head of your HTML, for scripts, say.



5 Use *File>New From Template* to create a new Web page following your template. Then you simply open the page and put the page's content into the editable areas as normal HTML.



6 You can also change which template pages follow at the click of a button, using your *Templates* palette – very useful if you need to experiment with several different designs, but only want to create the content for each page once.

Mass image processing

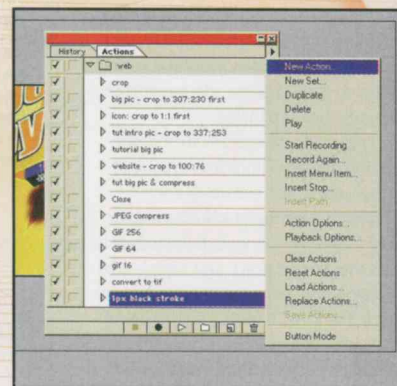
The new *Computer Arts* site has thousands of images, which offer visitors a strong visual experience. But if you're working with a large number of images, you don't want to waste time preparing them to the same specifications, one at a time. Here's how to do the whole lot in one go...



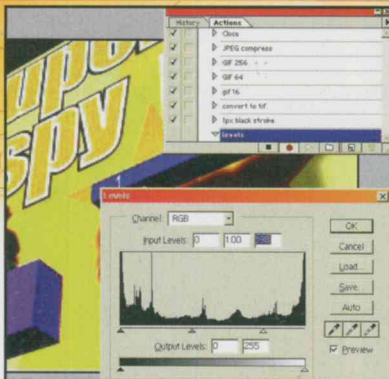
1 First, you need to decide some design principles for the images. Are they going to be standard sizes? Are they going have borders? What format – GIF or JPEG – are you going to use?



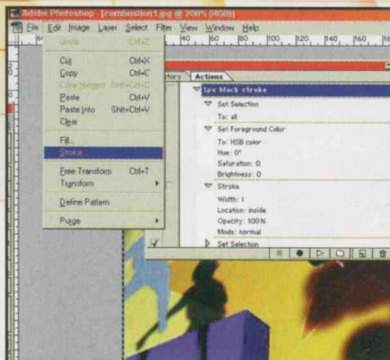
2 For instance, all the icon images on the *Computer Arts* site are 50x50 with a one pixel black border. This is both effective in the design and makes preparing them for the Web in large numbers easier – giving us more time to concentrate on the content of the images.



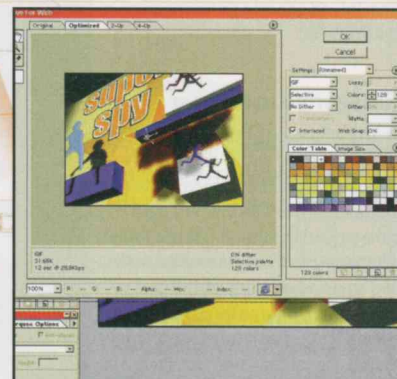
3 To process a batch of images in one go, you need to set up an action. Open an image, prepare to the point you want the batch process to begin, then find your Actions palette and select New Action from its drop-down.



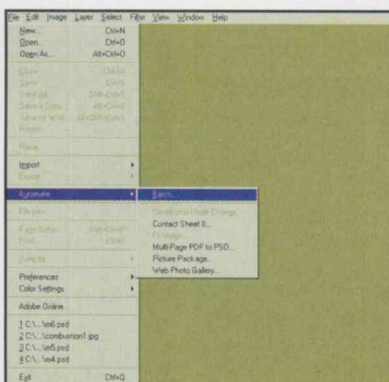
4 Name the Action, hit OK, and then start performing the steps on your image that you want to occur in the batch. For instance, you might resize the image, then apply a Sharpen filter and use Levels to increase the contrast.



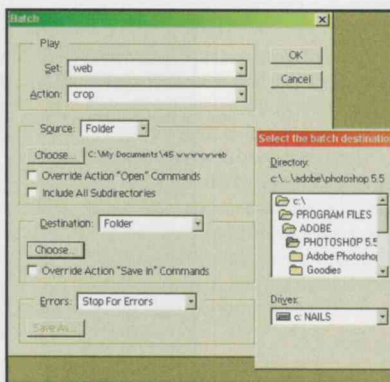
5 If you want to add a border, use [Ctrl/Command]+A to select everything, set your foreground colour to the colour you want your border to be, and then use Edit>Stroke to apply the border. This method works with any image, whatever its size and shape.



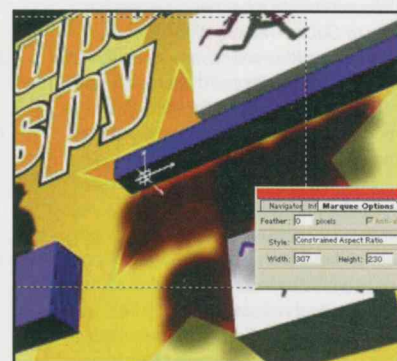
6 You can also include Save and Save For Web (which is to say, Optimisation) commands in *Photoshop* actions. Then when you're done, click the Stop button at the bottom of your actions palette, and your action is ready to use.



7 Now to apply these steps to a number of images, put them in a single folder and choose File>Automate>Batch in *Photoshop*. For the Source, click Choose folder and navigate to the folder where the images are.



8 Usually you'll want to create another folder for the processed images, and navigate to that as the Destination – but if your action includes a Save, just choose None from the drop-down. Then just hit OK, and *Photoshop* does all the work!



9 If you want all your images to be the same size, you'll have to crop to the same proportions before you process them. Use the Marquee tool and choose Fixed Aspect Ratio from the drop-down in the tool's options, entering your proportions in the fields. Crop your image via Edit>Crop and save it.

T3

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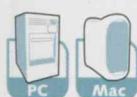
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- Full multimedia on the Internet using *Shockwave*
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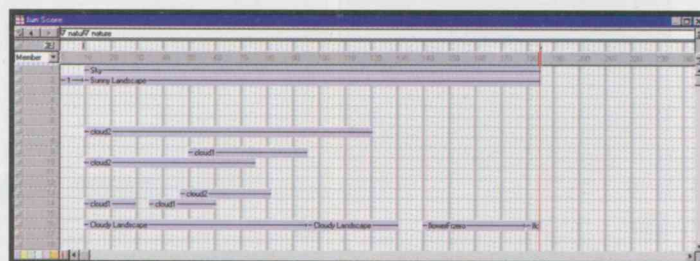
200MHz Pentium • Windows 98/
NT 4 • 64MB RAM



Macromedia's *Director* has been sitting pretty at the top of the multimedia authoring tree for some time. With version 8, Macromedia has focused the product more closely on the Internet. *Shockwave* is rapidly becoming the multimedia face of the Web, so the company has introduced some new features for improving content and reducing bandwidth.

On the outside, *Director* does look a little different. Macromedia has kept the interface that users have learned to work with, but improvements have been made. The most significant of these is the Properties Inspector. This replaces many of the dialogs and windows you previously had to sort through to locate information on your movies and sprites. You can now locate and alter your sprite's colour palette, ink type, Lingo script and so on, in one handy box.

The Properties Inspector gives details of whatever sprite is selected, so if you select several sprites with



The score is a timeline, on which you decide what happens when you're in a *Director* movie.

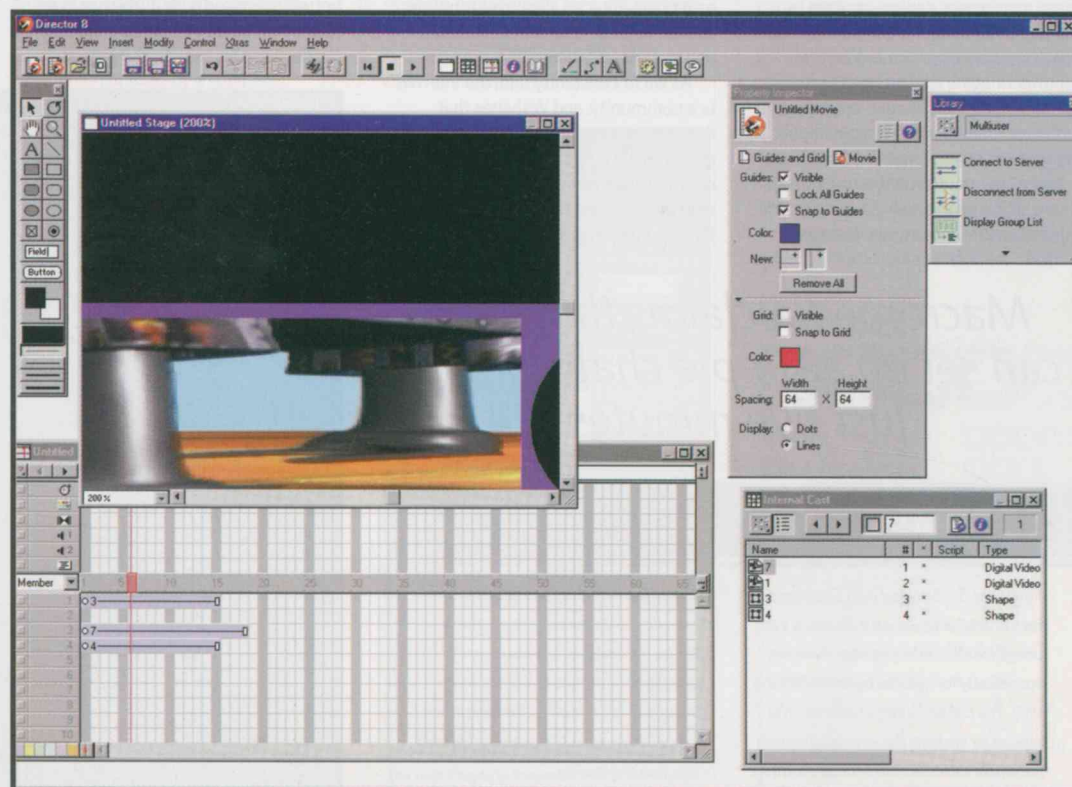
common properties you can alter them all at once. For example, say you've got dozens of pieces of text in your movie and you want to set them all to the same colour, you no longer have to alter each piece of text individually, you can simply select them all and then make the change.

Top of many designer's wish-lists for the new *Director* has to be scalable movies. Up to now you've had to plan well ahead, keeping the expected size of the Viewer's Browser window and the

overall design of a Web page in mind when creating *Shockwave* content. Now, at last, you can set *Shockwave* movies to scale themselves according to the size of the Viewer's window, giving you confidence that your work will look the same whatever it's viewed on.

Going to the zoom

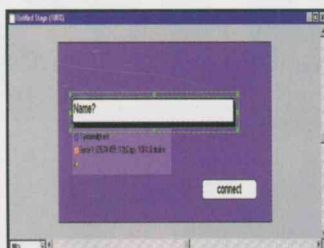
This scalability has been extended to the design stage. You can now zoom in or out on your movie while you're



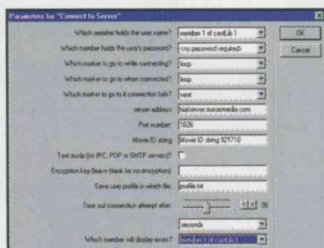
You'll find that the *Director* screen is still pretty busy, and you still have to shuffle windows around to work with the software.

Creating a chatroom

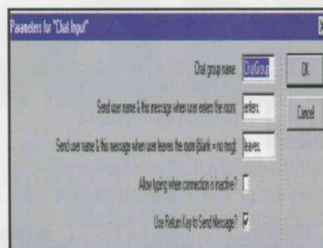
With *Director 8* you can create a chatroom application in five minutes. You need to have access to a *Shockwave* Multi-user Server to run the chat application on-line but, once you've got that set up, it's plain sailing...



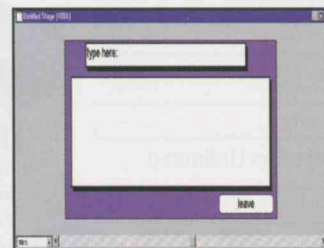
1 First, set up the Connect to Server behaviour. Create an opening screen with a field for the user's name and a button labelled Connect. Then, drag the Connect to Server behaviour onto the button and fill in the IP address of the multi-user server you're using, and the frame to jump to after connection.



2 Create frames for handling what happens if the connection fails. The Connect to Server behaviour automates the process, so you can specify where to jump if something goes wrong. We've set up simple error pages using text elements.



3 Now to actually create the chat page. On the frame you've specified in step 1, create a text input field. Next, drag the Chat Input behaviour onto it, a larger text box onto which you need to drop the Chat Output behaviour, and finally a button for dragging the Disconnect From Server behaviour on to.



4 Create the movie. Go to Publish on the File menu and your chatroom will be created as a *Shockwave* file. A simple HTML page will also be created with the *Shockwave* movie running inside it. All you need do now is place it onto your Website.

working on it. This means that you can position objects on the stage with much greater precision, or zoom out to work on projects designed to play full-screen.

Also new is runtime imaging. You can now create and edit images while the program is running using Lingo. This feature opens the door to creating paint applications and chatroom whiteboards, where many users can co-operate in working on an image or diagram. This is great, but there's much more on offer. Runtime imaging also means that you can composite pictures and animations during runtime, creating large complex images from small, low-bandwidth ones.

There is also a set of new transitions, which can be used on single sprites rather than the whole stage. Because

these transitions are written in Lingo — *Director*'s own native programming language — rather than in C, designers can edit them, creating new runtime effects to order.

Lingo itself has moved on, too. Sound is now handled much better. You can play different parts of an audio file or alter its volume and stereo positioning as it plays. You can also layer multiple sounds in Lingo and control their start and stop times with great accuracy.

As we're constantly told, the Internet is a community, and Websites that thrive are those which foster that sense of community. *Shockwave*'s tools for creating Internet chat and other Multi-user applications have been enhanced. By using the drag'n'drop elements,

Macromedia claims that you can set up a simple chatroom in just five minutes.

Playing with Fireworks

Fireworks 3, Macromedia's excellent image compression tool (see boxout) is included in the *Shockwave Internet Studio* package, and *Director* has been better integrated with it. You can now specify that the images within your movie are to be compressed using

Fireworks, and *Director* will do the work for you. You can specify different compression settings for each sprite so you can make the trade-off between file size and quality yourself, or you can set the compression globally so all images are compressed the same way. This'll make life easy if you're producing several versions of your *Shockwave* movies for different Internet users.

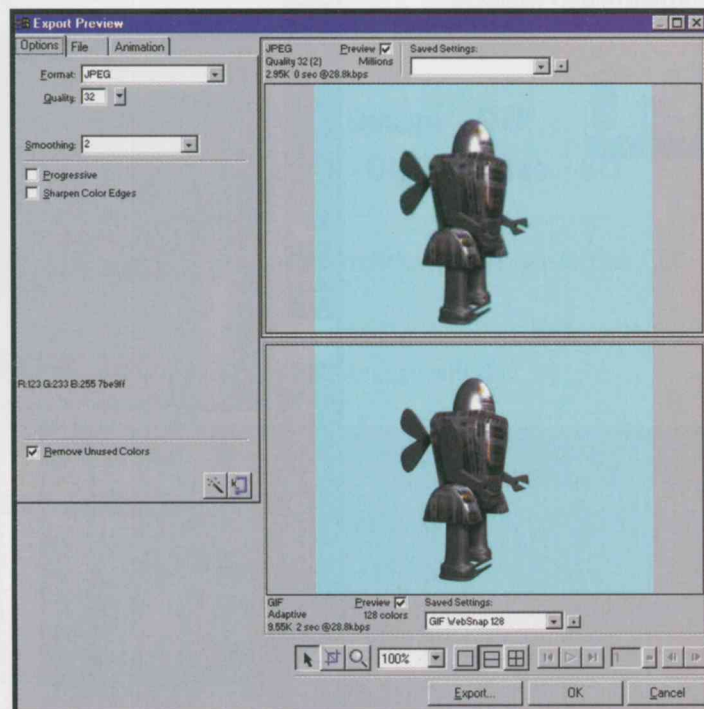
The design of vector graphics has also been improved. Previous versions

Macromedia claims that you can set up a simple chatroom in just five minutes

Fireworks

Fireworks 3 is bundled with *Director* in the *Director 8 Shockwave Studio*. It's an image manipulation package, designed specifically for optimising images for the Web. You can add Internet animation to images by creating (for example) rollover behaviours and animated loops. However,

the most significant feature of *Fireworks* is its ability to compress picture files. You can alter the scale, compression, and colour depth of images and see how your changes will affect the finished graphic. This provides a good compromise between image size and quality.



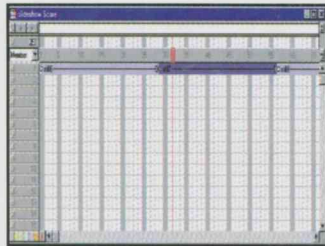
Fireworks 3 is bundled with *Director* and enables you to optimise image files for the Internet.

Generating a slideshow

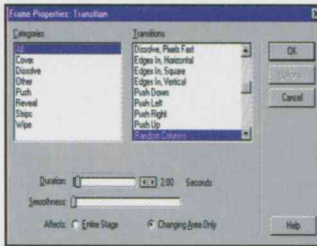
With *Director 8* it's even easier to create a slideshow for the Internet or CD-ROM. Here's how...



1 Import your images into the Cast window. With *Director 8* you don't need to compress your images first – you can do that using *Fireworks* from the Property Inspector.



2 Place your images in sequence on the Score window. Each frame will be represented by a block. Drag the length of your images so each one covers however many frames you want it to display for. Play through the slideshow and you should see each image appearing in sequence.



3 Now it's time to add transitions. Open the Effects channels with the button at the right of the Score window, and then double-click on the transitions track at the first frame of each image. A dialog appears so that you can pick from a range.



4 Our slideshow is currently automated. Try making it browsable by inserting Back and Forward buttons on each screen, and then set them to move the playback head to the appropriate frame.

of *Director* only enabled you to create very simple shapes. Each graphic could only be made up of one single line. If you wanted to produce a more complex image, you had to create multiple graphics and lay them over each other. With *Director 8*, though, all this has changed – you can build sophisticated vector graphics in the editor.

The Library palette now contains more drag'n'drop behaviours. These behaviours are simply pre-written pieces of Lingo code which can be dropped onto any appropriate object on the screen. For example, take a graphic,

place it on the stage, then drag the 'Random Movement and Rotation' behaviour onto it. When you click Play, the sprite moves randomly around the screen. No programming is needed. Behaviours range from animations to text handling, navigation, sound control and Internet applications.

Once a production has been fully completed, it needs to be published. *Director's* new Publish tools offer a range of possibilities. You can create simple Web pages to play your *Shockwave* content (a function which used to be handled by a separate

program). You can control how your movie is compressed, tune various aspects of it – including the way it's scaled to fit the Web page – and you'll also be told how browsers handle it when they don't have the *Shockwave* Player installed.

Movie Director

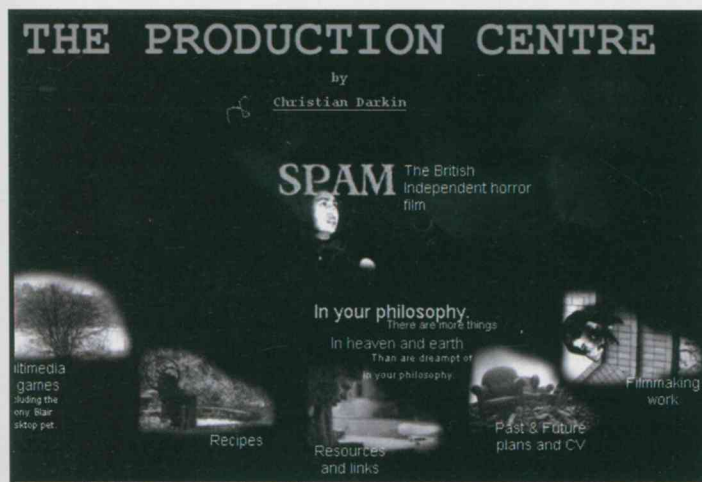
Director's Web creation options aren't a realistic replacement for a decent Web design tool, but they can help out if time is pressing, or if the non-*Shockwave* content of your page is small.

You can also, of course, publish your movie as a standalone executable file for CD-ROMs and Kiosk productions. So, non-Internet designers haven't been forgotten, but the enhancements are clearly designed to reduce bandwidth for productions destined for the Web.

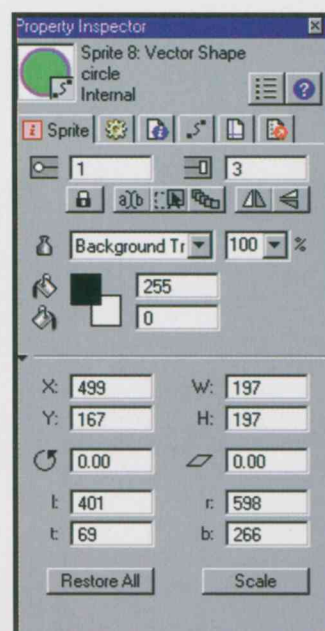
All in all, upgrading to *Director 8* is well worth considering. There are many interesting additions that will free designers from some of the old constraints, as well as simplifying work on complex projects. The addition of a list view in the Cast Member's window will help speed up locating elements in large productions, too.

Shockwave is well-established as one of the best ways to provide complex multimedia on the Web, and, with this new release, *Director* looks likely to continue to be an essential tool in all types of multimedia production. **CA+**

There are many interesting additions that will free designers from some of the old constraints



In *Director 8*, movies are constructed on the stage. You can position objects by dragging them, or by moving them at runtime through Lingo.



The new Property Inspector in this version of *Director* collects all the information about your cast members in one place.

Verdict



Speed
Value for money
Ease of use
Documentation



For: Low-bandwidth Internet multimedia • Bags of features • Improvements in handling of sound, images and the Internet

Against: *Shockwave* is not installed on all browsers • Still a little tricky to pick up • Mac and PC versions no longer included in the pack – you need to buy two versions to work cross-platform



Win [Macromedia software!]



Macromedia's *Director* has been the undisputed champion for authoring new media content since it was first released. Originally focused on CD-ROM development — the *Computer Arts Special* Coverdisc is created with *Director*, as are most other multimedia CDs — the latest version 8 is inevitably moving towards the Web. And as you can find out on page 29, it makes creating rich content simple.

We've got a copy of *Director 8 Studio*, worth £939, to give away. *Studio* includes not only *Director 8* itself, but also *Fireworks 3* (the excellent Web graphics editor) plus sound editors *Peak LE* (Mac) or *SoundForge XP* (PC). It also comes with the Shockwave Multiuser Server with a 1000 user licence, enabling you to create Web-based chatrooms with up to 10,000 users very easily (see page 36).

Other highlights include a tweaked interface; you can now use the property inspector to change sprite, member, behaviour, guide and movie attributes using either an icon or Lingo-based view. Add a customisable interface and improvements to *Director*'s native

scripting language Lingo, and you have more control over your movies than ever before.

Shockwave Web content gives you greater control and more flexibility than just about any other design tool, including *Flash*. Most of the design houses profiled in this issue use Shockwave extensively for its powerful graphical and mathematical capabilities, coupled with a rich scripting language. Check out Macromedia's showcase site www.shockwave.com for some excellent examples of what can be done.

Simply enter this compo and a copy of *Director 8 Studio* could be yours!



You can find out more by visiting [w] www.macromedia.com

The competition

Director 8 Studio includes a Shockwave Multiuser Server which enables you to build chatrooms. What's the maximum number of users who can connect to one of these chatrooms?

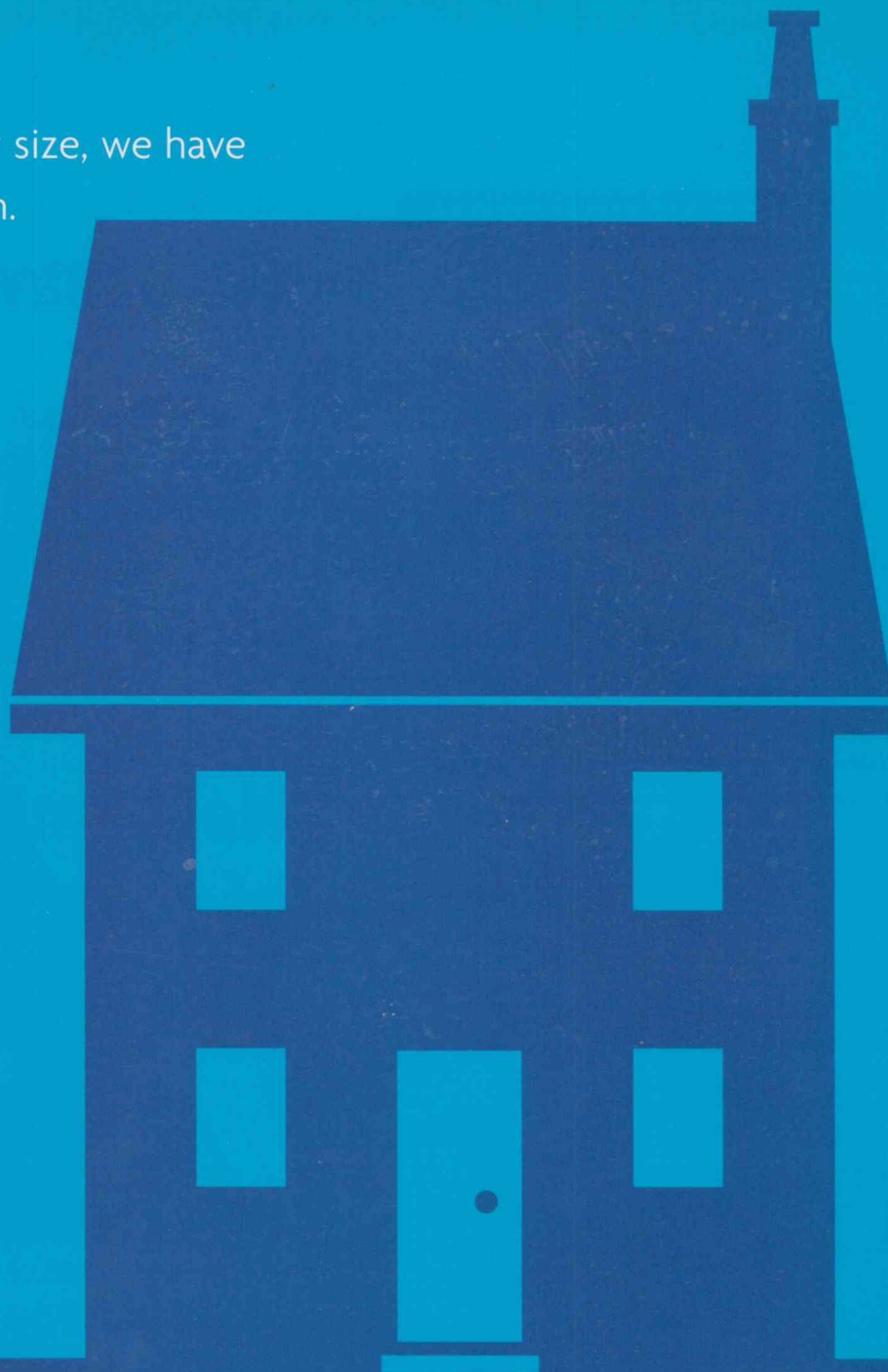
To enter

Simply click the Current Compo button from the *Computer Arts Special* CD interface and then enter *Director 8 Studio* as the competition name. Then select your answer and fill in all the other details and click Submit Entry. If you're not on-line, you can still enter by snail mail. Just write your answer on a postcard and send it to *Director 8 Compo*, *Computer Arts Specials*, 29 Monmouth St, Bath, BA1 2DL. Include a telephone number with your entry where you can be reached during the day.

The rules

The closing date is 31 July 2000. Employees of The Future Network, Macromedia, Stewart-Muir Communications and any of their agents or families, may not enter the competition. One entry only per reader. The editor's decision is final. No correspondence will be entered into and there is no cash alternative. No purchase necessary. **CA-S**

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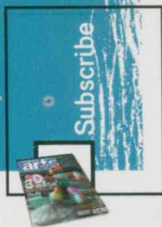


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Part 1: Drag and drop behaviour

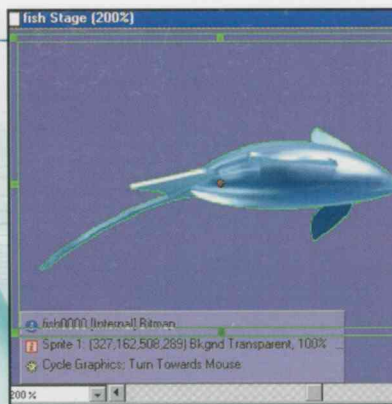
Here we're going to see how simple it is to create sophisticated animations using *Director*. Take a look at the file fish.htm on the coverdisc. It's designed as a screen wallpaper backdrop

That's Lingo

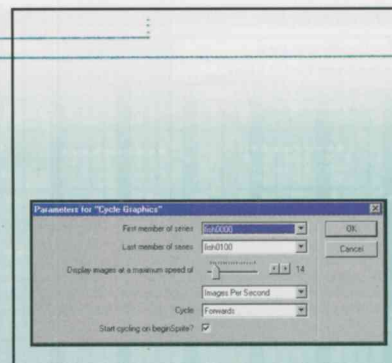
the drag and drop behaviours are simply Lingo scripts. You can call them up and edit them if you like. Each script is heavily annotated, so if you know your way around the programming language, you should be able to work out what you need to change.



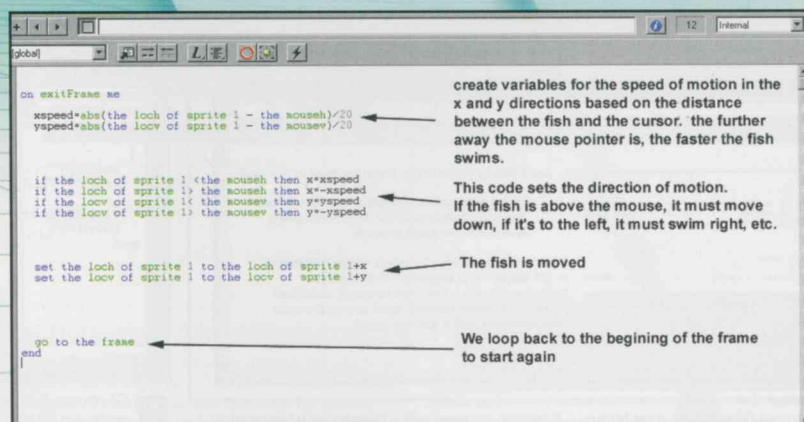
- 1 Set the size of our movie to 800 by 600 pixels. This gives us a large stage on which to work. Right-clicking on the cast window allows us to import all the graphic elements we intend to use in the project.



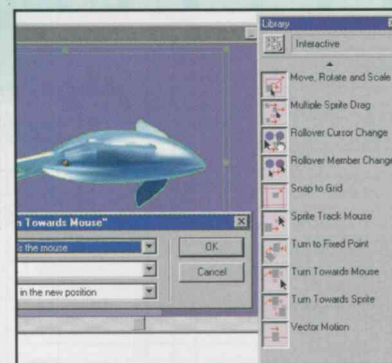
- 2 Drag and drop the first fish image onto the stage, and use the Property Inspector to set the ink to background transparent. Now resize the fish to an appropriate size.



- 3 Time to make the fish swim. Open the library browser, and select automatic animations. Now drag the Cycle Graphics behaviour onto the fish. We set the start and end images, and the frame rate, and then click play on the toolbar. The fish now appears to swim.



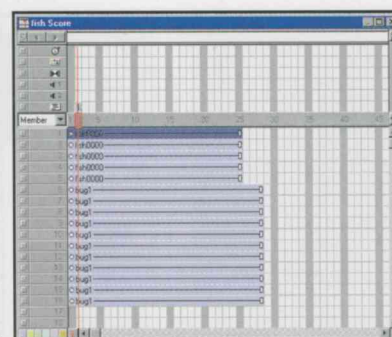
- 4 Clicking on the script track of frame one in the score window, we type Lingo code as above. This code makes our fish swim to follow the mouse. Playing the animation, the fish always moves towards the mouse, following it around the screen.



- 5 We now need to make the fish face in the direction it's moving. Back in the library browser, in the Interactive animation section, we find the Turn Towards Mouse behaviour, and drop it onto the fish. Now, the fish swims more realistically towards the mouse.



- 6 To create some more fish, we apply the same Cycle Graphics behaviour, but add the Follow Sprite behaviour to make the second fish follow the first. We also use the Turn Towards Sprite behaviour instead of the Turn Towards Mouse one. The result is a shoal of fish all swimming after each other towards the mouse pointer.



- 7 The other creatures in our aquarium are little bugs, which we want to run away from the fish. Giving them a Random Motion behaviour (so they swim a little on their own), a Turn Towards Sprite behaviour (to make them turn away from the fish), and an Avoid Sprite behaviour (so they flee from the fish). We can make as many copies of the grub as we like and arrange them around the screen.



- 8 With the movie completed, we click Publish in the file menu to create a Shockwave file with its own HTML page. Our production is a little large to put on a Website, but it makes quite a fun wallpaper screen for Windows. You'll find it on the coverdisc (fish.html).

Part 2: Getting the drinks in

Now we've found our way around *Director*, we'll try a more complicated Internet destination. We want to make the *Computer Arts* site a relaxing place, so we figure the best way to do that is to put in a bar...

Altered images

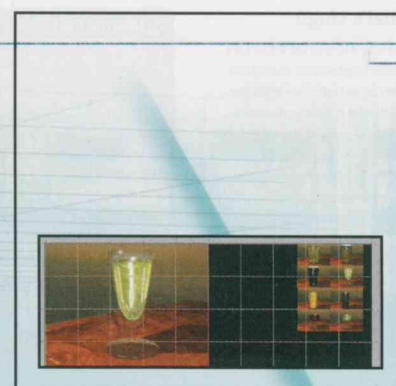
When you alter an image at runtime (stages 4 and 5), it stays altered, so you need to copy the cast member you're changing before you start, if you don't want to lose the original image.



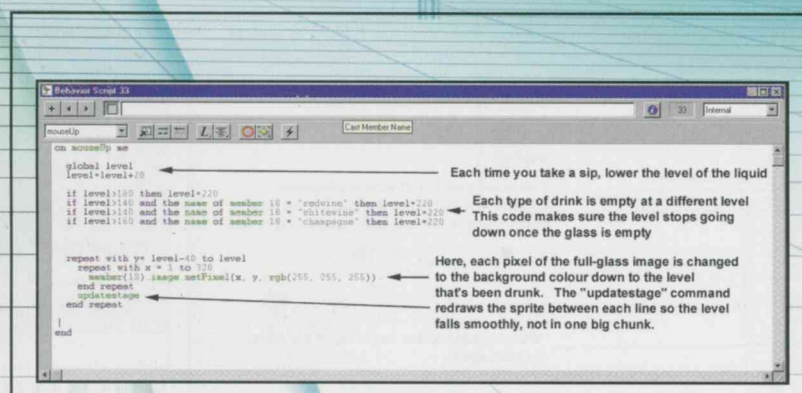
1 The first step is to create the images we'll be using. We've produced these drinks in 3D studio, creating empty and full glasses. We import the images into *Director*'s cast window.



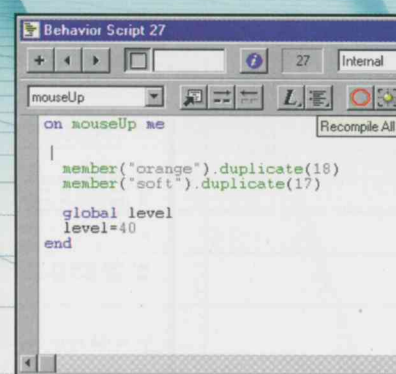
2 Each full drink image is dragged onto the stage and resized as a thumbnail so visitors can select their drink. In two empty cast member slots, we create copies of a full and an empty drink. These will be our visitor's choice, and will be manipulated later using Lingo.



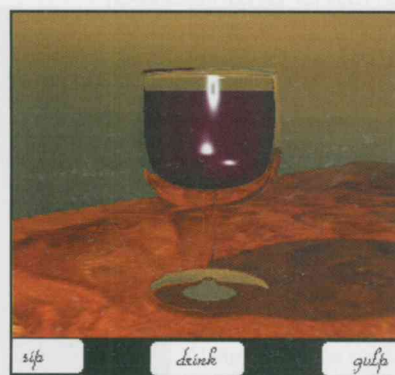
3 The empty drink is placed full sized on the stage, and the full version is positioned directly over it (*Director 8* has a snap-to-grid option so you can place images accurately). We now change the ink type on the full glass to Background Transparent.



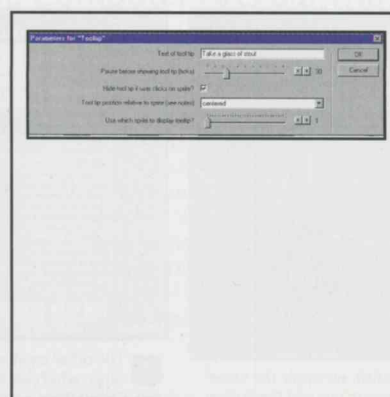
4 Runtime imaging is one of *Director 8*'s new features. Basically, you can edit a bitmap with Lingo while the program's running. We've attached the above code to a button labelled Drink. Each time the visitor clicks the button, we paint out a block from the top of the full-glass image with the background colour so the empty-glass image underneath shows through, and it looks as though the level of drink in the glass is going down.



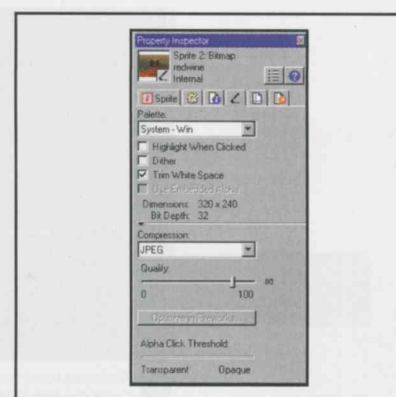
5 Of course, knowing our readers, we thought it pretty essential for visitors to be able to get a refill once their glass was empty. We attach an On Mouseup behaviour to each of the thumbnails so that when the user clicks the thumbnail, the drink pictured replaces their empty glass.



6 Just for fun, we add a couple more drinking buttons – one for 'sip', and one for 'gulp'. Each carries the same code as above, just with different sized steps. The sip option takes just a little drink, whereas the gulp option takes a random amount out of the glass.



7 Using the library browser, we attach tooltips to each of the drink thumbnails describing the drink, and use another behaviour to automatically change the mouse pointer to a finger whenever you pass it over a thumbnail.



8 Finally, we use another new function in the Properties browser to reduce the download time of our movie. We click Optimise In *Fireworks* and reduce the size of each of our images so our chatroom won't take so long to load.

Part 3: Oh, what an atmosphere

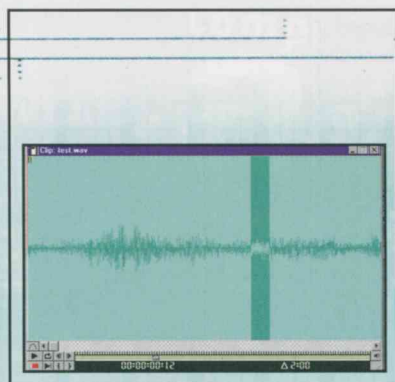
In order to give the *Computer Arts Bar* a little atmosphere, we're going to add some sounds. *Director* can now control sound with greater accuracy than ever before

Easy listening

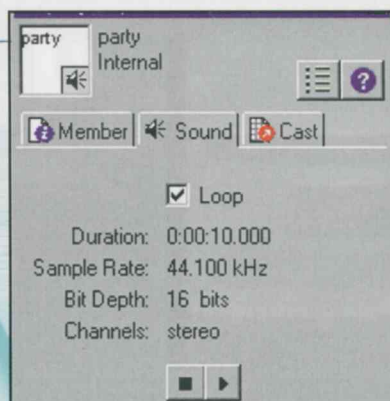
You can use Lingo to layer sounds, and play back different portions of a sound file very accurately. For a better depth of sound, we could have taken several party sounds, and played them randomly to build up the background noise.

Background noise

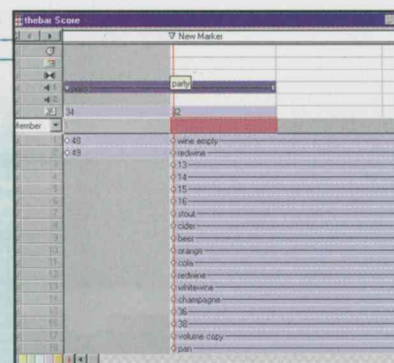
Our ten second background sound only adds about 25K to the size of the final Shockwave file.



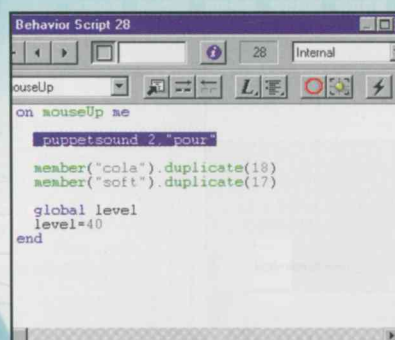
1 Produce your sound loops. There are plenty of places around the Internet where you can download freeware clipart sounds. If they need cutting to size or altering, most soundcards come with software to help.



2 Import the sounds into *Director*. It's usually best to start off with the highest quality samples you can. *Director* will compress them later when the Shockwave movie is produced.



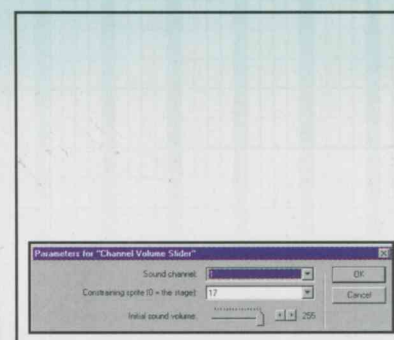
3 We're using two sounds in our bar. The first is the easiest to implement. Drag the Party sound into sound channel 1 on the score, and in the properties browser, set the sound to loop constantly. The sound is ten seconds of bar-room hubbub, so the fact that it's repeating shouldn't be noticeable.



4 The second sound we're using is the sound of a drink being poured. All we need to do is place the line of code above into the script for each of the thumbnails the user clicks when ordering a drink. This will play the drink pouring sound in channel 2 (so that it is heard over the party atmosphere, and doesn't interrupt it).



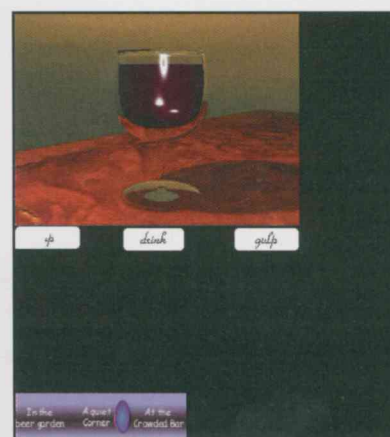
5 Now for some fun. We want to allow our visitors to wander around the pub. The graphic above is made up of two images, the background rectangle, and a dot which can be slid along it.



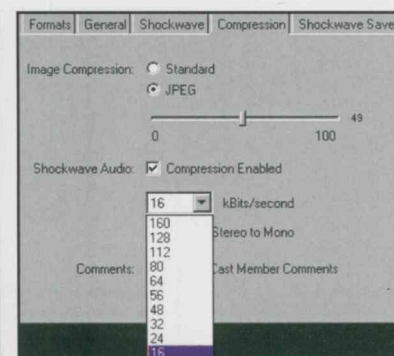
6 Placing these both on the stage, we drop the Channel Volume Slider behaviour from the library onto the dot, and in the dialogue, we set the dot to be constrained to within the background box. When the movie plays, the visitor can use the slider to move from the front of the bar (where it's very noisy) to the beer garden (where it's quiet).



6 Next we set up another slider on to which we drop the Channel Pan Slider behaviour. This allows our visitors to move to the left or right hand side of the bar by panning the stereo position of the sound. Changes should happen in real-time, while the background ambient sound is playing.



7 These sliders are pretty pointless – however, they add virtually nothing to the size of our movie and they're fun to play with, so why not?



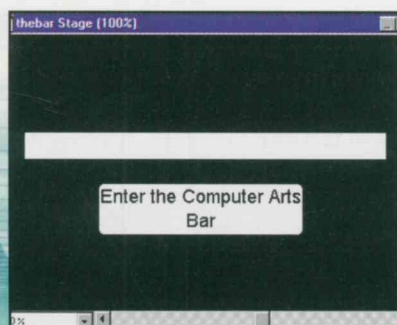
8 Finally, in order to make sure the sounds are compressed as much as they can be, we go to the publish settings menu, and set the audio compression to 16kbs/second. This compression would probably be very unpleasant for most sounds, but our general background sound doesn't suffer too much.

Part 4: Chattering classes

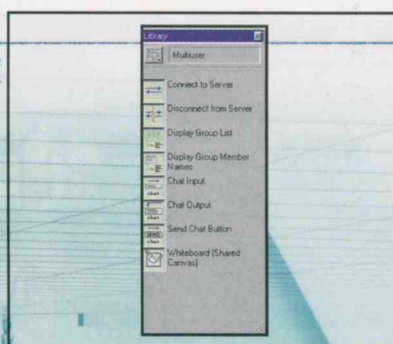
The final stage for our Internet chatroom is to provide somewhere for our visitors to chat. We're going to do this without a single line of code. Be sure to drop in and meet up with other readers...

Style trial

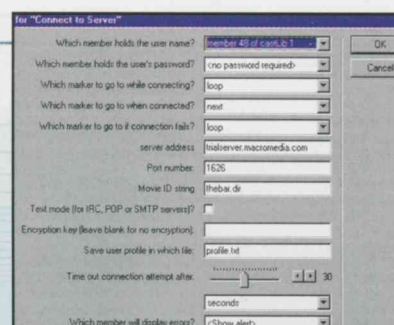
Macromedia provides a trial server which you can use to test your multi-user Shockwave files even if you haven't set up your server yet.



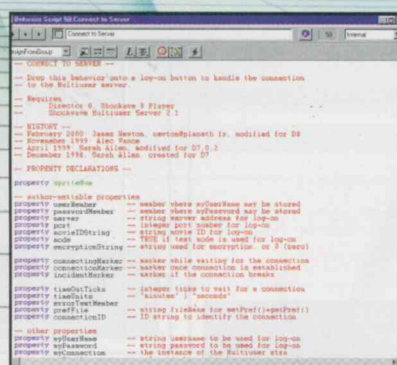
1 Frame 1 of our movie will be the log-in page. Here we place two items. A text box for the user to enter their name, and a button which will take them into the bar. It's good to have an opening page like this because while the visitor is making up their mind what to call themselves, all the images and sounds needed for the main bar-room can be downloaded in the background.



2 On the library browser, select Internet and Multi-user to display Director's pre-written chatroom behaviours. Everything we'll need for the Computer Arts Bar is here, but there are also interesting extras – notably the Whiteboard behaviour, which allows multiple users to draw graphics on a canvas.



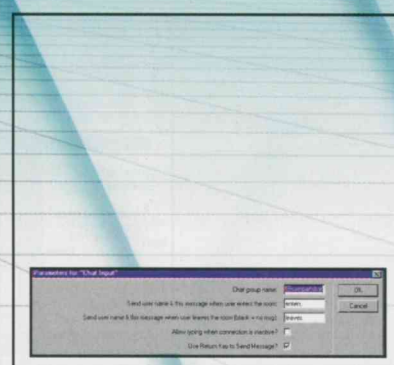
3 For our first page, we simply drag the Connect to Server behaviour on to the enter button we've created. We set up the IP address and name of the multi-user server we're connecting to. The multi-user server is the program on our host Website which handles Shockwave Chat. You can set up passwords and error handling if you like, but we've kept these at the default values.



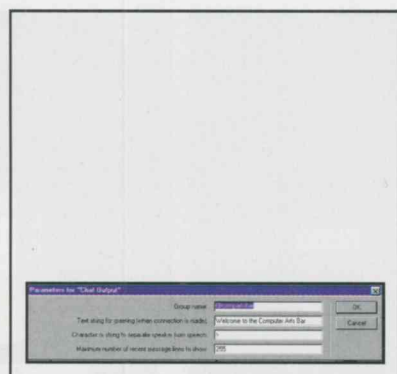
4 We can also set the name field we've placed on the screen as the location for the user's login name, and tell the Movie to advance to the next frame only when a connection has been established. If you want to make more complex alterations, you'll need to edit the Lingo code within the behaviour.



5 Our actual bar-room contains three text fields. Each is set as a scrolling box so that its size won't change when the text within it is altered.



6 The first field we set as editable, and attach the Chat Input behaviour. The visitor will type here, and hit [Return] to send the message. We create a name for our bar (because each multi-user server can run many groups at once), and keep the rest of the settings at their default values.



7 The second field is our output box where conversations will be seen. This we drop the Chat Output behaviour on to (remembering to use the same group name we used in the input field). We can also set a greeting for the new visitor when they enter the bar.



8 The third field is a simple scrolling box which contains a list of our bar's current visitors. For this we use the Display Group Member Names behaviour. Our last task is to use the Disconnect From Server behaviour on an Exit button, and the Computer Arts Bar is complete.



9 Finally, the movie is published as a Shockwave production. We need to do a little tweaking with the publish compression settings, to create a movie which is as small as possible without sacrificing the quality of the graphics. Visit www.computerarts.co.uk/web and tell us how we got on. **cas**

Complete creativity!



In this month's issue of
Computer Art Special's sister
magazine for designers:

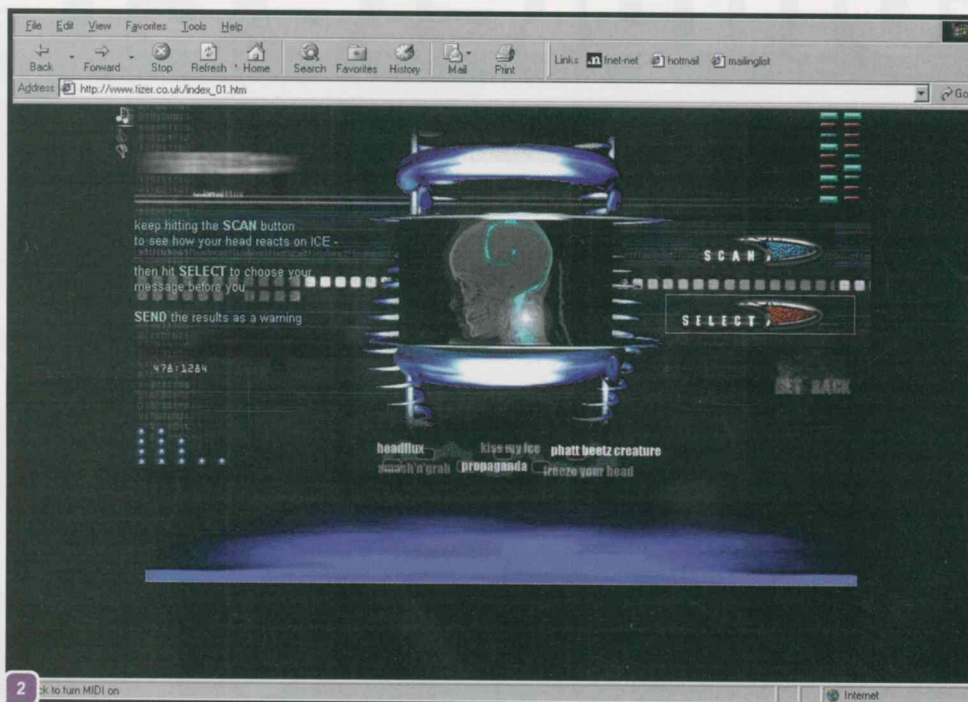
- *FreeHand 9*, *Photoshop*, 3D and Web design tutorials
- *Director 8*, *FreeHand 9*, 10
- Photoshop* plug-ins, *LightWave 6* and *Cinema 4D XL 6* reviewed and rated
- Packed dual-format CD
- Win *Director 8 Studio*!

More from the new-look Website
www.computerarts.co.uk

On sale now



1,2 and 3. Calypso soft drinks, Tizer and Hula Hoops. It's not all work, work, work, you know. Brand New Media has created a number of fun and interactive sites for the younger consumer with characters, games, music, screensavers and animations. The smart and colourful Websites are often aimed at boosting a products profile while providing entertainment, fun downloads and information for the visitor.



Brand New Media

"The end result is of course a Website but one that has come from many different directions and is no longer simply a design idea..."

Paul Mallett, creative solutions director.

It sometimes seems we're living in a time where the phrase 'old hat' can refer to something that was the ultimate in new thinking just six months ago. Brand New Media can testify to that. With no two projects the same in over four years of creative multimedia design, new and innovative ideas are more precious than gold to this established Leeds company.

Diverse portfolio

Brand New Media's diverse client portfolio includes major companies such as Heinz, In Bru, ntl and Bass. By integrating creative design and technology with marketing and business, they've managed to keep their output fresh and relevant to the client and consumer.

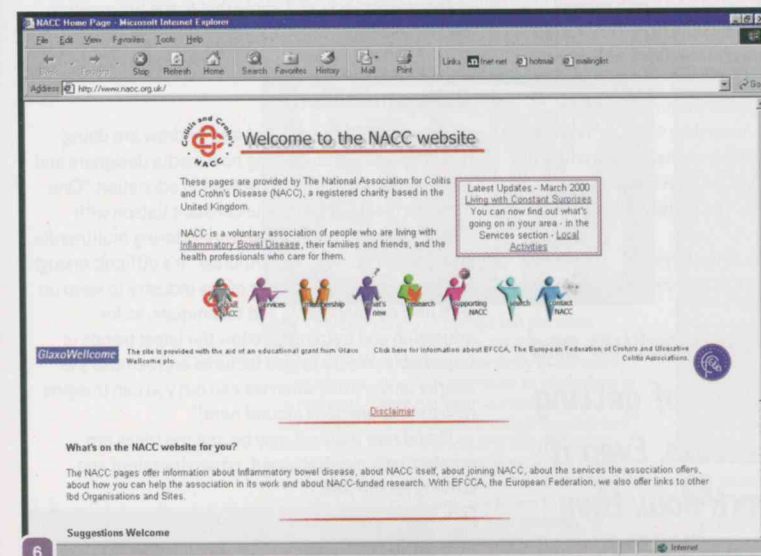
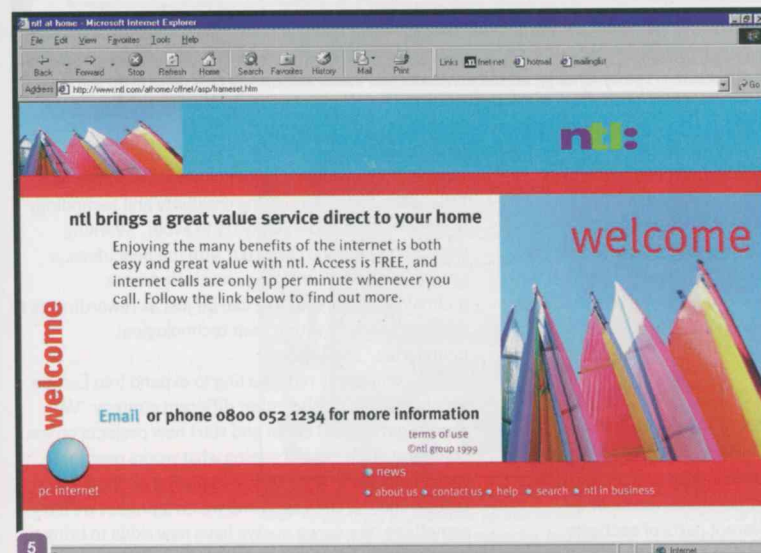
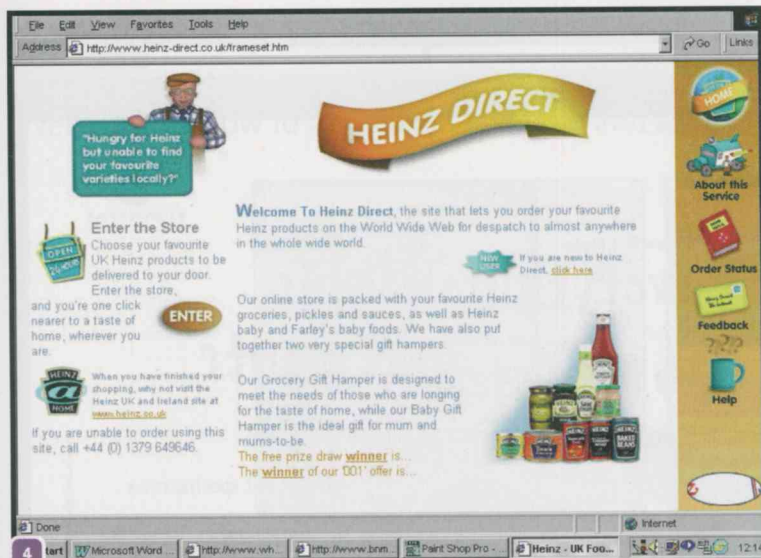
"We try to get involved in all aspects of a project, the creative, the marketing and the business. Making a Website compatible with TV advertising, labelling and the evolution of a product or service is very important for us," says Paul Mallett, creative solutions director. Such a strategy brings Web design right into the centre of a client's business plan, so that a Website is no longer an added extra but an integral part of the company's make-up. "Before we actually make a Website we spend as much time as necessary working through what the clients wants: is it customer service,

advertising, sales, news or entertainment? You can't start a project without having this in mind or it ends up having no goal at all."

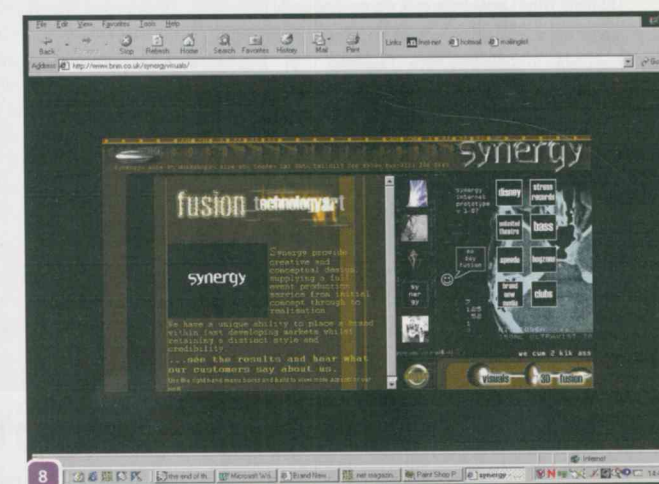
The experienced gained by Brand New Media after more than four years in the industry has contributed to their strong ideas and experimental outlook. When they started out in 1996, Web design was restricted by the limited technologies available. "You couldn't really do a lot with the Web in those days so we were having to use background graphics overlaid with transparent images to create a dynamic feel," says Paul. "We ignored all the rules that said keep all your pages to 10K worth of graphics and keep it text based, as the products we were marketing needed graphics. You had to think of interesting ways of using things like frames to get interactivity where it didn't really exist."

Sound has also been a prominent feature in Brand New Media's work. Rollover sound effects and background music in projects such as the Calypso soft drink Website are often used to entertain a visitor or emphasise a particular feature of a site. "We've always tried to do different things with music and sound. With the first generation In Bru site we did had characters who talked which we got a lot of stick for, but we thought it was a great way to make it a lot more interactive and exciting," says Paul.

Constantly pushing the boundaries of what's



4. "As long as it moves and it's digital, we do it," says Paul Mallett. The evidence? The Heinz Direct on-line store is a smooth, simple and easily navigable e-commerce site that sells baked beans and tomato ketchup to ex-pats who want a whiff of home.
5. It's not just your average computer that's causing a stir these days; try interactive TV, digital video, 3D and mobile phones. Communications company ntl, with the help of Brand New Media, is well on the way to pioneering an Internet TV nation.
6. The National Association for Crohn's and Colitis reflects the diversity of Brand New Media's talents. With support and information for sufferers and families, the charity has a great chance to raise awareness and funds via their Website.
7. The Brand New Media homesite is very different to many of their projects. With minimal graphics and content, the main advertisement for the dynamic company is in its impressive portfolio of well known sites and innovative designs.
8. The BNM recruitment drive – think you're up to it? "When we think about recruiting people, it's more about ideas than experience. Your skills become quickly out of date in this industry, we encourage continuous learning just by getting involved and trying out new things," says Paul.



Irn-Bru – the e-bad boy

Irn-Bru has always had a reputation for advertising that pushes the boundaries, and AG Barr's decision to gain an Internet presence early in the Web's development reflected the brand's keen interest in all things new and different. Brand New Media created an exploratory site that set the mould for branded Websites from then on.

Brand New Media, then trading as Knowledge Plus Solutions and based in Bradford, was talking to AG Barr late in 1995 and the first Irn-Bru and Tizer Websites appeared in Spring 1996. "This was the first generation of branded FMCG Websites", says Steve Barrett at Revolution Magazine. "They set the trend for sites of this type".

Simon Wadsworth, MD at Brand New Media, points out that the external advertising for these sites has only ever appeared on cans of Irn-Bru and Tizer. In 1996 it was groundbreaking for a branded site to be graphically based and exploratory, encouraging users to find pieces of brain to enter a competition. Nowadays of course these sites are two-a-penny, but Irn-Bru remains ahead of the game by tapping directly into the source — how people use the Net.

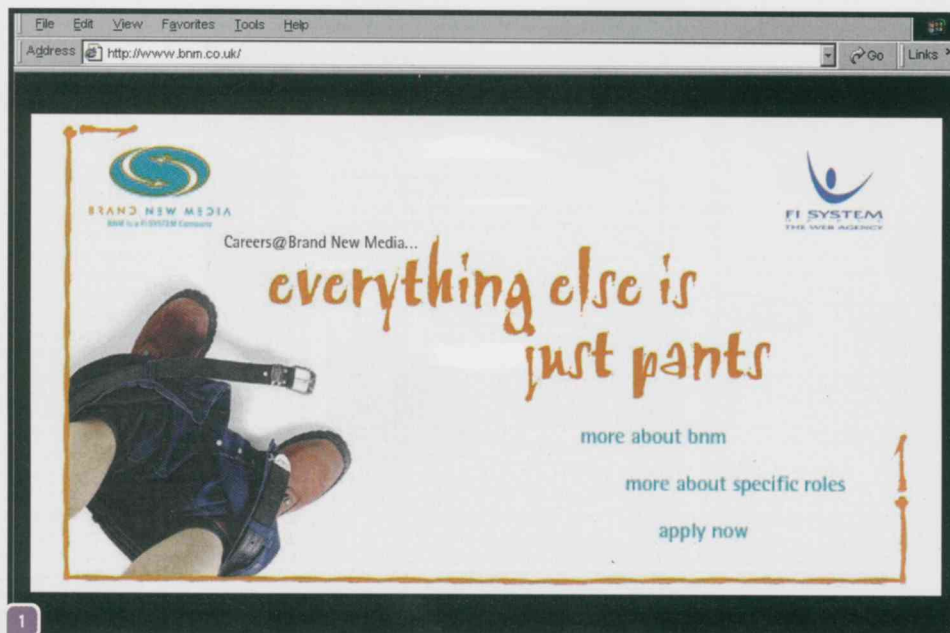
The first site was not replaced but updated. Using mini-stories to form a rambling soap opera the site developed into a huge sprawling mass over its first two years. Then in 1998 Irn-Bru went for a change and a site comprising only three main sections appeared. With a sleeker look, the Irn-Bru site encouraged users to send in their digital creations and displayed them in a surreal on-line talent show, mirroring Irn-Bru's sponsorship of Chris Evans's *TFI Friday*. A smaller part of this site was developing custom on-line pranks to be e-mailed to friends and this section proved massively popular.

Due to the success of the Irn-Bru wind-ups, the latest incarnation of the site was born a year later to great effect. And in December 1999, Irn-Bru's Ultimate Wind Up Website took the on-line world by storm. The site points users at a vast number of on-line pranks to play on friends and enemies.

Says Andrew Brown, Senior Designer at BNM: "We really wanted to get into the look of those now-famous Irn Bru posters. Using the black and white images achieves this easily, and the other elements were thrown in to maintain that anarchistic quality. The Irn Bru site looks alive, as if there are some proper sinister goings-on behind the interface..."

With the user sessions now hitting over 40,000 per month and still rising, Irn-Bru has taken the principles of modern marketing techniques and used them to great effect.

You can check out the current Irn-Bru sites at [w] www.irn-bru.co.uk



1. Leeds-based event design and production agency, Synergy, worked with Brand New Media to showcase their range of 3D and visual capabilities in a subtle, slick and innovative Website. Back on solid ground, Brand New Media and Synergy together won Best Stand Award at the Marketing 97 fair.

acceptable and credible has contributed to the successful expansion of the company and its wide range of achievements. "If there's one thing we've learned," says Andrew Brown, senior designer, "it's that you've got to be creative and try different ways of getting the message across. Even if they don't work now, they might do later on."

Varied background

As a growing company with 40 staff and new offices in London, Brand New Media does most aspects of a project in-house. Teams of designers and programmers who specialise in graphics, database, music or e-commerce take on the different parts of each site. "Over time we've done just about everything, including pure programming, games, video and touch screen applications. All our designers come from very varied backgrounds, including film and teaching; as long as it moves and it's digital we do it," says Paul. The contract with ntl involved a considerable amount of work on their Internet TV platform. According to Paul, "With ntl the approach was very different, we had to learn how to get the graphics and text right for television, a very different way of doing things. The variety we get from our clients is huge."

The company's designers often have the programming skills to match, so that projects aren't just

"You've got to be creative and try different ways of getting the message across. Even if they don't work now, they might later on"

passed from one member of the team to another with little interaction. Separating creativity and technology is something they definitely try to avoid. "Working together means you come out with the best ideas, a programmer who's thinking creatively from a technological perspective can be just as rewarding as a designer working within their technological boundaries," says Andrew.

The company is now starting to expand into Europe which involves an altogether different strategy. "We want to get out and about and start new projects on the continent, it's a case of seeing what works over there," says Paul. "We've got a desire to push it all the time, in Europe and the UK. Each time we do a project we'll try something new so we always have new skills to bring to the next project. We take what we learn from the corporate projects and apply that to the fun projects and vice versa."

Constant liaison

Back on British soil, Paul and Andrew are doing their bit for up-and-coming new media designers and programmers by getting involved in education. "One thing we feel is important is constant liaison with universities and colleges who are offering multimedia and design courses," says Andrew. "It's difficult enough for companies in the centre of the industry to keep up with new developments and techniques, so for education and training to follow the latest trends is impossible. We try to give lectures and seminars at nearby universities when we can but you can imagine how time is precious around here!"

Brand new media it may be, but the ideas are comfortably old-fashioned: creativity, talent and striving for the best.



To find out more about Brand New Media, [t] 0113 383 5000 or [e] info@bnm.co.uk, and visit [w] www.bnm.co.uk for links to the sites featured in this profile.



Cream of the crop

Brand New Media reveal the secrets behind the Heinz Salad Cream Website, and how to turn an old favourite into a youth icon...



1 First the brainstorm process takes place. The primary objective is to position Heinz Salad Cream as an exciting, modern, vibrant product that will make people try and remember how delicious it is. This involved sketching out ideas for characters and the creation of a mood board as well as laying out the sort of thing we wanted to achieve.



2 The look and feel was mocked up and developed to give us the final images that would dictate the whole look of the site. A cross between adult 2D characterisation and a psychedelic play on the famous Heinz keystone was used in conjunction with 3D elements created in 3D Studio MAX.



3 Brand New Media worked closely with Heinz's other agencies involved in creating the TV ads, poster campaign and on pack sales promotion. "It's great getting together with creative people from different agencies and backgrounds and attempting to integrate the message for each different media". The Website attempts to draw on elements of all the other campaigns whilst keeping a unique identity that would be embraced by the Net generation.



4 The key to the whole site wasn't fancy 3D renderings, a funkadelic soundtrack or characters with attitude and panache, but the humour that was applied to the content. "It's like a movie – if you don't have a great story you're on to a loser."



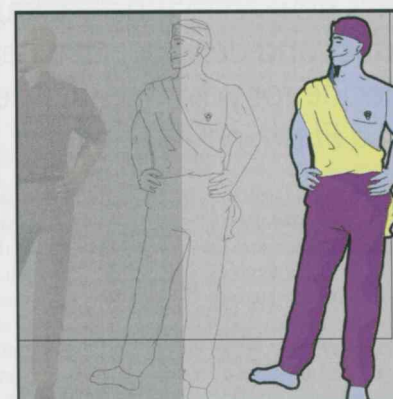
5 There was a very short amount of time to complete stage one of the site in time for the release of the TV ads. Small teams were given charge of different sections of the site and developed them side by side. Brand New Media created a branding toolbox of icons and imagery to keep a consistent feel throughout the site.



6 A number of different technologies were used to achieve the objectives required for each section – from HTML, DHTML and JavaScript to the use of Flash and Shockwave for animation, games and music. Cookies check whether users have been in certain sections and make decisions as to whether graphics should be preloaded or not. "The decision to go full screen and really immerse the user in the site made the whole thing feel like an individual application, not your run of the mill Website."



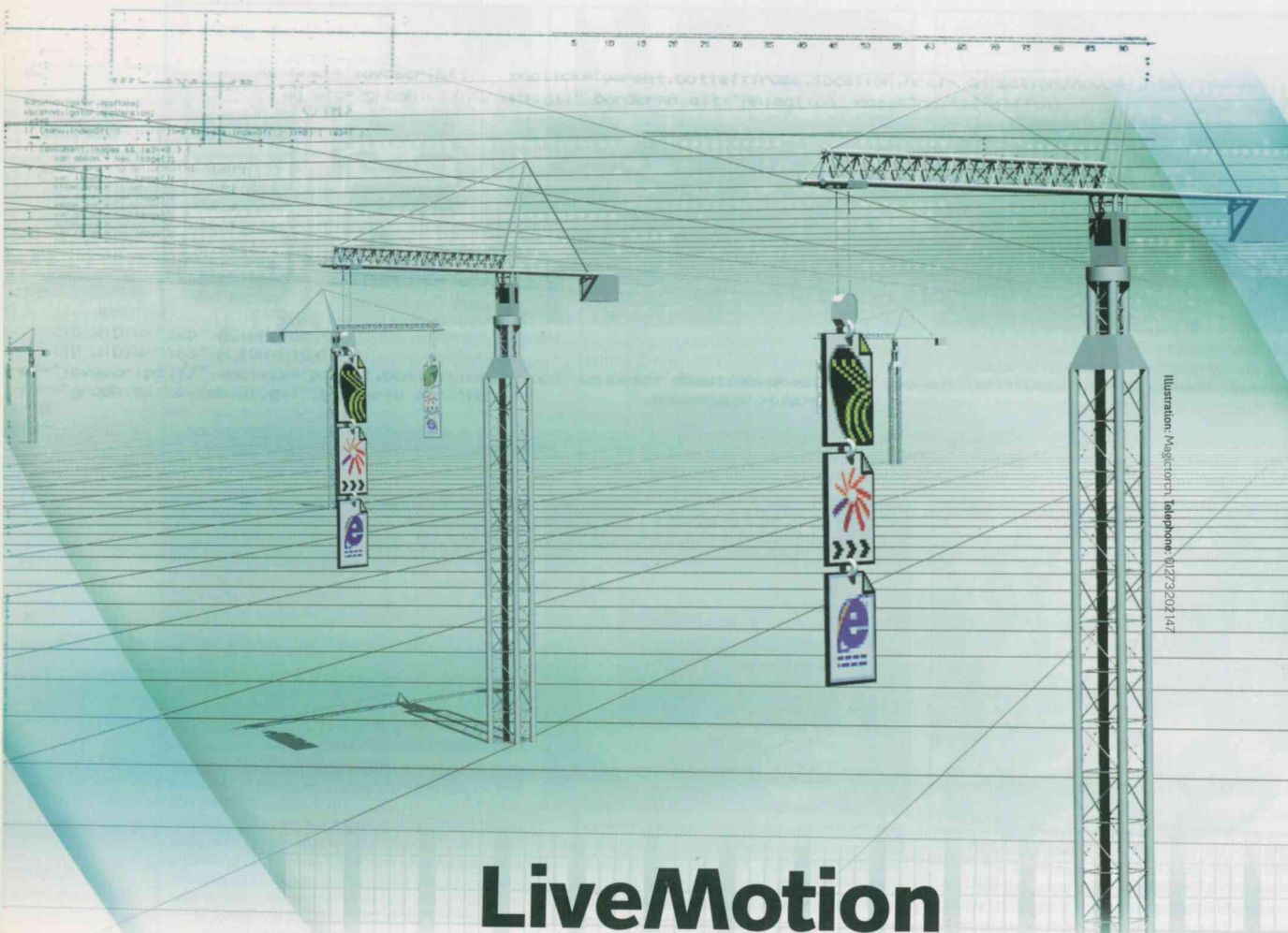
7 The final stages of the site left the team responsible working around the clock to finish the initial phase. The site is currently in constant development. "We're working up to phase two at the moment. There has been a massive amount of user feedback, hit levels are through the roof and people seem to love the site and the product it's advertising. We're going to address a few issues, mainly about copy and functionality, then it's phase two. We've still got some cool prizes to give away and some great ideas for the new sections, so everyone's really looking forward to the next phase of development."



8 Brand New Media used Poser and Flash to create the cartoon characters that populate the site. As a large number of characters had to be drawn swiftly all the characters' poses were set up in Poser, laying out the proportions for the artist.



9 These were imported into Flash and each character drawn over the top of the Poser images using a graphics tablet. "Hairstyles, features and items of clothing were inspired by people who happened to wander past, so a few people in the office ended up looking at themselves when they were testing the site." **car-s**



LiveMotion

Adobe's new animation package for the Web has critics and designers divided. Try our tutorial and decide for yourself whether it's the real deal or just a *Flash* in the pan ...

Some enthusiastic soul has registered the domain name FlashKiller.com for a site devoted to Adobe's new Web graphics and animation package, *LiveMotion*. That may be a bit premature.

LiveMotion may export to Macromedia's *Shockwave Flash* format, but it's quite a different animal. Aimed more at creating splash pages, text animation and optimising bitmaps than interactivity, *LiveMotion* is easy to pick up for Adobe veterans and newcomers alike.

This ease of use is centred around a less linear approach to animation than its obvious rival. Objects on the page in *LiveMotion* remain easy to edit even after you've applied several transformations. You can change individual aspects of an animation – a rotation here, a rescaling there – anywhere along the timeline without it affecting any other aspect.

So here's a quick tour of *LiveMotion*, including those animation and interaction features. If you're used to *Flash* give it a go – you might be pleasantly surprised...



Try it out

Expertise supplied by Karl Hodge. You can find tutorial files on the disc.

Part 1: Drawing tools

Firstly we'll discover how to get the max from *LiveMotion's* impressive tool set, and learn how working with layers enables us to build complex shapes...

Colour schemes

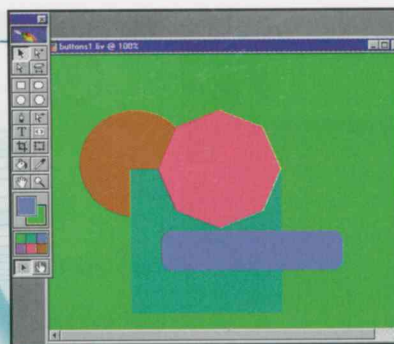
Use the Colour Schemes palette to find colours that are complementary to your chosen foreground colour.

Quick change

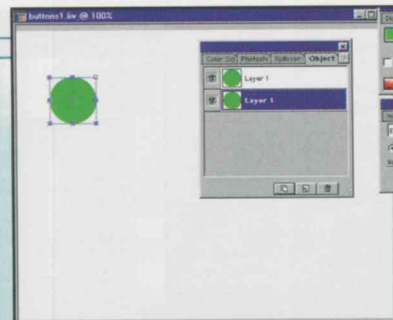
To change the background colour of your document, you don't have to mess with preference settings, just click away from the document window to deselect all objects and chose a new background colour from the program's toolbar.



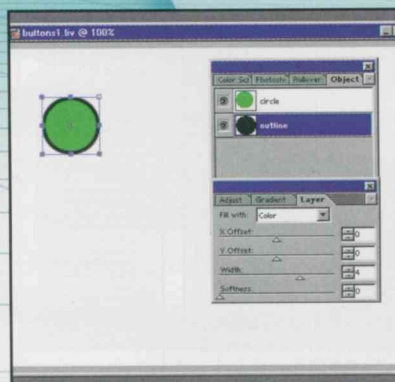
1 *LiveMotion's* tool set looks familiar. The company continues its policy of sharing interface elements among the family, so you'll come across features that *LiveMotion* has in common with *Illustrator*, *ImageReady*, *Photoshop* and even *Adobe AfterEffects*. In the preview versions we tried, most of these had been tweaked to fit in with the package's keep-it-simple ethos.



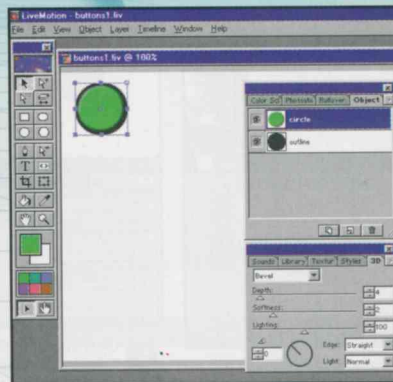
2 Like *Flash*, the drawing palette leads with a collection of primitive shape drawing tools. In the case of *LiveMotion* you have access to Rectangle, Rounded Rectangle, Sphere and Polygon drawing tools. When you place a drawing on screen it automatically becomes an Object, with its own set of properties and layer structure.



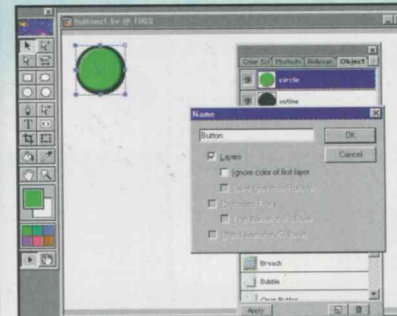
3 Layers in *LiveMotion* allow you to build complexity into your shapes. Begin by drawing a simple circle using the Sphere tool, holding down Shift as you drag. Go to Window>Object Layers to make sure the *Photoshop*-style Layers list is available. Click the Duplicate Layer icon in the palette. Rename the top layer to Circle and the bottom layer to Outline.



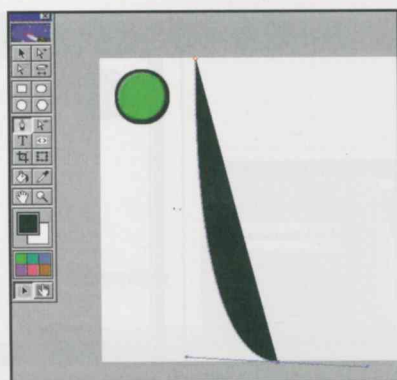
4 With the Outline layer selected, go to Window>Layer to make sure the Layer Properties Palette is open. Set the layers width to 4 in the Layer tab. With the object still selected, go to the Colour tab and change the foreground colour to black.



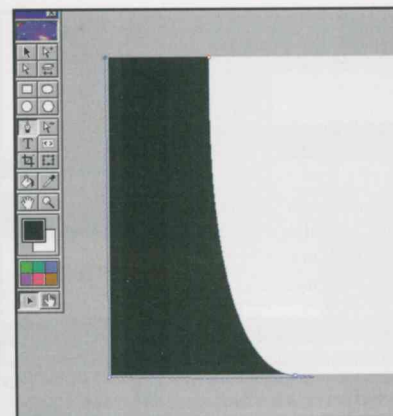
5 Go back to the Object Layers palette and select the Circle layer. Go to the 3D tab (use the Window>3D menu option if it's not visible). In the 3D tab set the 3D style to Straight, depth to 4, softness to 2 and the Edge type to Button.



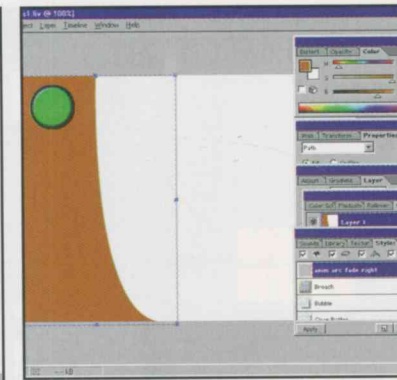
6 If you wish, you can save this combination of layers and effects as a reusable Style. Open the Styles tab and, with the button object selected, click the New Style button. In the dialogue that appears enter a unique name for the style and check Layers. To apply the style to another object, select the object in the document window, choose a style from the list and select Apply.



7 The Pen Tool in *LiveMotion* creates vector paths in a similar way to the Pen tool in *Illustrator* or *Photoshop*, but it's less complex. Clicking on a blank piece of canvas creates a new point, while by default clicking on an existing closed point deletes it.



8 [Ctrl/Command]-click to end a path, or [Alt/Option]-click to edit an existing point. Clicking along an existing path adds a new point. You can also edit paths using the Pen Selection Tool.



9 In common with primitive shapes, shapes created with the Pen Tool can either be rendered in Outline or Filled mode (using the Properties tab), and can be made up from any number of Layers. You can also apply Styles to elements drawn with the Pen Tool.

Part 2: Basic animation

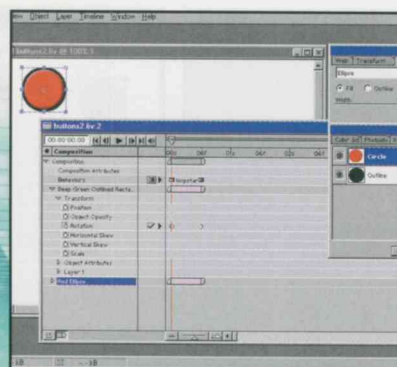
Now we'll take our first steps using *LiveMotion's* animation tools, and create a simple production which applies a transformation to an object

Cautionary tale

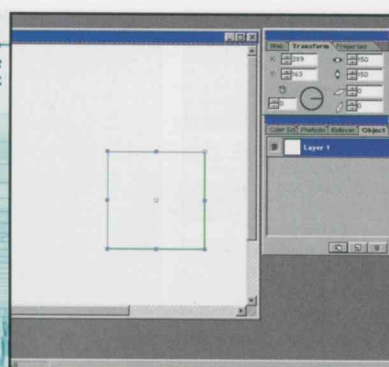
Although *LiveMotion* lets you add cool 3D effects, drop shadows and anti-aliasing to objects, it does this by transforming them into bitmaps. Try to avoid animating objects with lots of detail on different object layers – or your file sizes will balloon.

Rolling, rolling, rolling

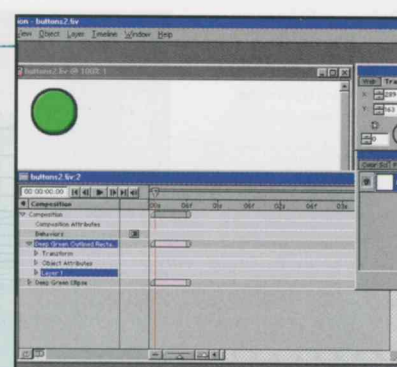
In the rollover palette you'll find drag and drop target icons like those in Adobe GoLive. To link a button state to another object on screen, you just click on the target and drag it to the appropriate object.



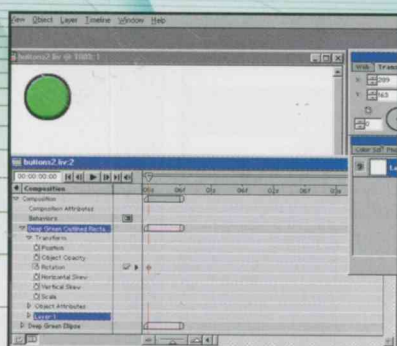
1 The object-oriented approach to drawn elements extends to the animation metaphor used in Adobe *LiveMotion*. We'll look at how it works by creating a very simple animation that applies a transformation to an object over a set period of time.



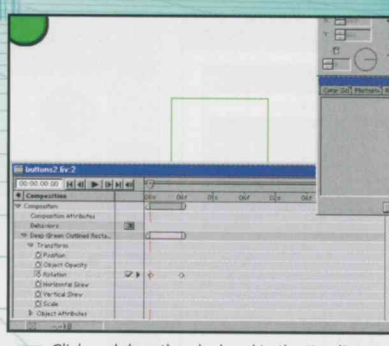
2 Working in the same document we started with, open the Colour tab and select a green colour for the foreground using the selector. Draw a rectangle in the document window about 150x150 pixels, and with the object still selected, go to the Properties tab and select Outline.



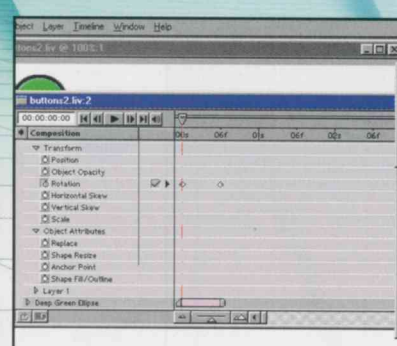
3 [Ctrl/Command]-T to open the Timeline window. You should see that an object called something similar to Green Outlined Rectangle has already been added. Click the arrow alongside the object label to view the available properties for that object.



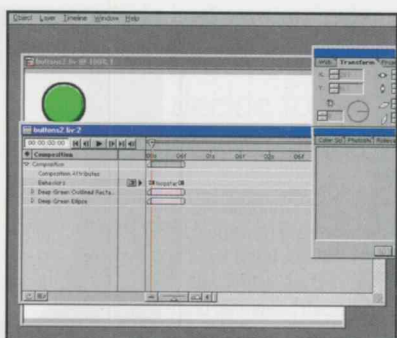
4 Click on Transform in the Timeline under the listing for the rectangle we created. The list that appears contains the properties of the object we can animate over time. Click the stopwatch icon next to Rotation. By default, the playhead for the timeline is at 00s ('s' for seconds). When you click the Rotation stopwatch a keyframe is placed at that point.



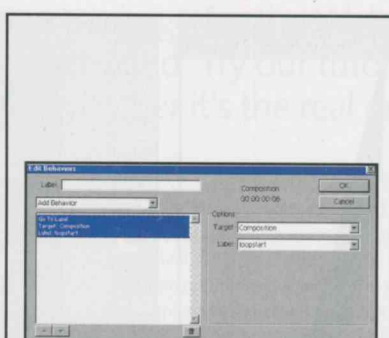
5 Click and drag the playhead in the timeline to '6f' for six frames – the default frames per second rate is 12, so this is half a second. Go to the Transform tab and in the Angle box type 360. Several things happen; a new keyframe is added at frame 6, the timeline object length indicators change to show that the animation lasts for six frames and the rectangle on screen rotates 360 degrees...



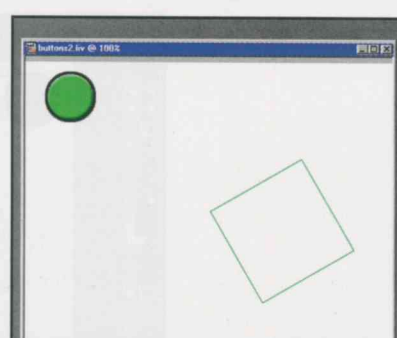
6 You can animate any transformation attribute for an object in this way, including its position on screen, its opacity and horizontal and vertical skew. Using the Layer property on the timeline, you can also animate changes in object colour as well.



7 By default, your animation only plays back once. You can loop the entire composition with the animation settings, but we're going to use Behaviours to set up some more complex interaction. Set the playback head or Current Time Marker back to 00s. Click on the Edit Behaviours icon in the Behaviours section of the Timeline. You'll find it under Composition Attributes.



8 In the Edit Behaviours dialog type 'loopstart' in the Label box, choose Play from the Add Behaviours dropdown, then click OK. Move the playback head to 6f and click the Edit Behaviours icon again. Select Go to Label from the Add Behaviours dropdown and choose 'loopstart' from the 'label:' dropdown.



9 Rewind the animation back to the start and save your work. To quickly preview the animation you've created, go to the Toolbar and select the Preview Mode icon at the bottom right of the bar. You'll discover later that you can't preview all interaction directly in *LiveMotion*, but simple animations should playback fine.

Part 3: Animating text

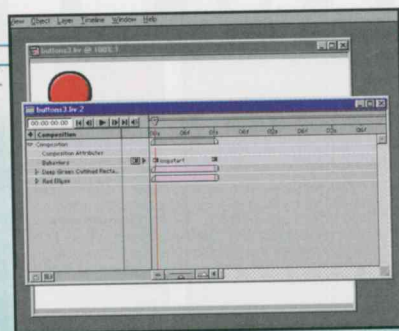
Let's apply *LiveMotion's* talent for animation to text, and create an attractive rotating logo – just the thing to add a professional touch to your Website

Other formats

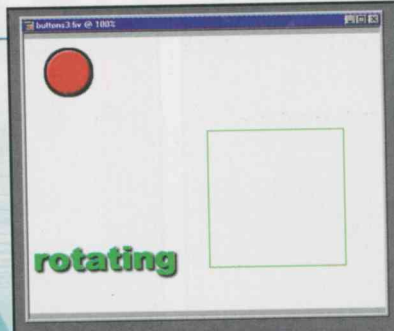
Shockwave Flash is just one of the formats *LiveMotion* supports for export. You can also save files as PNG, Photoshop PSD, JPG, GIF and animated GIF among others.

Photoshop integration

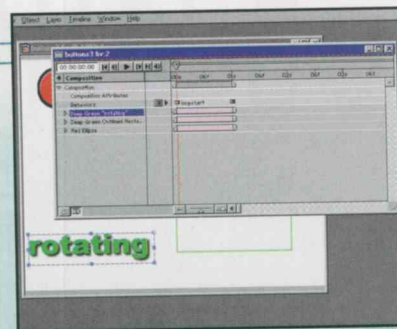
You can import Photoshop-native PSD files into *LiveMotion* with each layer as a separate object.



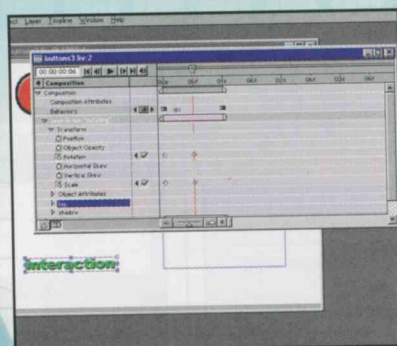
1 Go to the timeline and stretch the composition length indicator to 01s. Click and drag the behaviour we inserted at frame 6 to 01s, along with the keyframe that we created when we applied rotation to the green rectangle. The result here is that the length of the animation we've created has been doubled, without having to redo the animation or create new behaviours.



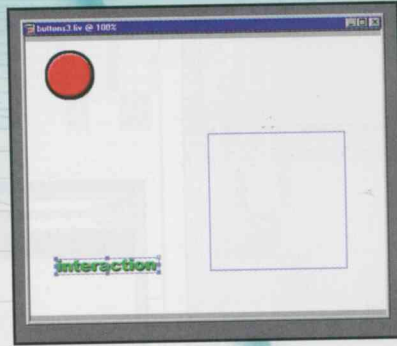
2 The reason for this reorganisation is so that we can insert some animating text in our document – one of the most popular uses of vector animation tools. Begin by selecting the text tool in the Toolbar, click in the document window and type in the word 'rotating'. Use a chunky, sans serif font, and set its size to about 48 pts.



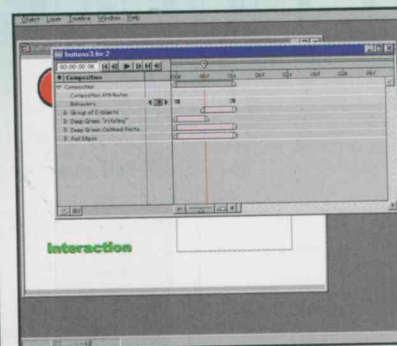
3 Position the text object as shown, then go to the Timeline window. Choose Window>Timeline if it's not already open. You should see an object called something like Green Rotating. Collapse the menus for all the other objects and open the tree for the text object by clicking on the arrow next to its name. Set the playback head to 00s.



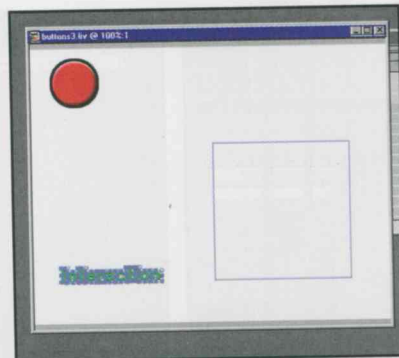
4 Open the Transform branch under the text object entry in the timeline, and click the stopwatch icons next to scale and rotation. Move the playback head to 36f. In the transform tab, set the angle entry to 360. In the width and height boxes, divide the existing numbers by two and type them in.



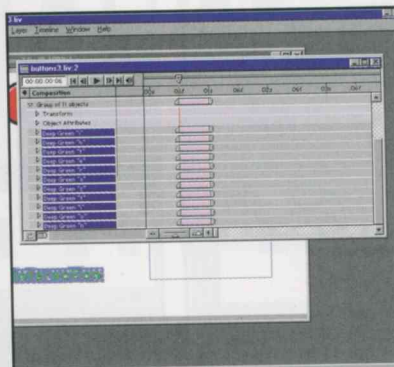
5 Move the playback head back to 00s and open the Object Attributes branch in the timeline below the text object entry. Click the stopwatch icon next to the item labelled Text. Move the playback head to 6f. Double-click on the text object in the document window to edit it. Change the text in the box from 'rotating' to 'interaction'.



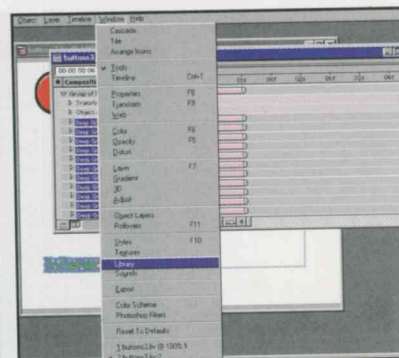
6 Set the duration bar for the text object so that it ends at 6f, then move the Current Time Marker to 6f. Select the text tool and type in 'interaction'. Set the other attributes to match the existing text object, then line up the new text exactly over the old. Use the arrow keys to nudge the text object a pixel at a time if necessary.



7 With the new text still selected, choose Object>Break Apart. Go to the Timeline, all the individual letters in the new text should already be selected. Click on the arrow next to the top object (which should be something like Green I) and click on the Object Opacity and Scale stopwatches in the Transform branch.



8 Move the playback head to 01s. In the Opacity tab set Object Opacity to 0. In the Transform tab, multiply the currently entered figures by six and alter them. Rewind the animation to the beginning and select the preview button to view your impressive handiwork.



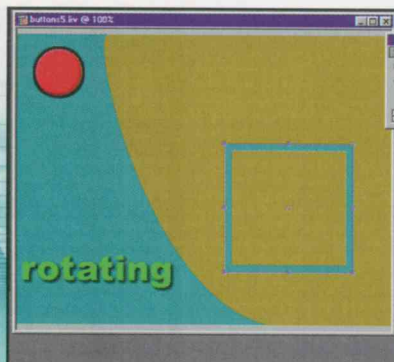
9 To reuse this animation sequence as a Style, make sure all the letters are selected, then choose Object>Group. Go to Window>Library, then drag the selected object to the Library. Give the item a name. To reuse the item, you either select the object in the Library and choose Place, or drag and drop it into position.

Part 4: Buttons and interaction

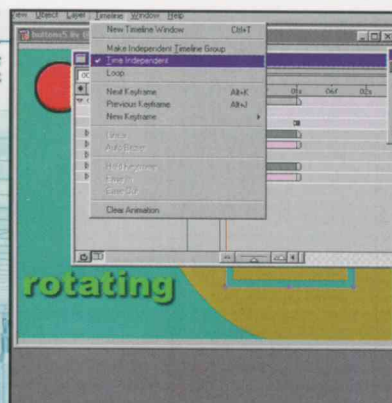
LiveMotion is superb for creating hassle-free buttons, rollovers and other interactive Web elements to dazzle visitors to your site

Compression

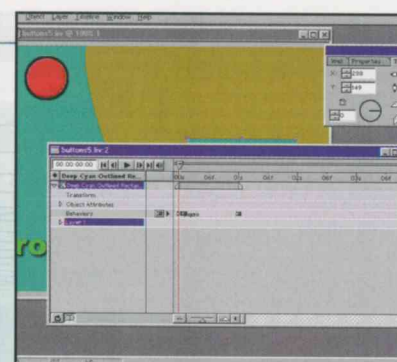
The final release of *LiveMotion* enables you to set individual compression parameters for individual objects in a file, even if you're exporting the final product to *Shockwave Flash*.



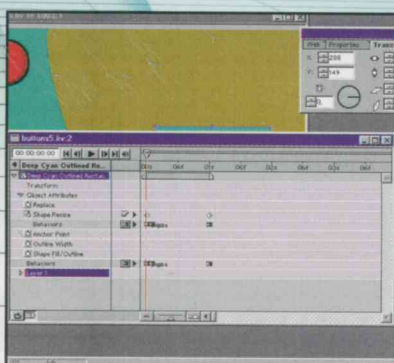
1 Though lacking some of the advanced scripting elements found in other apps, *LiveMotion* lets you trigger animation using a combination of rollover actions and timeline behaviours. In this example we trigger additional animation in the rotating rectangle we created earlier.



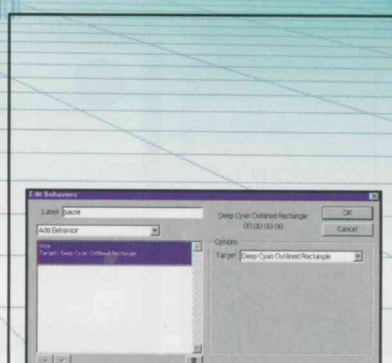
2 Select the rectangle in the document window and [Ctrl/Command]-T to open the Timeline Window. The rectangle should be selected in the timeline. On the menu, go to Timeline>Time Independent.



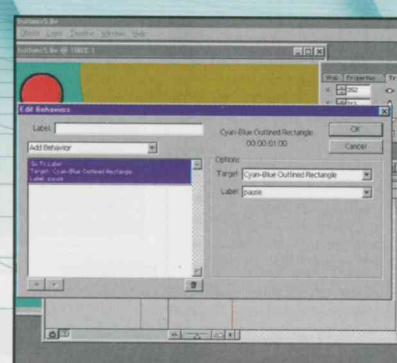
3 Double click on the independent timeline icon button between the tree arrow and the name label of the animated rectangle in the Timeline Window. You are taken to a new timeline window containing an independent timeline for that group. Our first task is to create an independent animation.



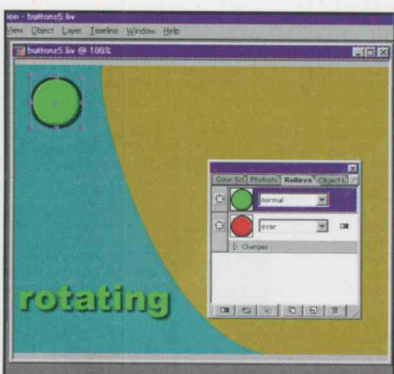
4 Open the Object Attributes branch and click on the Shape Resize stopwatch icon. Move the Current Time Marker (CTM) to 01s. Open the Transform tab and type in 50 for height and 50 for width. This creates the animation – to make it interactive we have to add behaviours.



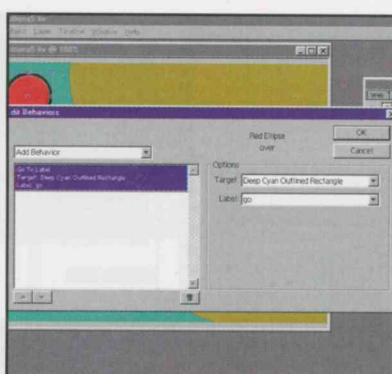
5 Move the CTM back to 00s in the independent timeline. Click the Behaviours icon and type 'pause' in the text box marked Label. Choose Stop from the Behaviours dropdown, then click OK. Move the CTM to the next frame.



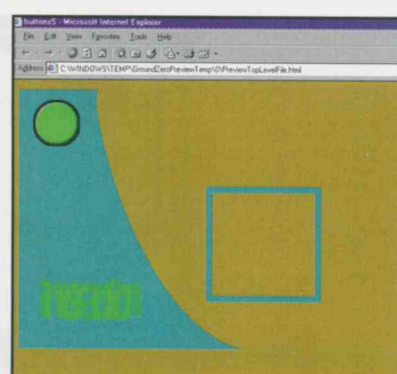
6 Click the Behaviours icon and type 'go' in the Label box and choose Play from the Behaviours dropdown. Click OK and move the playback head to 01s. Click the Behaviours icon and just Go To Label from the dropdown. In the Label dropdown, choose Pause.



7 Select the button object we created right at the beginning. Go to Window>Rollovers and make sure the Rollovers tab is open. Click on the New Rollover State icon at the bottom of the window to make an Over state for the button. Edit the colour of the selected button in the document window.

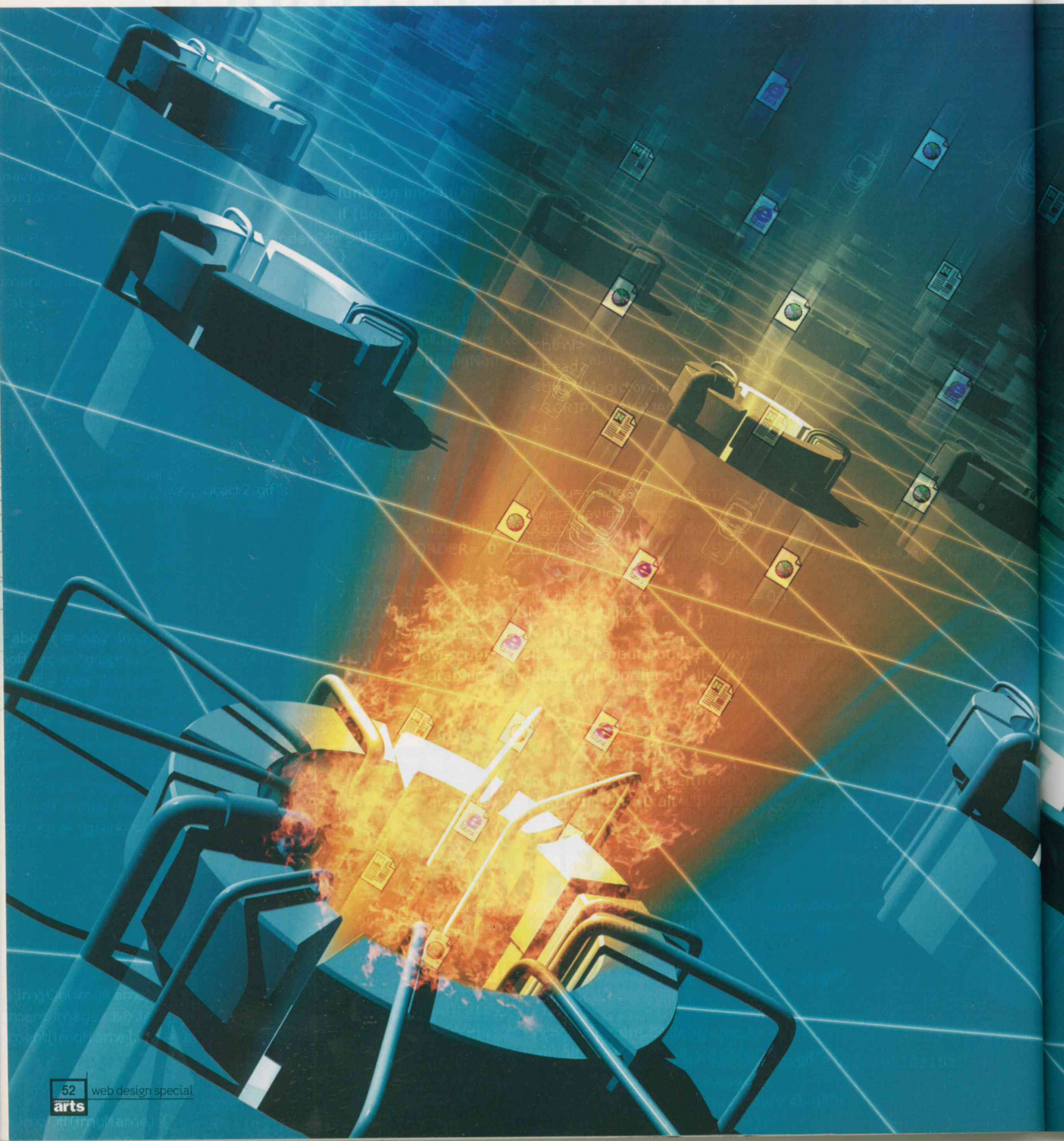


8 With the Over state still selected, click on the Edit Behaviours icon in the Rollovers palette. Choose Go to Label from the Add Behaviours drop down. Select the name of the animating rectangle from the Target dropdown and 'go' from the label drop down.



9 To preview the finished animation with the rollover interaction, choose File>Preview In... to see the file playback in *Shockwave Flash* format in your browser. Though you can preview most actions within *LiveMotion*, nested animations only seem to work when you export them first. **CAUTION**

Not enough memory to accurately render picture.



WAP Welcome

WAP represents the future of the Internet, we're told, but is it a case of one step forward and three steps back?

The future is wireless. It's a future in which you can always access the Net, and it's a future in which credit cards are as obsolete as cash. If the adverts are to be believed, it's even a future in which, even deep in the outback, you can access a database of snakes to see if the one that just slid up the leg of your trousers is poisonous or not. But how much of that is just hype, and how much is reality?

It may sound like a sound effect from an episode of *Batman*, but WAP actually stands for Wireless Applications Protocol and it's a new open standard for the encoding, transmission, collection and display of Web-like data. Content for WAP clients is written and delivered using WML (Wireless Markup Language), which is a derivative of XML (Extensible Markup Language).

Although WAP uses the Internet as a distribution and storage medium, it's really a massively condensed version, and is not remotely suitable for the majority of Web services. Although there are HTML to WML converters, none but the skimpiest sites would stand the translation, and by and large, WML sites have to be specifically written for WAP browsers.

The WAP standard has been formulated by a group of over 300 companies called the WAP Forum. It's an open standard, which means that it's not owned by any one company, and the specifications are freely available to any interested parties.

Many things restrict the versatility of WAP services, but the greatest limitation is the capabilities of the client machine. The WAP forum specifically wanted to avoid making assumptions about the type of machine that would be used to access WML documents, and so the standard has been made as open as possible in order to accompany everything from the lowliest mobile phone, to the most powerful PDA or Portable Digital Assistant — an electronic organiser. This means that all WML documents have to conform to the lowest common denominator, which is little more than a glorified version of your mobile's text-only SMS or Short Message Service. For this reason, don't expect to see extravagant WML sites, with vibrant graphics and kicking sound. In the world of WAP, 'multimedia' means that the

document includes a postage stamp-sized black and white graphic!

The reasons for this are fairly obvious — because all WML documents have to be displayable on a mobile phone screen, there's no room for fancy features. In any case, another fairly serious limitation is the actual rate at which mobile phones can receive data — their bandwidth. There are a few mobile phone transmission standards around the world, but none of them provides data rates anywhere near the v.90 modem speed of 56k per second. This means that it wouldn't be practical to create large complicated documents, even if the user had the means to display them.

If you've ever developed Web pages which are intended to be viewed by users on a variety of platforms, running different browsers and different browser versions, you'll already be familiar with the difficulty of creating documents that look the

same in every situation. You need detailed knowledge of the limitations of each browser and the safest solution is to create very simplistic documents devoid of such niceties as Java,

Don't expect to see sites with vibrant graphics and kicking sound

frames or even tables. Under WML, the situation is infinitely worse because a developer can make absolutely no assumptions whatsoever about the display capabilities of the user's machine, except perhaps that it will be capable of displaying at least one line of text and that the user will be able to navigate around larger documents.

WML authors do have the capability to query a WAP device in order to find out what it is. They can then customise their code accordingly, changing graphics, line lengths, text formatting commands and even button assignments according to the device from which the pages are being accessed. This is definitely not the recommended option, but if you don't do this, you could find important parts of your message being automatically clipped on devices with smaller displays than your baseline assumption. The only trouble with this approach is the sheer number of WAP models that are available. There are already dozens of mobile phone, PDA and organiser manufacturers, each offering many different models. That means that the potential number of different screen permutations will run to hundreds if not thousands of different varieties, and accommodating all of

Pick a card

Writing a program in WML for WAP sites isn't tricky...

Creating a WML program is much like creating a page in XML. However, because multiple pages (known as cards) are stored in a single WML file (called a deck), the pages are referenced somewhat differently. In fact, it's not unlike using HTML bookmark anchors (#) to jump to specific points in a page.

Also, because of the various limitations imposed by WAP clients, WML has no support for Java. WML does support monochrome bitmaps, and you can obtain an upgrade for *Photoshop* to save files in the correct format.

Here's the code for a couple of cards. Note the `<p>` tag, which stands for "paragraph" and delimits any text to be printed to the screen. The `<do>` tag is the only other tag that can be included on a card and is used to process button actions.

```
<?xml version="1.0"?>
<!DOCTYPE wml PUBLIC "-//ComputerArts//DTD
WML 1.1//EN"
"http://www.Futurenet.co.uk/DTD/wml_1.1.xml">

<wml>

<card id="Intro" title="Intro">
<p>
<do type="accept" label="More info">
<go href="#info"/>
</do>
Welcome to our site. We hope that you enjoy the
experience.
</p>
<p>
You can learn all about Future Publishing's many
magazines at this site.
</p>
To e-mail us, select the "Contact Us" button.
</p>
</card>

<card title="For more info" id="info">
<p>
Visit us at www.Futurenet.co.uk
</p>
</wml>
```

Although you can use such things as bold text or italics, these are not universally supported by all devices. When it comes to WML/WAP, you can more or less forget any hopes you had of creating stylish sites — it's content, content, content.

those with 'If... Then...' programming is likely to be just completely unworkable.

The innate simplicity of most WAP client devices means that WML pages will be far simpler in terms of content and the way that it's presented, than current Web pages. This leads us to the natural question — what sort of material will WML be used for? Well, it's an interesting one. Developers talk about booking tickets, doing on-line banking and finding out about the weather. For instance, on the train home you could dial into a central booking office, check all the movies that are on within a ten-mile radius of your home, choose one that you like, book seats and pay for them all without saying a word. The voiceless aspect is an added benefit for anyone who feels conspicuous speaking in public on a mobile, or for those of us who are irritated by those people who still think that owning a mobile is a status symbol that needs to be advertised by using one in a loud voice on public transport...

Of course, e-commerce is already in massive growth and the use of WAP compliant devices is likely to provide a significant spur, because you no longer need a separate credit card when paying for things on-line. SIM cards are unique to each user, and used in conjunction with a password authentication system, you can order goods and services on-line and receive

the bill via your mobile phone statement. The WAP standard has provision for security in the form of an encryption layer that will encode your communications to prevent them being intercepted and your private details being extracted.

Planet mobile

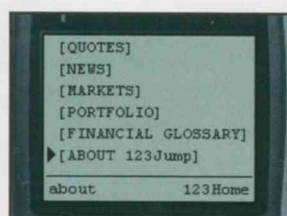
There's great impetus upon mobile phone-based commerce to succeed for several reasons. The first is ubiquity — there are about 300 million mobiles in use worldwide, and it's estimated that by the year 2005, there will be one billion mobile phone subscribers — that's over 10 per cent of the planet's population...

The second reason that so many businesses support WAP is its relative ease of use. The potential user base is much more at ease with a phone than with a computer. Billions of people are familiar with phones, and the 300 million mobile phone owners represent twice the number of computer Internet users. The Internet is a seemingly limitless source of revenue, and WAP gives companies an additional, omni-present, user-friendly way for their customers to access it.

Perhaps one of the most interesting features of WAP is only accessible when you access services via a dedicated WAP gateway — the part of the system that

10 great WAP sites

Because anyone can create a WAP site with relative ease, there are at least 80 sites already. Here are ten for you to dial on your WAP-compliant mobile...



123 Jump
www.123jump.com/wap
Markets, quotes, stocks & shares



BBC
www.bbc.co.uk/mobile/mainmenu.wml
The Beeb on the Net



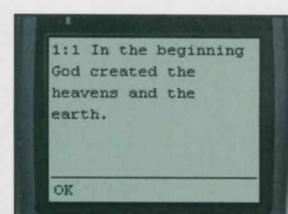
Boxman
<http://wap.boxman.com>
Buy CDs by mobile



Hitchhiker
<http://wap.h2g2.com>
The Hitchhiker's Guide to the Galaxy!



Focloir
www.topstudy.com/wap/index.wml
Irish/English English/Irish dictionary.



The Holy Bible
<http://wap.mobible.org>
A mobile phone version of the Bible

WAP Resources Guide

- **WAPDEV Mailing list:** www.waptastic.com/application/default.asp • **WAP Developers Conference:** www.wapforum.org
- **Nokia, including a WAP phone emulator and development kit:** www.forum.nokia.com/main/1,6668,1_1,00.html
- **Phone.com, including WAP phone emulator:** www.phone.com/products/upsdk.html
- **WAP Ring:** www.waptastic.com/application/display.asp?Item+Type+ID=WAP_RING



connects your mobile phone network to the Internet. The gateway can discern the phone number and location of the caller, which means the information available to a caller can easily be customised.

To go back to the cinema ticket example, the central booking office could easily offer to list films within a specified radius of the phone's current location, or of its owner's home town. What about booking a restaurant? Or finding a local 24 hour plumber? The possibilities of an information service that adapts itself to your current location are certainly exciting. You could even access a database and check your diary when you're out of the office.

Mobile phones are already pretty sophisticated, but in order to use the Web, they'll need to include a compatible microbrowser. The actual operating system on your WAP device is irrelevant provided the browser is fully compliant. However, the WAP browser specification is very fault-intolerant, unlike most computer browsers. This means that code needs to be written with greater care because even basic syntax errors will generate fatal faults.

Although current bandwidth and battery life issues make it infeasible to run more complex browser software or provide true HTML support, Microsoft predicts that this limitation will soon be overcome, and

it's touting its Windows CE operating system as the ideal solution for the future of WAP devices. Phone and PDA manufacturers say that this is an unrealistic assertion from Microsoft, and that these limitations are likely to exist for a long time yet.

While the language used to construct WAP sites is similar to existing languages, the actual physiology of a site is different. Existing sites consist of multiple pages, of virtually limitless size, each of which may be referenced individually with a HTTP address. Mobiles may have serious memory limitations — the Nokia 7110 can only handle documents up to 1.4K in size — so pages are created according to a different model.

Because WAP devices cannot display large amounts of data, and even short sentences require scrolling, it's better to think of a WAP site as containing a series of cue cards, including graphics, each bound into decks of related material. When you go to a site, a deck is loaded in one go, enabling you to navigate around quickly without the constant need for new downloads.

Dialling the future

So is WAP going to be the amazing thing everyone's making it out to be? The answer is a resounding yes... and no. The truth is, there's going to be two flavours of Websites — vanilla and WAP compliant, with many companies maintaining both. The limitations on the amount of data you can download and view in one go is a significant limitation, although the fact that there's a WAP version of the Bible only goes to prove that where there's a will, there's a way. However, it is ironic that just when the Web has become a truly multimedia experience, developers are getting all excited about a version that can only display monochrome graphics and a couple of lines of text at a time...

In the short term, what we'll see is a whole new way of accessing information and making choices that doesn't involve lots of typing or reading. For most of us, it's likely to remain a gimmick more than an essential tool. Like mobile phones themselves, you can live without it, but life's a lot easier with it.

In the long term, it seems inevitable that wireless devices will achieve the same capabilities as existing computer browsers, enabling them to access regular multimedia HTML pages. The only question is, how much further will the Web have evolved by then? **ca-s**

Writer Mat Broomfield would like to thank James Pearce and Luca Passani for their WAP expertise.

WML Mime Types

WML files use different MIME types to the standard Internet data types — JPG, BMP etc. These are not complicated to implement, but you do need to be aware of them...

wml	text/vnd.wap.wml
wmlc	application/vnd.wap.wmlc
wmlsc	application/vnd.wap.wmlscript
wmlscript	text/vnd.wap.wmlscript
ws	text/vnd.wap.wmlscript
wsc	application/vnd.wap.wmlscriptc
wmls	text/vnd.wap.wmlscript
wbmp	image/vnd.wap.wbmp

Suggestion box

Ten great applications for WAP that may or may not appear on your mobile soon...

It's already been pointed out that most of the great applications for WAP probably haven't even been invented yet. Just as the great Internet money spinners, like on-line games, electronic auctions and e-commerce were not imagined at its conception, chances are we're going to see some entirely new opportunities which are only made possible by the existence of WAP. Nevertheless, there are some great things already available. We've compiled a list of the most frequently touted schemes, and added a few of our own just to get you thinking...

On-line banking: check your accounts, make transactions, and pay your (no doubt huge) phone bill — all on the bus home from work.

Ticketing: change your restaurant reservation when you realise the meeting you're in is going to over-run by a couple of hours.

Sports summaries: find out if your team won in the middle of the dulltest meetings. Remember not to cheer excessively when they score.

Weather reports: find out whether to put on Speedos or a raincoat before the train arrives at your holiday destination.

Share prices: have your phone call you to warn you when a pre-determined price movement occurs. Buy, buy, sell, sell, etc...

Stock access: at a customer's site, you can check your company's inventory before promising that next day delivery.

Interactive reference: find out just how serious that nasty rash could turn out to be, before going on a second date.

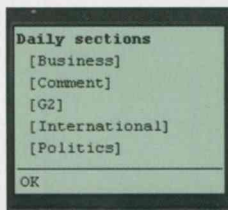
On-line manuals: right, so how exactly do you fly a Boeing 747 again?

Entertainment: got a few hours and lots of phone credit to spare? How about on-line hangman?

Dial-a-floozzy: in a foreign city and feeling a bit lonely? Press a few buttons and find an ideal dinner companion in no time.



Curryhouse.net
www.curryhouse.net/wap
A list of UK curry houses.



The Guardian
www.newsunlimited.co.uk/wml
Home of The Guardian newspaper



UK Entertainment Centre
www.ents24.com/index.wml
Clubs, comedy, theatres and music events



Mickes Links
www.wml.f2s.com/
Add tunes to your mobile phone

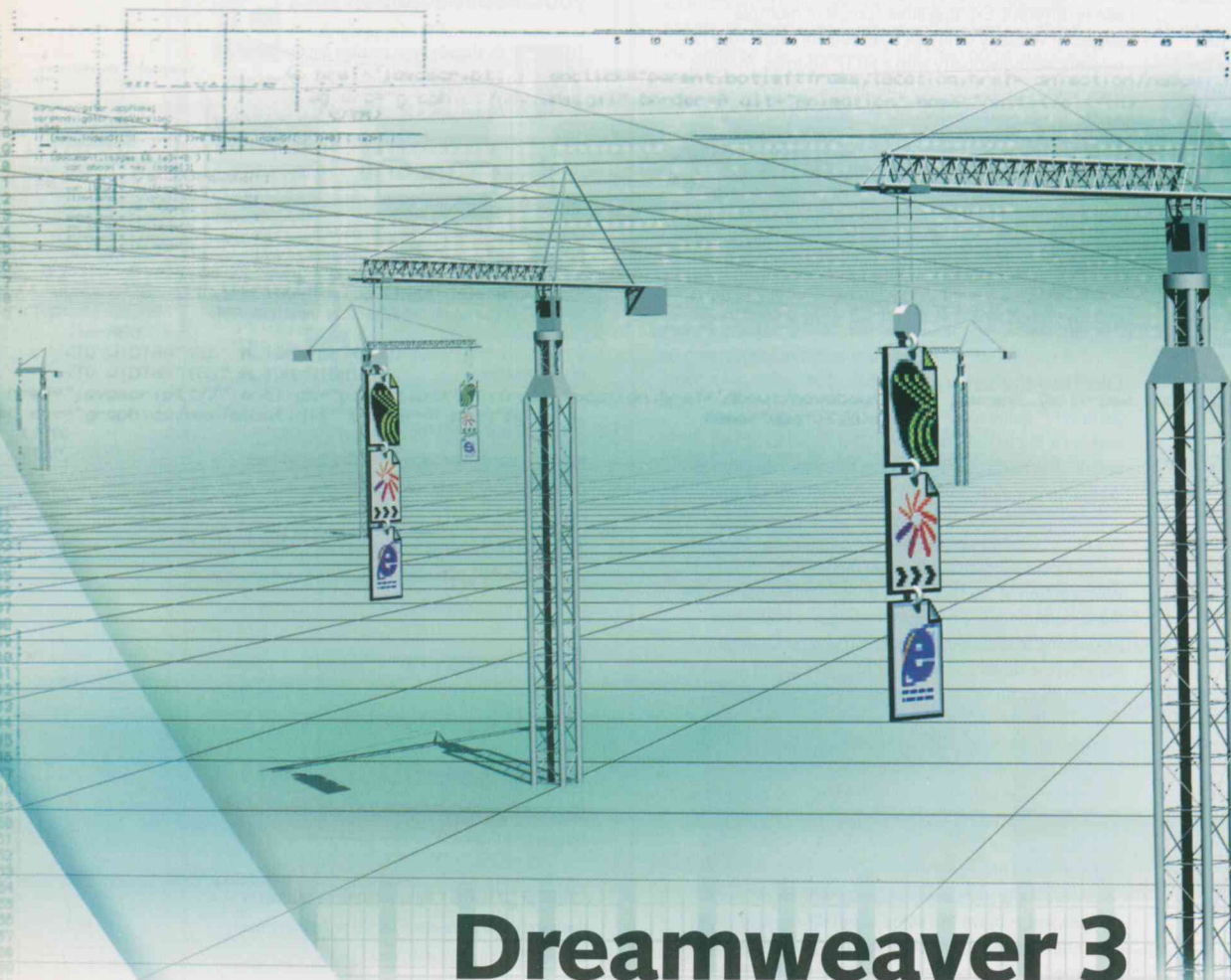


Illustration: Magistich Telephone: 01273 202147

Dreamweaver 3

From site management through complex Web page creation to adding JavaScript and DHTML, *Dreamweaver 3* is the perfect tool for the job

Many people would argue that Macromedia's Web editor *Dreamweaver* was the first WYSIWYG package which did exactly what it said on the tin. Finally, someone had produced an editor that worked properly, and came stacked with lots of labour-saving features and (for the most part) didn't have any of those irritating little foibles.

Version 2 of *Dreamweaver* was even better, as Macromedia addressed a lot of

the feedback they had from users of the earlier versions of the software. And with version 3, *Dreamweaver* is as close to being a perfect tool for Website development that you could find – at least, that's what many users will tell you.

In this tutorial we'll cover everything from setting up your site correctly to *Dreamweaver's* built-in DHTML features. So if you've yet to sample the delights of this well-regarded package, now might be a good time to start.



Try it out

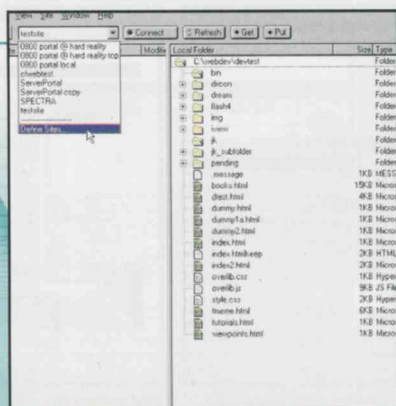
Expertise by Darren Irvine. You can find tutorial files and a demo on the disc.

Part 1: Getting started and the Dreamweaver Library

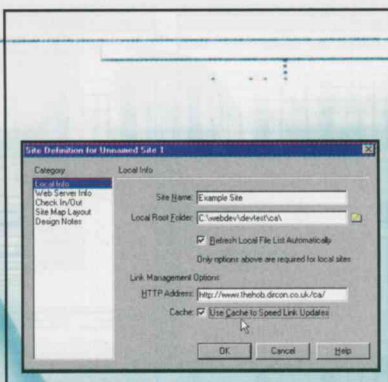
The first steps towards building our site, including designing a navigation bar so that visitors can easily find their way around

Site caching

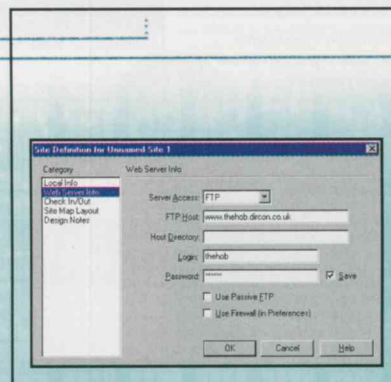
Switching on site caching now will make site maintenance a lot easier later on.



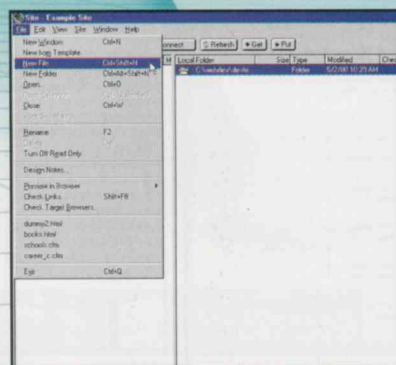
1 Setting up your site properly in the first place can make a big difference to site management later on. Select Define Sites from the main pull-down menu in the Site Files window to get started.



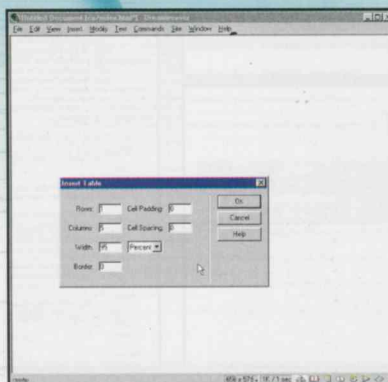
2 On the Local Info page set up your site name, the local root folder and the ultimate URL where the site will end up. Clicking the Cache tick box will make moving files around or deleting them a lot less of a chore later on.



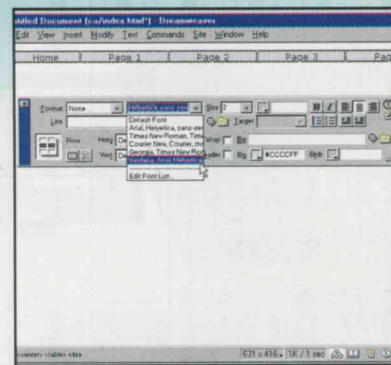
3 On the Web Server Info page, fill in the FTP details for your Website – you can change or add these later if you don't know them. Don't worry about the other pages of the Define Sites window for now.



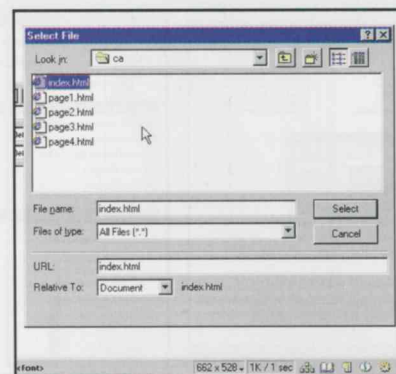
4 If you're creating a site from scratch, you'll see a pretty blank-looking screen when you finish with the Define Sites window – to get started choose New File from the File menu and give it a name. Since every site needs an index, that's what we'll call this first file.



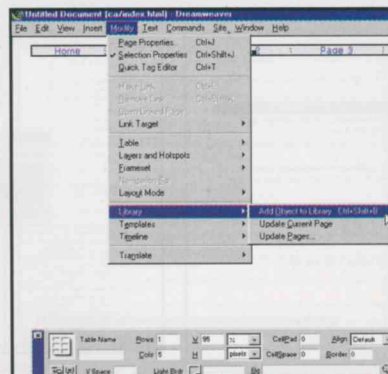
5 Let's build a simple navigation menu for our new site. To get started, click on Insert Table in the Objects toolbar. Define a simple table with one row and five columns, and set it to be 95 per cent in width. Set zero cellpadding and cellspacing for now.



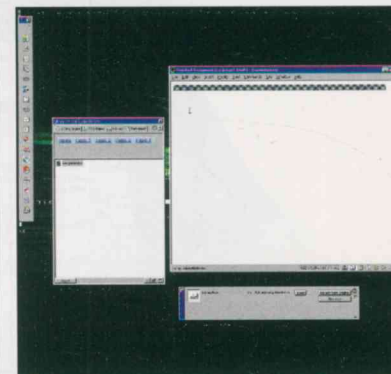
6 Drag the mouse pointer to select all the table cells. Use the Properties window to change the background colour of the table cells, the font family and size of the text and also Centre Align the contents of the cells. To change the colour of the text, select each word individually.



7 Go back to the Site Files window, and create four more new pages for our menu options to actually link to. Next, select each of the five bits of menu text, and click on the Browse for File icon beside the link text in the Properties window. Select each file in turn, until you've done all five.



8 Select the entire navigation table – to do this easily, click somewhere in the table, and then on the <table> text which appears on the bottom of the editing window. Now, select Add Object to Library from the Library option on the Modify menu, and call the new library item 'navigation bar'.



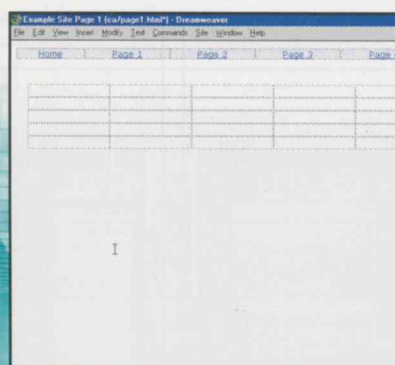
9 Next, go into each of the other four pages in turn. Make sure the Library window is visible (use the Window menu to turn it on if it isn't). Now, drag the 'navigation bar' library item from the Library window to the start of each page – and as easy as that, you've added navigation to your site.

Part 2: More fun with Tables

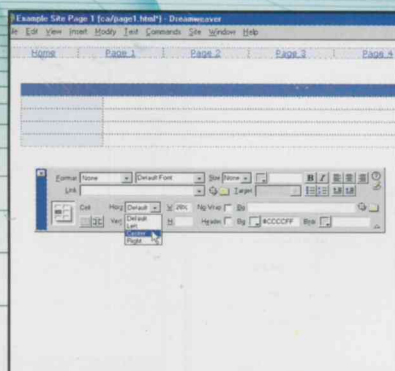
Tables are a breeze with *Dreamweaver*, and you have the power to adjust individual cells if you're a perfectionist...

Neat and tidy

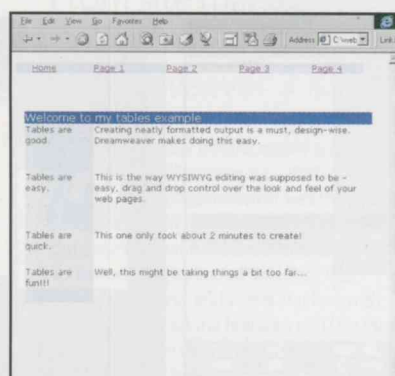
Use WYSIWYG tools to define your tables roughly and then dive into the source code to tidy them up.



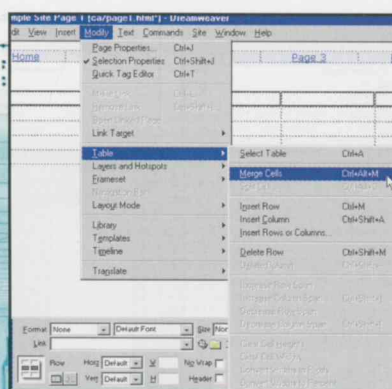
1 Let's see how easy it is to format page layout using tables in *Dreamweaver*. Open up page1.html, click just below the menu and then click on Align Center. Add another table – this time make it five columns by five rows. Again, 0 for border, cellpadding and cellspacing.



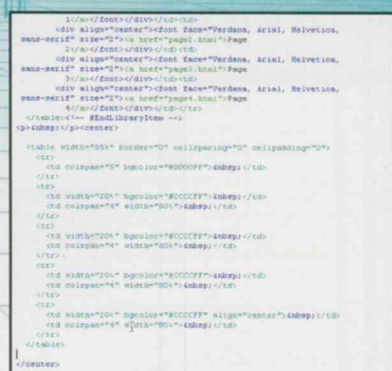
4 If you're a perfectionist you can adjust individual cells by clicking in them and using the Properties window to alter height, width (to pixel level), horizontal and vertical alignment and so on. Doing this in some WYSIWYG editors would generate very messy code – but not in *Dreamweaver*.



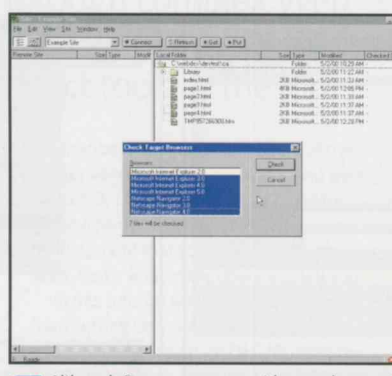
7 Now we've actually got something that looks vaguely like a Web page, let's see just how WYSIWYG *Dreamweaver* is – select Preview in Browser from the File menu. You may as well learn the keyboard shortcut for this – [F12] – as you'll be using it frequently. The page looks as we'd expect.



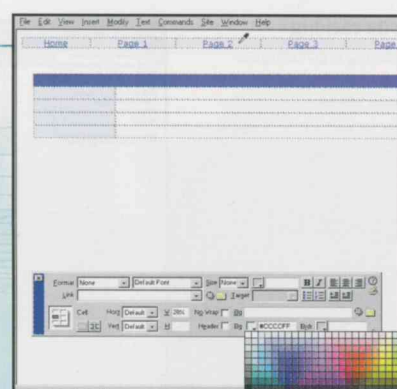
2 Select all the cells in the first row of the table. Next, choose Merge Cells from the Table option in the Modify menu. Surprise surprise, this creates one large cell at the top of the table. Select the new cell, and change the background colour.



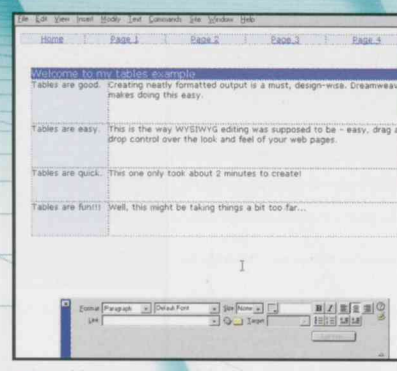
5 Choose HTML from the Windows menu to display the source code that *Dreamweaver* has generated. Note that this isn't a mere 'view source' option such as you'd get with a Web browser – you could actually do all of your Web editing in this window if you liked.



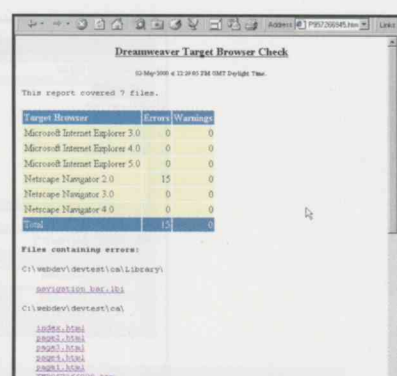
8 Although *Dreamweaver* provides good support in its JavaScript and DHTML features for cross-browser compatibility, it's always a good idea to actually test your site in as many browsers as possible. Choose Check Target Browsers from the File menu, and highlight the browsers you want to check against.



3 Repeat the process until you get your table looking like this. You'll probably find when you merge the bottom right four cells that the table then becomes split in two down the middle – just drag the cell border to the left to get it back into shape.



6 Add some content to your table. Obviously, when you're building a real site, you'll want to use slightly more helpful content than this (oh, and probably lose the nasty purple'n'blue colour scheme). Of course, text included could be linked to other pages, and you can even easily embed tables within tables.



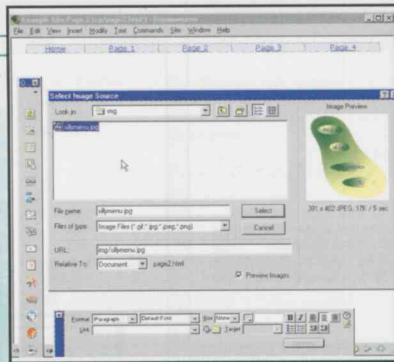
9 *Dreamweaver* generates a report of how your Web page will work with the list of browsers you selected in step 8 – you can use this as a first step debugging tool, but do try and physically check your site in as many browsers as you can – especially if you've used any JavaScript or stylesheets.

Part 3: Using Image Maps

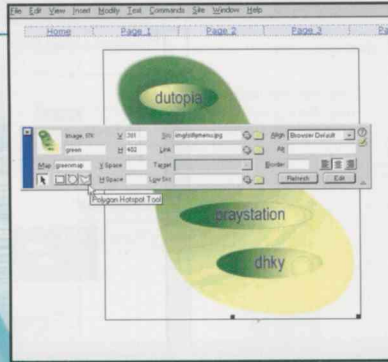
Image Maps are an attractive way of designing hyperlinks for your Website, so put yourself on the Hotspot with *Dreamweaver*...

Navigation aid

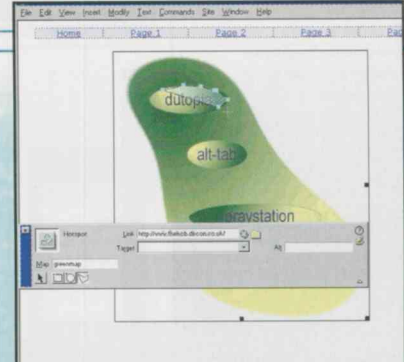
With a bit of care, Image maps can make your site navigation easy, without resorting to hackneyed effects like image rollovers.



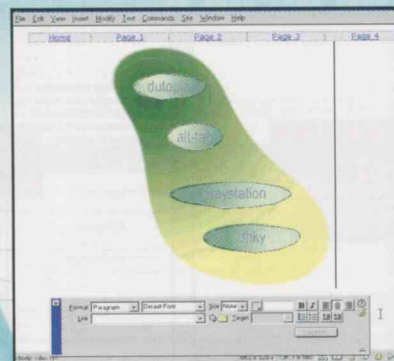
1 Let's take a look at *Dreamweaver*'s built-in Image map creation tools. Click the Centre Align button on the Properties window, and then on the Insert Image icon on the main toolbar. Select an appropriate image – in this case sillymenu.jpg from the img directory.



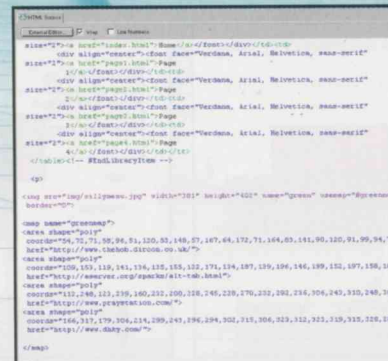
2 Adding an active map to your image is fairly easy with *Dreamweaver*. First, select the image by clicking on it. Here we could use the Oval Hotspot but in fact we'll use the Polygon Hotspot Tool as it's more versatile, and once you get the hang of it, the other Hotspot tools are simple.



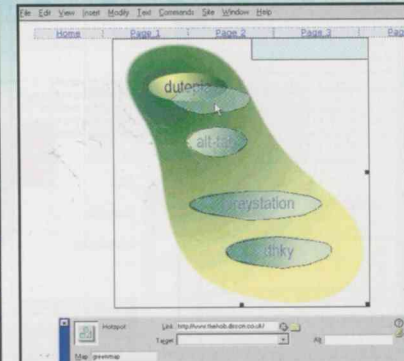
3 First of all, enter a URL into the link text. To actually add a map area, click on the edge of the top button. Next, click all the way around the button, in short increments – you'll see a blue hatching appear over the selected area.



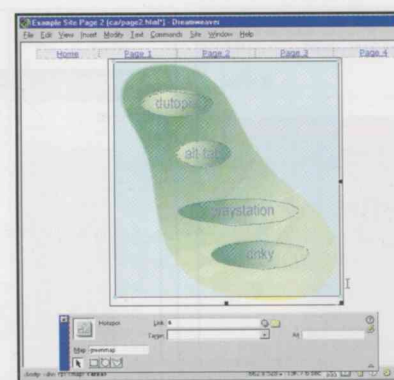
4 Carry on the whole way around the first button. To finish the first mapping and start another, just click on the Polygon Hotspot Tool icon again (or whichever one you want) and start on the next button. Create mappings for all the buttons on the image, with URLs.



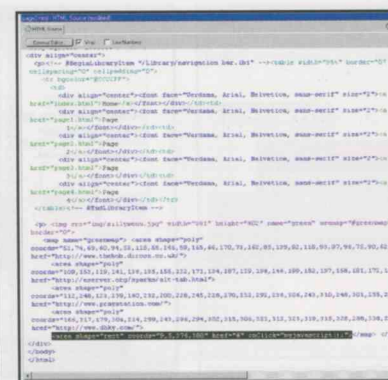
5 Press [F10] to display the source code for your new image map. If you like, you can tweak the areas of each of your buttons by hand to tighten up the accuracy of your map. Notice how *Dreamweaver* has attached your map to the correct image.



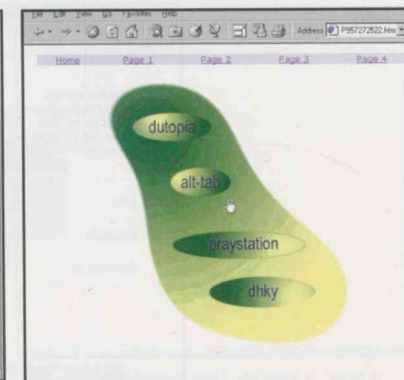
6 Once you've defined a map area, you can move it about in its entirety by simply clicking and dragging. You can also use the standard cut and paste keys to copy an image map from one HTML page to another.



7 In you're inclined to do so, *Dreamweaver* also lets you easily overlay one image map on top of another. This time, select the Rectangle Hotspot Tool and create an image map that covers pretty much all of the menu image. Leave the URL in this case as '#'.



8 You might be wondering why you'd overlay map areas in this way. The answer really is to provide dual functionality for your map – for example, you might want to add some JavaScript attached to the large map to trigger an event when any button is clicked.



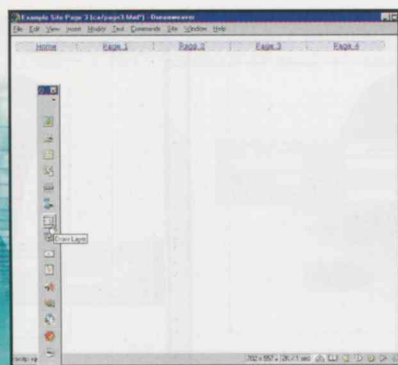
9 Finally, press [F12] to preview your image in your chosen browser. If all is well, clicking each of the buttons on the image will load the correct URL, and clicking any one of them will trigger whatever Javascript you attach to the large map.

Part 4: Layers vs Tables

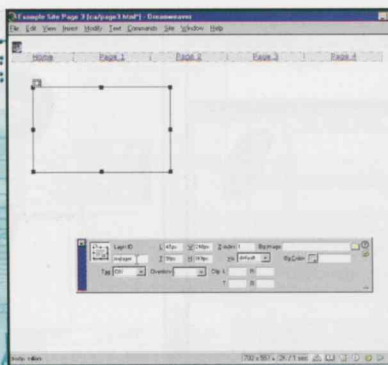
Dreamweaver contains excellent support for layers, for those occasions when tables simply aren't up to the job...

Layer alert

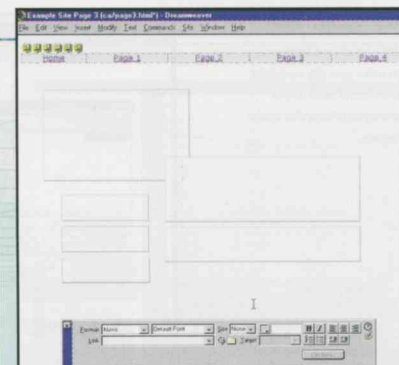
You can use layers as a development tool even if you ultimately aim to cater for 3.0 series browsers.



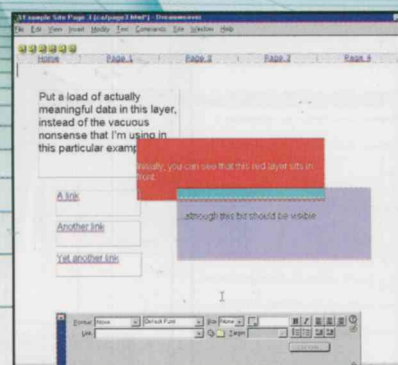
1 We've already seen how easy it is to create tables. Sometimes, however, even Dreamweaver isn't up to the job if you want a particularly complicated-shaped table. Luckily, support for layers is excellent. To get started, click on the Draw Layer icon on the toolbar.



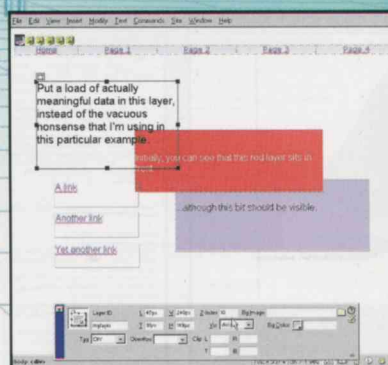
2 After clicking on the Draw Layer icon, click and drag in the main editing window to define the region covered by the layer. Give the layer a name in the Properties window – you can also change things such as background colour and tweak the size and position.



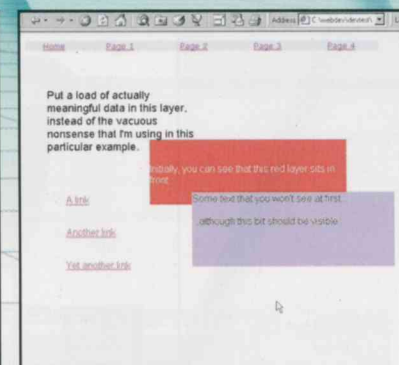
3 Add some more layers repeating step 2. So that we can see what the z-index control on the Properties window for layers does, make sure at least one of the layers you add overlaps the first layer you created.



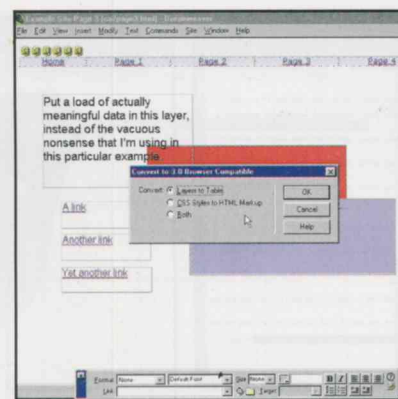
4 Add some content into each of the layers you created – if you add a background colour to the layer that overlaps the first layer, you'll see that the colour obscures the text or images that you add to the first layer. In this example, we've ensured it overlaps two other layers.



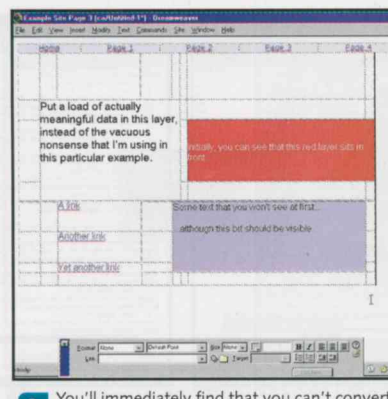
5 The z-index of a layer is basically a value indicating the display priority of that layer – layers with a high z-index appear on top of layers with lower z-indices. To see this working, click on the handle for the obscured layers, and change their z-indexes to 10.



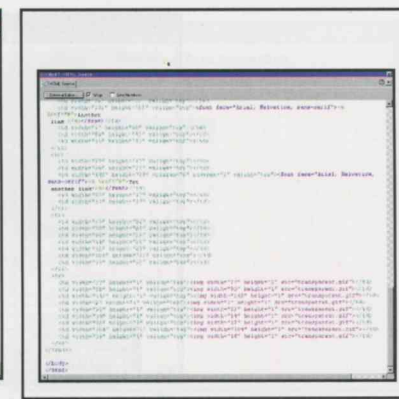
6 To make sure the z-indices are set up correctly, press [F12] to preview the page in your browser – if you've set the z-indices of the previously obscured layers to a value higher than the red layer, they'll now appear on top of it.



7 Unfortunately, layers only work in 4.0+ series browsers, so if you're catering for users of 3.0 series browsers, you'll have to go back to tables. Select 3.0 Browser Compatible from the Convert option of the File menu and tick Layers to Tables.



8 You'll immediately find that you can't convert overlapping layers to tables – fair enough since you can't overlap table cells. Drag the layers so they aren't overlapping and try the conversion again. Dreamweaver creates the complicated table layout for you.



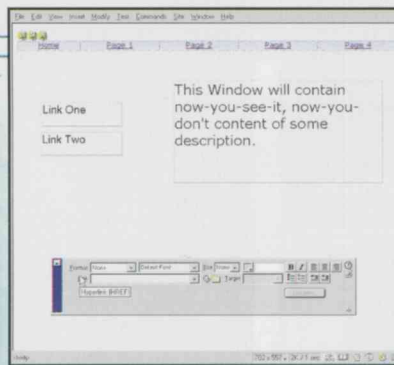
9 Be aware that when converting layers to tables, Dreamweaver creates a spacing image called transparent.gif in the same directory the Web page is in – not a big problem unless you already have a file of this name in this location.

Part 5: Getting dynamic

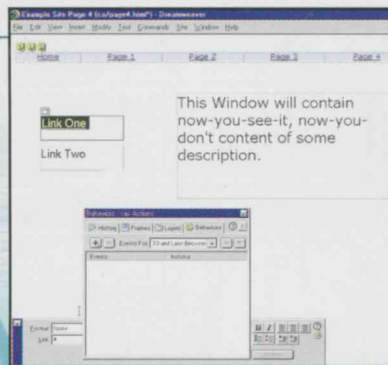
Now we'll take a look at *Dreamweaver's* useful DHTML functions, including Behaviours and the Timeline

No experience necessary

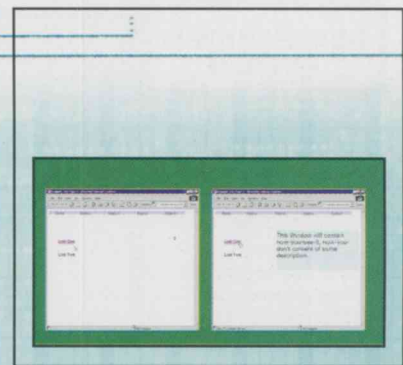
With *Dreamweaver*, there's no need to learn JavaScript in order to be able to add DHTML effects to your pages.



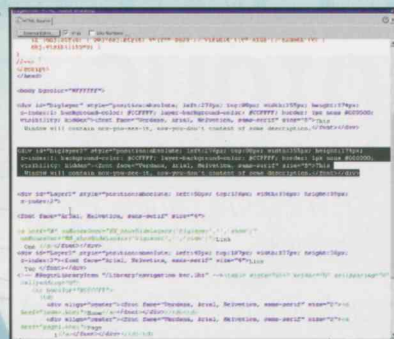
1 Now let's take a look at some of *Dreamweaver's* DHTML features, specifically Behaviours. Use the techniques we used earlier to produce a page roughly like this using layers. Next, bring up the Behaviours window by selecting Behaviours from the Window menu.



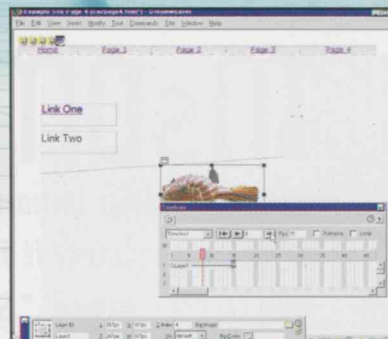
2 Highlight the text reading 'Link One' and give it a link of '#'. Now you can add a behaviour to this piece of text – click on the + button on the Behaviours window and select Show/Hide layers. Select the name of the large layer, and click on Show. Make sure the action is OnMouseOver.



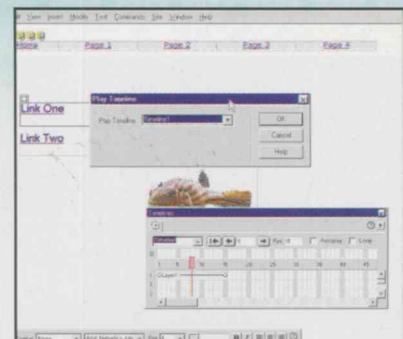
3 Repeat step 2, except this time after adding a Show/Hide layers behaviour, select the same layer as before but click on Hide. Now change the default OnClick action to read OnMouseOut. Set the default visibility of the large layer to hidden. Test this page in a browser and see what happens.



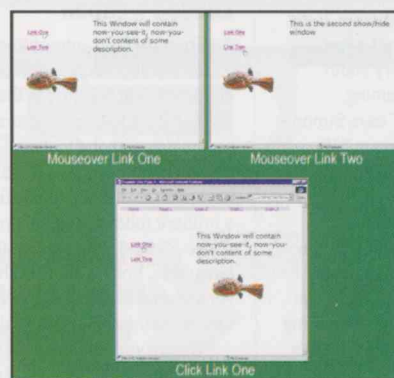
4 Let's add another popup layer for the other link. Use the HTML source window to speed things up. Highlight everything between the <div> and </div> tags. Copy it, and paste it. Note you must change the id= part of the new opening <div>. Add the appropriate behaviours to the other links, as in steps 2 and 3.



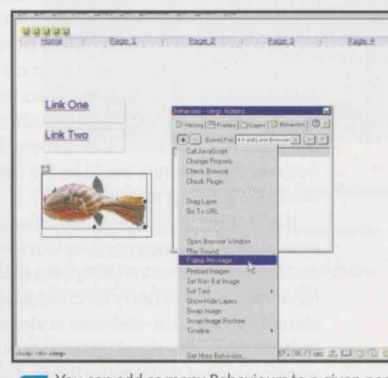
5 *Dreamweaver's* other main DHTML feature is the Timeline. Add a new with an image. Select the layer, and choose Add object to timeline from the Modify menu. Click at the end of the timeline and drag the layer containing the image to the other side of the screen. A path line will appear. Preview the animation by holding down the Play button.



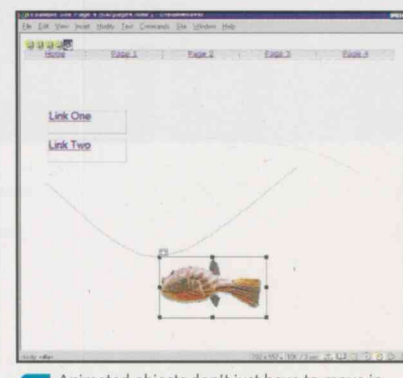
6 Now re-select the 'Link One' text again. Click on the '+' button in the Behaviours window to add another behaviour. This time select a Play Timeline behaviour, and choose the appropriate Timeline (in this case, there is only one). This time, stick with the OnClick behaviour type.



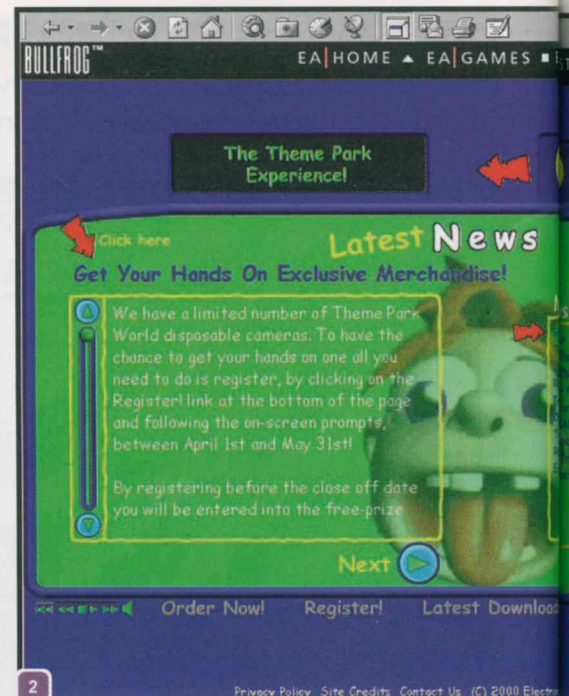
7 Preview the page in a browser again. This time you've got three states for the Link One button. Moving the mouse pointer over and away from the link results in the large information layer to appear and disappear as before. If you actually click on the link, the image moves across the screen.



8 You can add as many Behaviours to a given page element as you like, from sounds that play when OnMouseover or OnClick to call JavaScript functions. You can use behaviours to pre-load images – select the entire page by clicking on <body> in the bottom left of the edit screen; add a Pre-load Images behaviour and select the files you want.



9 Animated objects don't just have to move in straight lines – moving them in smooth curves is simple. Click on a frame somewhere in the middle of the Timeline. Next, choose Timeline>Add Keyframe from the Modify menu. Drag the object somewhere else on the screen – you'll see the path becomes a curve. **CAUTION**



INsOMNIOUS

"We're heading towards interesting times, if the Net is going to work as a channel it has to make all the different technologies talk to each other..." Simon Sergides, co-founder of INsOMNIOUS.

Right now the speed of change in the games and youth leisure industries seems to be quickening all the time. For the Internet to keep up with the pace of development, you need an adventurous and experimental design company. One such studio is INsOMNIOUS, the name behind a plethora of youth culture Websites such as PlayStation, Columbia TriStar, Virgin Interactive, Tomy, ProPlus and Thomson Holidays, to name but a few.

"All the clients that we work with are very youth culture orientated, with an emphasis on gaming, entertainment and the leisure industries," says Simon Sergides, new business development director. "We decided these sectors would be the best as they're much more in tune to our talents."

INsOMNIOUS, as a new media design and consultancy, has been going for four years, but Simon and operations director Tricky (aka Richard Bassett) have been in the industry for considerably longer. "We started out in a back-bedroom environment, beaver away on the audio-visual interactive side of things. We were focusing at that time on floppy disks as delivery mechanisms and were very conscious of compression, therefore the natural progression for us was the Web," explains Simon.

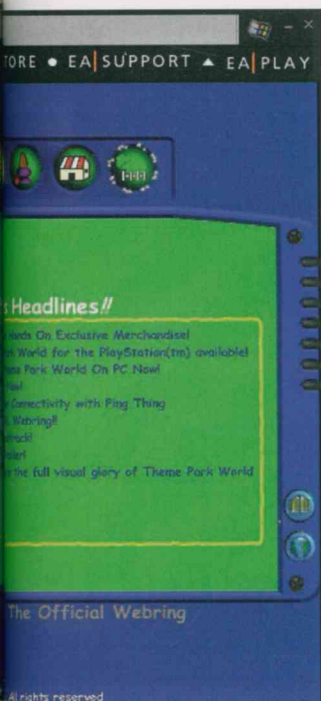
Like many top Web design agencies, INsOMNIOUS has found it unnecessary to advertise its services

thanks to the incredible effect of word of mouth recommendations within the industry. One visit to the Website and INsOMNIOUS' portfolio of projects is an impressive display of the capabilities of the company's design teams.

Loaded weapon

Audio, animation, interaction, language translation and a creative approach to navigation and content display are prominent features in their work. The side bar on the gaming site Empire Interactive, for example, self-assembles with the look and sound of a loading gun. In contrast, the Tomy children's toys site contains a navigation bar that doubles up as a set of piano keys in a brilliant rollover device. And PlayStation Europe's *Ridge Rider 4* site presents the game in five different languages, both in superb Shocked and non-Shocked versions, all of which, from HTML to the *Flash* movies, can be maintained via a straightforward database.

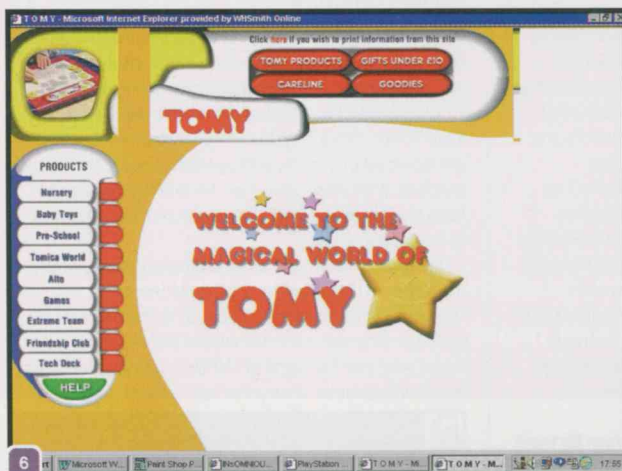
"We are very flexible in our approach as every single project has a different set of problems," says Simon. "If we were to be compared to someone who would reflect our attitude, ethos and execution, it would be the 'outlaw' magicians Penn and Teller. In the industry, everyone seems to think there's black magic surrounding Web design but there isn't. Everything is



1, 2 and 3. Generate, captivate, communicate and sustain – the motto of the INsOMNIOUS design team. Wide scale awareness, innovation, imagination, entertainment, ease of use and clear messages are at the root of the firm's projects. PlayStation Europe, Electronic Arts and Columbia TriStar are among the team's many clients. *Ridge Rider 4* for the PlayStation, EA's *Theme Park World* and *Big Guy Rusty the Boy Robot* for film studio Columbia TriStar.



4. One for the little ones, the bright Tomy Website keeps it simple and fun.
5. The site for the game *Oddworld* immerses the visitor in a rich and fantastical world.
6. Empire Interactive, a veritable feast of games presented in a loud and interactive site.





2

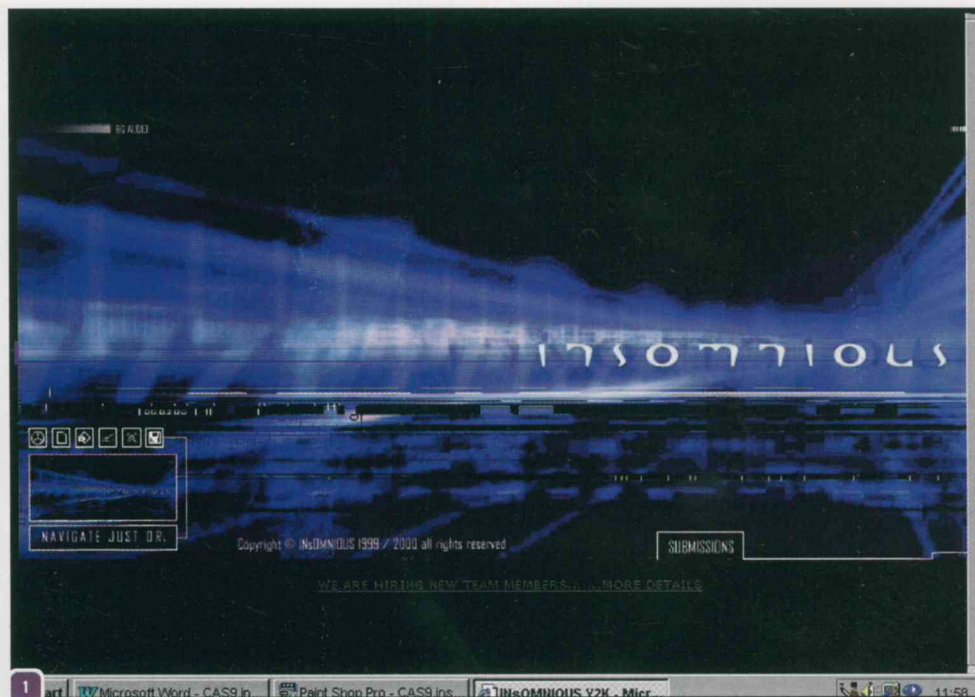


3

1. The INsOMNIOUS homepage. A slick and innovative interface with drag and drop style navigation, which receives up to one and a half million impressions each month. Budding designers from all over are offered the chance to create a stunning background for the site with a new one featured every month.

2. With 20 in-house staff and a PC-dominated workforce, the capabilities of the design team are great. The INsOMNIOUS 3D pages provide an extended showcase of their talents and as 3D creativity comes more and more into play on the Web, this lot won't be left behind.

3. "Digital media's greatest asset is interactivity. Communication strategy comes first." The team's belief in cross-media convergence is reflected in this inspired new project, Intravenous. A joint venture with two other creative media companies that looks towards the development of this concept.



1

just an execution, a good or a bad execution. We're happy to expose everything and try to give our clients what they want and not restrict them to any existing technologies and so on."

Now that Y2K fear has long been left behind, the growth of investments in the Internet and the expansion of Web technologies are unprecedented. Companies know what they want and are turning to Web design consultancies to get it. It's a time of experimentation as existing ways of using the medium of the Internet are constantly evolving. The emphasis is on reaching as many people as possible in the most dynamic and interactive ways imaginable.

Hearts and minds

"We listen to exactly what the client wants, then ask the questions they never knew they had to ask, then as a team we brainstorm and identify ways of achieving, and exceeding, their preconceptions," says Simon. "We try to put our minds into the person we're targeting and continually test our ideas to ensure we're not missing the mark entirely. Our key strengths are within the creative arena, problem solving, project management, interface development and workflow architectures."

INsOMNIOUS endeavours to create new tools and programs to meet the client's needs including multilingual and content management systems. Low maintenance Websites which make life as easy as possible and don't tie down the client are an incredibly attractive commodity, because the client can manage their content independently without the constant guidance of the design team. The sites aren't just short-lived flash-in-the-pan productions either, room is made for constant improvements and adjustments to keep the content and features as up-to-date and exciting as possible.

"We truly believe in getting the right person for the right job, and don't do everything in house, so as not to

dilute our key strengths or client deliverables. We coordinate with other best of breeds in the industry to get the best execution and delivery of solutions," says Simon. "Our focus is on delivering simple, targeted digital communication environments, which can transparently integrate with complex backend systems and processes, to make user participation as simple and inviting as possible." This reflects the excellent philosophy of INsOMNIOUS — cross-platform capabilities and problem-solving.

So how will it all progress, what will we be looking at in a year's time? "The future of the Web will involve much more continuity and integration across the board," predicts Simon. "There has to be a shake-up that leads to mobility within the different technologies including WAP, digital TV, on-line and off-line systems. We're looking towards this goal. We think the opportunities are infinite."

Techno frontiers

Overcoming the limitations of today's numerous and diverse technologies holds great implications for users and designers alike. Such mobility will put an end to irrational brand loyalties and change people's mindset, says Simon. "It's a fact that people are more likely to get divorced in this day and age than change their bank account. With what's going on on-line this is going to have to change and it will have to work cross-platform to keep people loyal."

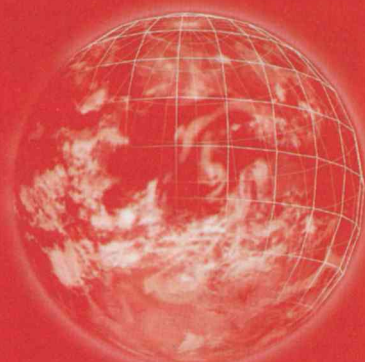
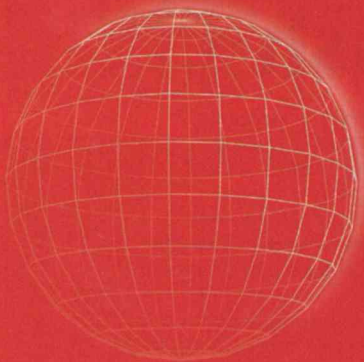
With such vision and an awesome workload, surely the stress in the office must be quite intense? "Absolutely! But the crew, all credit to them, create a good fun atmosphere in the studio. We've got a shrine to our very own Elvis and toy UFOs buzzing around our heads which tends to surprise our visitors..." **CA-S**



Discover more about INsOMNIOUS at [w] www.insomnious.com, which features links to their other sites. Contact [e] nosleep@insomnious.com [t] 0208 357 7373

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Dynamic Flash

Fancy a quick game of Noughts and Crosses?
With our *Flash* tutorial you can play any time...

There's no doubt that *Flash* has become the medium of preference for Web-based design, and not just because it offers fantastic graphics and animation, in return for comparatively minuscule filesizes. The tools and techniques of *Flash* are far more welcoming to the *Photoshop*- and vector-literate designer than HTML, while its powerful ActionScript facilities provide you with the means to create advanced interactive content that assembles on the fly, in response to how and where your viewer clicks their mouse.

The stuff is so powerful, in fact, that you can create captivating games within 50K odd, which is more than reasonable for a

phone line, and it's a fact that a well-publicised game can drive your site stats up in exponential leaps. So we're going to make a game.

The art of creating great *Flash* games is to keep things simple, at least initially, so you don't get lost in ever decreasing circles of complexity. Noughts and Crosses is the perfect place to start. All the core elements of game writing are in there — creating dynamically interactive graphics, tracking two sets of interactive events (one for each player), determining a winning move — while there isn't much maths involved and the graphics and animation can be as simple or as you like. Sounds good? Let's get on with it...

Illustration: Magistorch Telephone: 01273 202147



Try it out

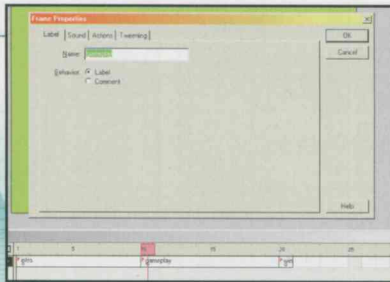
Expertise supplied by Nick Nettleton.
You can find tutorial files on the disc.

Part 1: Setting the stage

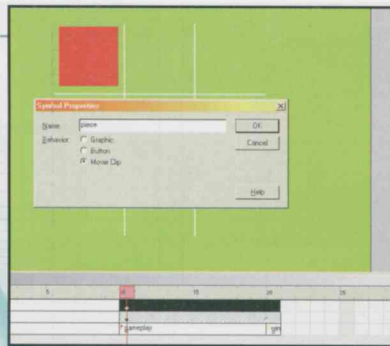
You can't play a game without a gameboard, so our first step is to create the background, and set up our players...

Copying frames

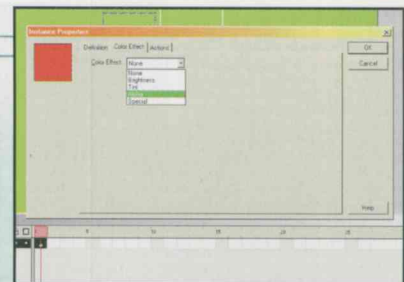
You'll find copying actual frames very useful – select the frame, [Ctrl+Alt] or [Command+Option]-click it, then select your destination frame and [Ctrl+Alt+V] or [Command+Option+V]-click



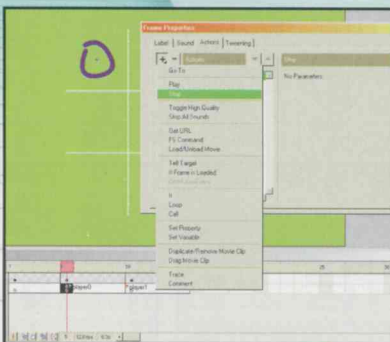
1 Once you've set up your movie size (600x400, say) and background via Modify>Movie, you need to outline your sections – create two new keyframes anywhere in your timeline (select the frame and hit F6), as well as the existing one at frame 1. Double click this one and label it 'intro' in the Label tab of the Frame Properties popup, then label the other two 'gameplay' and 'win' in the same way. Then rename this layer Actions – it's a good idea to keep frame actions on a separate layer.



2 Create a new layer, give it a keyframe on the frame after gameplay, and create a grid there with your Line tool, using the Object Inspector to position the lines exactly. Then on another new layer called Pieces, draw a square – any colour – within one of the grid spaces and Convert it to a Movie symbol called 'piece' via the Insert menu.



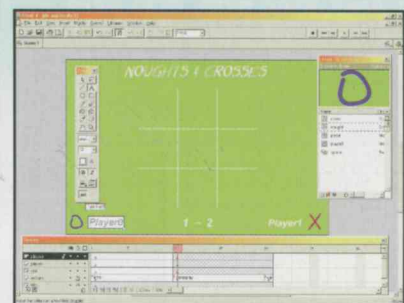
3 Right-click the symbol to Edit In Place, then select the square again and convert it to a Button symbol – in a bit we'll give it an on Release action to put either a nought or a cross in its place when a player moves. But first, double-click the button and set its Alpha to 0 in the Color Effect tab, then create new keyframes at frames 5 and 10, and a new layer called 'actions' with keyframes in the same place, labelled 'player0' and 'player1' – Player 0 corresponds to Os, and Player 1 is Xs.



4 Delete the transparent button at player0 and player1 on the first layer, then create your 0 graphic at player0, and X at player1, then convert them both into graphic symbols. On your actions layer, double-click the player0 frame and use the + dropdown in the Actions tab to add a Stop command, then add Stops at player1 and frame 1 too.



5 Double-click your stage to get back to your main scene, then double-click your piece movie, and in the Definition tab of the popup give it the Instance Name 'position1'. Duplicate it eight times and place a copy in each of the grid spaces, changing their Instance Names to position2, position3 and so on as you go across then down. It's important to get these in the order you see here – you don't need the numbers.



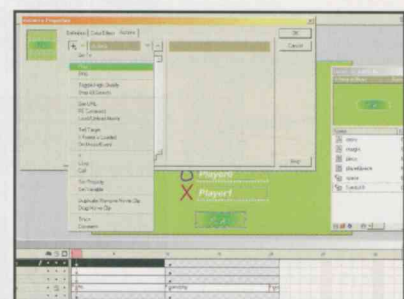
6 Now we need the player info – create a layer called Players with a keyframe at gameplay. Then drag your 0 and X over from the Library to your movie at that keyframe, and lay out some text areas to show the players' names and scores, and who's using which piece. We also need to make the text live, so it can update dynamically – double-click Player 0's name area to edit it and depress the abl button in your toolbar.



7 Then right-click the text for Properties and put 'player0' as the variable. Uncheck Draw Border And Background, check Disable Editing, Disable Selection and Include All Font Outlines, and restrict length to a number of characters that fit. Do the same for Player 1's name, putting player1 as the variable, and then again for each of their scores' text areas, putting player0score and player1score as the variables. We'll set up these variables next.



8 To show whose turn it is, we can flash the player's piece. Select the 0 by Player 0's name, convert it to a movie symbol, and double-click it to give it Instance Name player0piece. Right-click to edit in place, put keyframes at frames 2, 7 and 12, and delete the graphics at 7 and 12. Double-click frame 1 to add a Stop, then double-click frame 7 and add a Go To action, choosing Frame Number 2 on the left and checking Go To And Play at the bottom. Do the same for Player 1's piece, giving it the Instance Name player1piece.



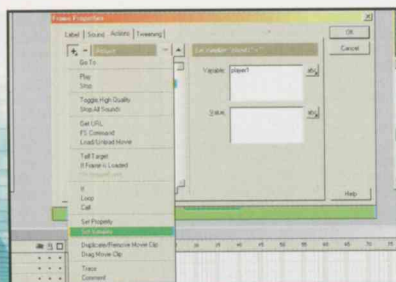
9 Finally the intro screen. Double-click to get back to your main timeline, and put a Stop at the intro frame. Then on the Players layer, copy the contents from the gameplay frame to the intro frame, and relay it out with a splash graphic to ask for the players' names. Right-click the name fields to uncheck Disable Editing, and finally design a Play button, convert it to a button symbol, then double click it and add a Play action (which defaults to on Release) in its Actions tab.

Part 2: Setting dynamic variables

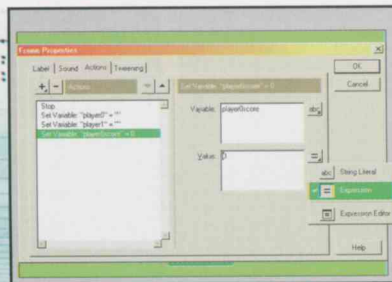
Now we lay the foundations for our gameplay, setting up variables and working out how to keep track of the score...

Testing, testing

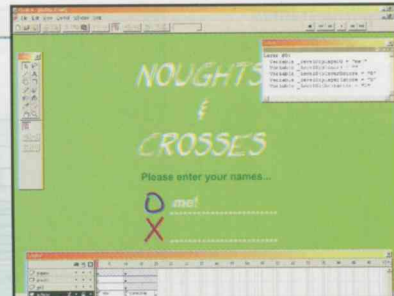
Use Flash Preview for testing movies, and choose Control>List Variables to see a useful summary tracking your variable values – as you'll see, you'll get to use this a lot!



1 Our first step in preparing the gameplay is to set up some variables. Double-click your intro frame and in the Actions tab + drop-down select Set Variable. In Variable type 'player0', and leave Value blank, so you should get Set Variable: "player0" = "". In the same way, set "player1" = "". These hold the players' names – empty until the players type something in.



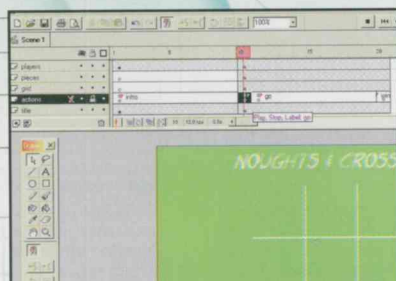
2 We need to set the players' scores too, but as numerical figures (or Expressions in Flash-speak), not phrases (known as strings, and signified by quote marks). In the same way as before, set the variable player0score, but put 0 as the value and in the drop-down by the Value box choose Expression. You should have Set Variable: "player0score" = 0. It's essential to get the quote marks in the right place.



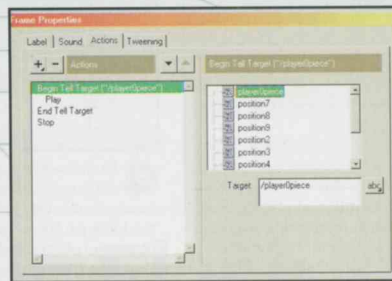
3 Set the variable "player1score" = 0, too, and then "thestarter" = 0 in the same way, which specifies who goes first. Now if you put a temporary Stop at your gameplay frame and preview your movie via File>Preview>Flash, you should see the values in your dynamic text fields reflect your variables with the same name.

Part 3: Making moves

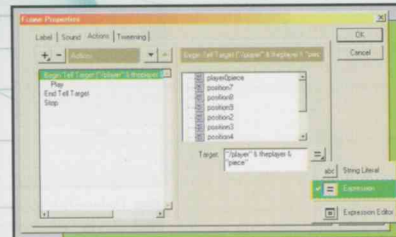
In this section, we'll work out whose turn it is to play, and take a look at controlling movie behaviours on the fly



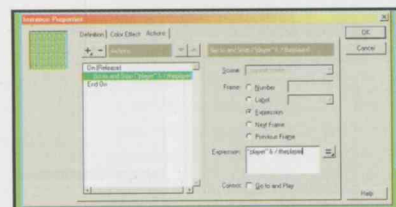
1 First we control whose turn it is with a variable called the 'theplayer' – on your gameplay frame remove the Stop and add the action Set Variable: "theplayer" = thestarter, making sure the value is an expression, then put a keyframe at the next frame, label it 'go', and another at the frame after that with a Stop action.



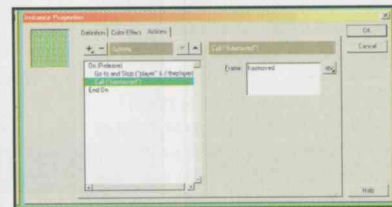
2 In the Actions tab drop-down for your go frame, choose Tell Target – this offers a way of controlling the movie symbols. In the list on the left are all your Instance Names. Double-click player0piece, and add a Play action within the tell target. Now if you preview this, you should see the 0 flashing.



3 Instead, we want the flashing piece to depend on whose go it is, so go back to this action and in the Target field type the expression: "/player" & theplayer & "piece", and choose Expression from its drop-down. This puts either a 0 or 1 in the target name, depending on the value of theplayer variable – ie, whose turn it is. If you set "starter"=1 in your intro frame, you should now see X flashing when you preview your movie.



4 For players to play moves, you need to add actions to your piece symbol. Find it in your Library (Window>Library), right-click it and choose Edit. Double-click your transparent button on frame 1 and in the Actions tab choose Go To. Click the Expression radio button, and in the box type: "player" & /:theplayer. This creates the frame name player0 or player1, depending on who theplayer is. You put /: before theplayer to specify it's a variable at the root of the movie-tree.



5 Also within the on Release add a Call action, putting hasmoved as the frame – this implements frame actions from a frame without actually playing it. Then at frame 15 of your piece symbol, create a keyframe on the actions layer and call it hasmoved. In the next stage, we're going to add actions for the main gameplay rules. First, though, we need a way to track the positions of the players pieces and a way to compare them to possible winning positions.

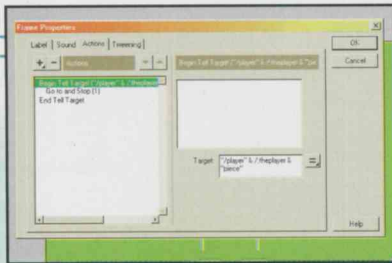
6 We do this with several strings of nine characters – one for each position on the game board. Click Scene 1 at the top left to get back to your main timeline, and at your gameplay frame set the variable "player0pattern" = "000000000" and "player1pattern" = "000000000" (that's nine zeroes each). You should also set "numberofmoves" = 0 so we can track how many moves have been played. Then in your intro frame, you need to set eight variables for each of the eight possible winning patterns:

- "win1" = "111000000"
- "win2" = "000111000"
- "win3" = "000000111"
- "win4" = "100100100"
- "win5" = "010010010"
- "win6" = "001001001"
- "win7" = "100010001"
- "win8" = "001010100"

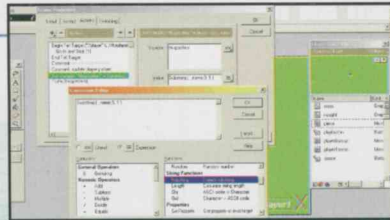
You can copy these from win fla on the coverdisc if you want.

Part 4: Enforce the rules!

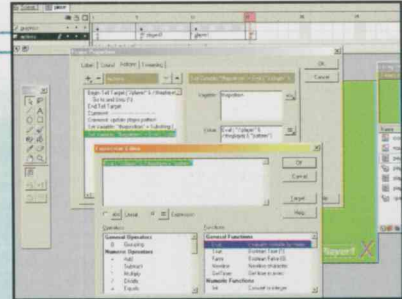
What happens when you play a move? Is someone a winner, or can their rival play another move? Time to find out...



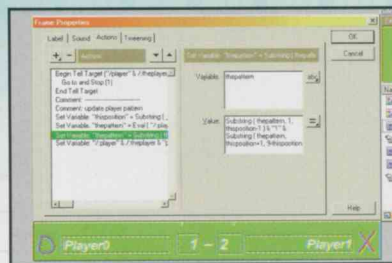
1 Once a player's moved, we've got four things to do: stop the flashing symbol, update the variable tracking the pattern of the player's pieces, check if it's a winning position, and if not, move to the next turn. Copy and paste the Tell Target action from your go frame to the hasmoved frame in your piece symbol, but put `/:theplayer` in front of the theplayer variable to target the variable in the root movie. You should have: `Begin Tell Target (":theplayer" & "/:theplayer & "piece")... Also change the Play action to a Go To frame 1 action.`



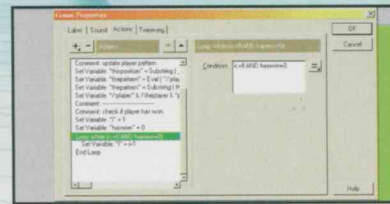
2 Now to update the player's pattern variable. We get the position of the move, by getting its number from the symbol's Instance Name. See why it was important to get them in the right order? Set a new variable called 'thisposition', set its value to be an Expression, and open the Expression Editor from the drop-down. Double-click Substring from the list on the right, and you get: Substring (string, index, count). Select 'string' and double click `_name` to replace it, which gets this movie's Instance Name. Then replace 'index' with 9 and 'count' with 1, and hit OK. You should end up with: `Set Variable: "thisposition" = Substring (_name, 9, 1)`.



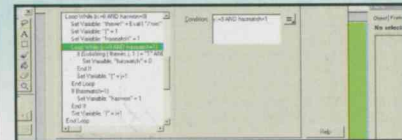
3 The next line gets the player's existing pattern. Set a variable called 'thepattern', and for its value choose Eval in the Expression Editor. For 'variable', type: `":player" & "/:theplayer & "pattern"`. You should finish with Set Variable: `thepattern = Eval (":player" & "/:theplayer & "pattern")`. This puts together the variable `/:player0pattern` or `/:player1pattern`, then finds out what it is.



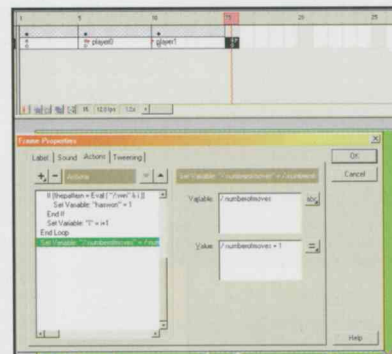
4 The next line swaps the appropriate 0 in the pattern for a 1. Set the variable 'thepattern' again, putting as its value the Expression: `Substring (thepattern, 1, thisposition-1) & "1" & Substring (thepattern, thisposition+1, 9-thisposition)`. Finally, we output the newpattern again by setting another variable, with the variable itself set to Expression, as well as the value: `Set Variable: "/:player" & "/:theplayer & "pattern" = thepattern`. You can copy all this from update fla on the coverdisc, if you want.



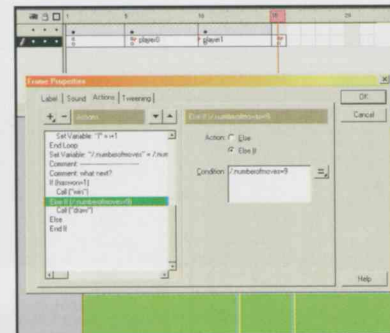
5 Now to check if this new pattern is a winning pattern, we need to compare to each of the possible winning patterns from before. We set up a loop running from 1 to 8, because there's eight winning patterns, checking for winners. Set a variable "haswon" = 0, to track if there is a winner, and another "i" = 1 – both their values are expressions, since they're not surrounded by quote marks. Then choose the Loop action. In the condition put `i<=8 AND haswon=0`, and "i" = i+1 in the loop, so you get: `Loop While (i<=8 AND haswon=0)`. Set Variable: "i" = i+1. End Loop.



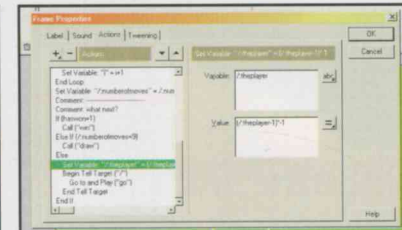
6 Within the loop, and before "i" = i+1, we need to run another loop to see if at least three pieces in the player pattern match those in one of the winning patterns. So before "i" = i+1 we put: `Set Variable: "j" = 1`. `Set Variable: "hasmatch" = 1`. `Set Variable: "thewin" = Eval (":win" & i)`. `Loop While (j<=9 AND hasmatch=1)`. `If (Substring (thewin, j, 1) = "1" AND Substring (thepattern, j, 1) = "0")`. `Set Variable: "hasmatch" = 0`. `End If`. `Set Variable: "j" = j+1`. `End Loop`. `If (hasmatch=1)`. `Set Variable: "haswon" = 1`. `End If`.



7 That's pretty tough, so you can copy the whole win-checker from wincheck fla on the CD. Next we want to track how many moves have been made, just in case it's a draw: there's no winner, but all the spaces are filled. Set the variable `/:numberofmoves = /:numberofmoves+1` to do this. Now we can tell the game what to do next.



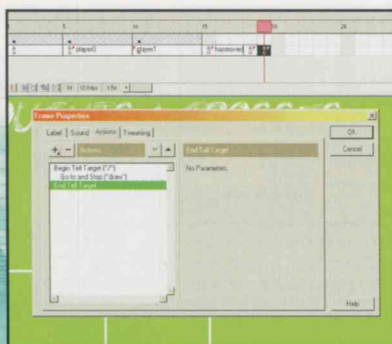
8 Add an If clause asking if "haswon" = 1, and this time click the Add Else/Else If button twice. For the If Condition put `haswon=1`, and then add a Call action calling a frame called 'haswon' – we'll create this in the next stage. Then select the first Else, choose Else If on the right, put `/:numberofmoves=9` as the condition, and insert a Call ("draw") action after it.



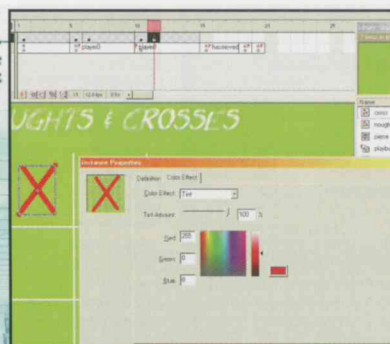
9 The final Else governs what happens if it's neither a winning nor a draw move – it's the other player's turn. First you want to change the player: set the variable `/:theplayer = (/:theplayer-1)*-1` with the value as an expression – so if it's 0, it becomes 1, and vice versa. Then you need to start a new turn by telling the main movie to go and play from the frame labelled "go" – the target name of the root movie is `"/`. So you should get: `Set Variable: "/:theplayer" = (/:theplayer-1)*-1`. `Begin Tell Target (":")`. `Go to and Play ("go")`. `End Tell Target`.

Part 5: The game's up!

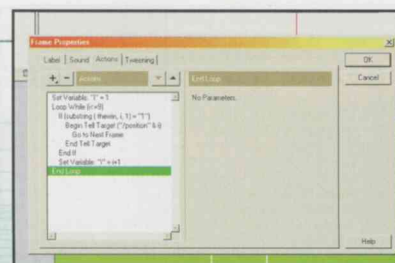
Win, lose or draw, we need to work out how the game finishes – and devise a colourful victory routine. Have fun!



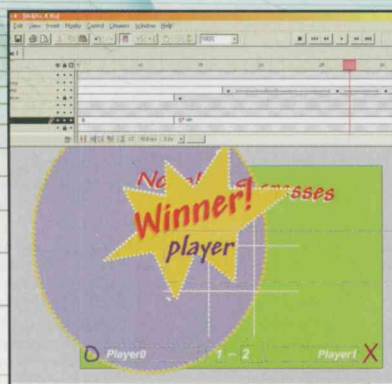
1 Now to deal with wins and draws. Create two keyframes just on from your hasmoved frame, on the actions layer of your piece symbol, and label them 'win' and 'draw'. On the draw frame put the action Begin Tell Target ("/), Go To and Play ("draw") – we'll create this scene in the main movie in a minute.



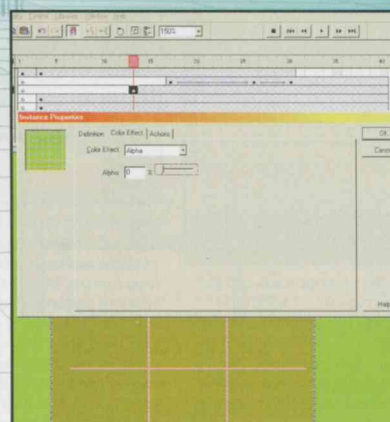
2 As for a win – we want the winning trio of pieces to turn bright red, so find your player0 and player1 frames in the piece symbol and create a keyframe on the graphics layer immediately after each. Double-click the graphic on each and use Tint in the Color Effects to colour it. Also give both keyframes a Stop.



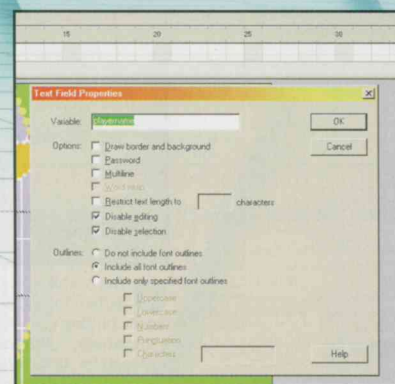
3 We need to run another loop to get which pieces are in the winning series, and turn them red. So set "i" = 1 again, and then set a loop while i <= 9. In the loop we get the winning pieces and turn them red:
If (substring (the win, i, 1) = "1")
 Begin Tell Target ("/position" & i)
 Go to Next Frame
End Tell Target
End If
Set Variable: "i" = i+1



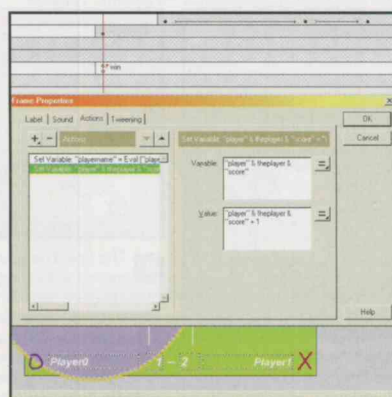
4 The rest is easy now. After the End Loop add a Tell Target action, telling the root movie, "/", to Go To And Play at frame label "win", which you created earlier. Head back to this frame in your main timeline, to create a winning graphic and animation.



5 If you're going to keep the pieces in view, protect them with a transparent button on the layer above so no more moves can be played.



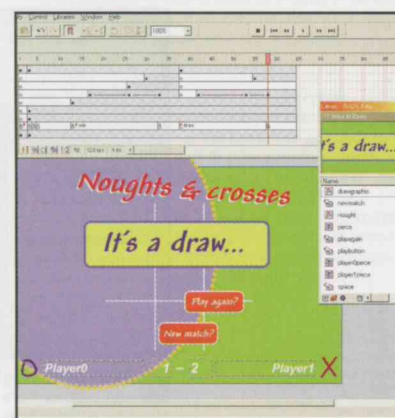
6 To put the name of the winner, just set up a variable at the win frame, "playername" = Eval ("player" & theplayer), then create a live text field as before in your winning graphic, and set it's variable as playername.



7 You should also add an action here to update the scores – note that the variable name is an expression, as well as the value:
Set Variable: "player" & theplayer & "score" = Eval ("player" & theplayer & "score") + 1



8 Create a Play Again button and a New Match button for the win scene, on a new layer, and put a Stop action at the frame where they appear. On Release, give the Play Again button a "starter" = (starter-1)*-1 action to change the player who goes first, and a Go To and Play ("gameplay"). Set the New Match button to go to intro.



9 Finally, create a keyframe labelled 'draw' in your main timeline, and create a draw scene, with similar buttons. Then you're done – export your game and check it out! **CA+8**

[myopic] **FISH EYE**

Part 1: Roll me over



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Part 5: The game's up!



Design by program

Graphical art is often static, but with JavaScript and a Web browser, not only will it move, it becomes intelligent. Discover how easy it can be

Let's face facts, computer programming isn't widely regarded as an interesting branch of computer design.

However, thanks to the Web, and the browsers that go with it, programming and design can merge together to form something new and exciting.

For the past few years, every Web browser has had a programming, or scripting, language called JavaScript built in. It enables you to make your graphics and designs interactive, reacting to what the viewer does. They can even be

intelligent, making pre-defined decisions from a variety of factors.

If all this programming sounds complicated, then you may be pleasantly surprised. Not only is JavaScript relatively easy to learn, but you can simply copy and paste other people's work (with their permission, of course!), making small adaptations. Over the next four pages we'll show you a series of graphical scripts which you can use on your site. And if you don't fancy all that typing, you'll find these scripts on the cover CD for you to copy and paste.

Illustration: Magister/Telephone 01273 202147

Part 1: Roll me over

The rollover is a classic design feature of Web pages. When the mouse passes over a hyperlink, without clicking, a graphic can change from one state to another

Rollover return

If desired, when the mouse leaves, the graphic can return to its previous state. This works best when the two graphics to be swapped are of the same size. Fortunately, the rollover is one of the easiest JavaScript effects to achieve as it merely involves adding the onmouseover and onmouseout attributes (events) to the standard HTML <A> tag.

Name your files

The important thing to remember is to give a name to all of your graphics. This enables the JavaScript to refer them later. In this example, we actually take the opportunity to do quite a lot with the onmouseover event. First, it changes the small graphic directly to the left of the hyperlink. Next, it changes the larger logo at the top of the screen. Finally, it sets the status bar text along the bottom of the browser window.

You are here

You can use rollovers on your site purely for a design effect, but [w] www.nitpickers.com uses them to actually help the user navigate. As you pass the mouse over the buttons at the left side of the screen, the large text label is replaced by smaller text, describing exactly what the button does.

```
<HTML>
<BODY BGCOLOR="#DDAAAA">

<CENTER>
<IMG NAME="banner" SRC="future.gif"><BR><BR><BR>
</CENTER>

<FONT SIZE="+3">

<A HREF="http://www.computerarts.co.uk"
onmouseover="
document.images['option1'].src='over.gif';
document.images['banner'].src='computerarts.gif';
window.status='Goto the Computer Arts Web Site';
return true;"
onmouseout="document.images['option1'].src='out.gif';"
STYLE="color:#000000;text-decoration:none">
<IMG NAME="option1" BORDER="0" SRC="out.gif">
Computer Arts Magazine
</A><BR><BR>

<A HREF="http://www.MacFormat.co.uk"
onmouseover="
document.images['option2'].src='over.gif';
document.images['banner'].src='macformat.gif';
window.status='Goto the MacFormat Web Site';
return true;"
onmouseout="document.images['option2'].src='out.gif';"
STYLE="color:#000000;text-decoration:none">
<IMG NAME="option2" BORDER="0" SRC="out.gif">
MacFormat Magazine
</A><BR><BR>

<A HREF="http://www.netmag.co.uk"
onmouseover="
document.images['option3'].src='over.gif';
document.images['banner'].src='netmag.gif';
window.status='Goto the .net Web Site';
return true;"
onmouseout="document.images['option3'].src='out.gif';"
STYLE="color:#000000;text-decoration:none">
<IMG NAME="option3" BORDER="0" SRC="out.gif">
.net Magazine
</A><BR><BR>

</FONT>

<BODY>
</HTML>
```

1 The onmouseover event only works with hyperlinks. In this case, when the mouse passes over the hyperlink text, we change the small graphic just to the left of the link to indicate which option is currently being selected.

The same onmouseover event also changes a second graphic at the top of the screen to show the logo of the magazine in question. Obviously you'll want to substitute the name of your own GIF files here. When the mouse leaves the hyperlink, the onmouseout event is initiated. This changes the graphic to the left of the hyperlink back to its original file, but leaves the banner as is.

2 Another piece of JavaScript which uses the onmouseover event is the window.status property. This enables you to specify the text which appears in the status bar along the bottom of the browser window when the mouse is over a hyperlink.

By default, the status shown is the HREF of the link, but since this is often unintelligible to the viewer, it can be useful to override it, and put your own custom message there.

If you do use the window.status property, you must follow it with the return true statement. If you forget, it won't work, and worse still, JavaScript won't even remind you by producing an error message.

3 It's a matter of preference, but some might find the default blue underlined hyperlink text rather gaudy. You can override this by using the STYLE attribute in the <A> tag. This actually isn't JavaScript at all, but rather a little bit of Dynamic HTML.

Whereas JavaScript works in virtually all browsers, DHTML only works in the latest versions. Another problem with DHTML is the same command can work differently in different browsers, whereas the vast majority of JavaScript is universal. Fortunately, this bit of DHTML is quite safe.

Also, notice that the graphic has also been included inside the <A> tags, so that the graphic becomes part of the hyperlink as well as the text which follows.

Part 2: The write move

The problem with designing text for the printed page is that it's, well, rather static. We've seen that JavaScript offers the designer the ability to change graphics on the fly, but it also enables text to move...

Scroll on

Moving text adds interest to a page, and can draw the viewer's attention to something important. In this script, we're showing two methods of designing moving text. The first is a scrolling banner of text which continually moves to the left. The second script produces a ticker tape style text box. Here the message unravels one letter at a time. Once the message is complete, it is blanked out and the ticker starts again from scratch.

```
<HTML>
<BODY BACKGROUND="background.gif" onload="myscroll(); mytype();">

<SCRIPT>
```

```
var scrollstart = 0;
var scrolltext = "Computer Arts is a great magazine";
for(count=0; count<10; count=count+1){scrolltext = scrolltext + " " +
scrolltext;}
```

```
function myscroll(){

    document.myform.mytext.value = scrolltext.substring(scrollstart,
scrollstart + 100);

    scrollstart++;
    if (scrollstart == scrolltext.length){scrollstart = 0;}

    setTimeout("myscroll();", 100);
}
```

```
var typestart = 0;
var typetext = "Computer Arts is a great magazine";

function mytype(){

    typestart++;
    if (typetext.substring(typestart-1, typestart) == " "){
        typestart++;
    }

    document.myform.myarea.value = typetext.substring(0, typestart);

    if (typestart == typetext.length){typestart = 0;}

    setTimeout("mytype();", 100);
}

</SCRIPT>
```

```
<CENTER>
<FORM NAME="myform"><BR><BR>
<INPUT TYPE="text" NAME="mytext" SIZE="60"
VALUE=""><BR><BR><BR>
<TEXTAREA NAME="myarea" ROWS="4" COLS="20"
WRAP="YES"></TEXTAREA>
</FORM>
</CENTER>

</BODY>
</HTML>
```

1 We start this script by creating a couple of variables. This is similar to the algebra you learnt at school when x can change depending on the formula. The first variable is a counter which will later help us to move the message banner across the screen.

The secret to the continuously scrolling banner is to have one long piece of text (string) repeating the same message many times. To save us having to create the long string, we define it once then use a loop to repeat it. Here we create a loop which goes around ten times, adding the message to itself each time. It also adds a gaps of several spaces between each occurrence of the message.

2 This is the heart of the banner script. It starts by displaying a section, or substring, of the entire banner message. The section it shows starts at a position defined by the starting variable we created earlier. It then includes the next 100 characters, although you may want to increase this for a large banner. It then increases the starting position by one character, for the next loop around the script.

Then it checks to see if the banner has now scrolled the distance of one whole message. If it has, the starting variable is reset to zero, so the text goes back to the start. Finally it loops around the script using the setTimeout method. The number, 100 in this case, defines the speed of the scroll.

3 Now we come to the ticker tape script. It starts and ends in similar fashion to the scrolling banner script, but the central section here is different.

The text stays still but continuously adds the next character to the end. However, if the next character is a space, then the scripts immediately moves ahead to the character following the space, otherwise it would appear to stutter.

When the entire message has unravelled into the text box, the starting variable is reset to zero, so the entire message disappears and starts again.

4 You cannot dynamically change static HTML text on the page, so to achieve moving text, we have to use text fields in a standard form. Here we use two different types of text field. For the scrolling banner we use the TEXT type, which is a single line. For the ticker tape script we use a TEXTAREA field which can be many lines deep.

The important to remember is to name the fields. This enables our JavaScript to reference which field their respective text is to appear in. If you do use a TEXTAREA field, it's also important to turn the text wrapping on.

Part 3: Chaos theory

Designers can spend an age judging structure and balance to a page, which is all very worthy, but where's the fun? How about adding a bit of danger to your pages by adding an unknown factor – randomness

Lucky numbers

JavaScript has the ability to generate random numbers. With a bit of skill and imagination, these numbers can be turned into random colours and graphics, as we shall see. The important technique used in this script is the `document.write` method. This writes HTML to the screen just as it were normal HTML. The difference is that it is controlled by JavaScript, and therefore can be programmed to have random results.

<HTML>

<SCRIPT>

```
function myRandom(maxnum, format){
  var mynumber = Math.random();
  maxnum = maxnum + 1;
  mynumber = mynumber * maxnum;
  mynumber = Math.floor(mynumber);
  if (format == "hex"){mynumber = mynumber.toString(16);}
  return mynumber;
}
```

1 JavaScript offers a built in random function. However, in common with most programming languages, it's rather basic. This is because it can only generate a random number between zero and one, to an accuracy of 16 decimal places.

Our custom function uses a little bit of maths to make it more useful. If you pass a number to it (a parameter), it will generate a number between zero and the number you passed in.

There's a second, optional, parameter which states the format you want. In particular, the randomly generated number can be converted to hexadecimal. We'll use this below.

```
var mybgcolor = "";

for(count=0; count<6; count++){
  mybgcolor = mybgcolor + myRandom(16, "hex");
}

document.write("<BODY BGCOLOR='#' + mybgcolor + '>');
```

2 The `document.write` method can write HTML to the page. In this case, we want to create a `<BODY>` tag with a randomly generated background colour, specified with the `BGCOLOR` attribute. This is made up of six hexadecimal numbers, that is, zero to F.

The easy way to create this string is to use a loop. In this case we loop around six times, adding another hexadecimal number to the end of the string with each loop. Having created our random colour, we generate the entire `<BODY>` tag and write it to screen.

```
var adnum;
var frequency;

function randomAd(){
  adnum = myRandom(2);
  alert(adnum);
  document.images['advert'].src = "advert" + adnum + ".gif";
}
```

3 We want a random graphic to appear at the top of the screen, in this case an advert. The `` tag appears later on the page, has been given a name, and has a default image to start with.

We have three ads to choose from, so we generate a random number from zero to two, inclusive. Having got our random number we change the source of the image using a similar technique to the rollover in the first script. The trick is that the advert images all have the same name except for a numeric suffix. This means we can reference the name of our ads by appending our random number.

```
frequency = myRandom(5);
frequency = (frequency * 100) + 200;
setTimeout("randomAd()", frequency);
}
```

4 For a final element of randomness, the speed with which the advert changes has been given a deal of latitude. First we generate a random number from zero to five. The delay is measured in milliseconds, so we multiply it by 500.

We also want the ad to stay visible for a minimum of a second (if the random number was zero, multiplying it by any number won't help) so we add another 1000. Finally we use the `setTimeout` method to call our `advert` function, which will pick another random graphic. Of course, it may be the same advert again, but that's no problem.

</SCRIPT>

```
<BR><BR><CENTER>
<IMG NAME="advert" SRC="advert1.gif">
</CENTER>
```

```
<SCRIPT>
randomAd();
</SCRIPT>
```

```
</BODY>
</HTML>
```


Part 4: Scrolls both ways

We've seen changing graphics and moving text, but for our last script we'll create moving graphics. JavaScript can control most elements of the browser window, and the scroll bar is amongst them

You've been framed

The ability to scroll the page isn't often very useful. However, we're going to split the page into two sections, a small banner at the top, with the content in the middle. We'll accomplish this using frames. This means we can scroll the banner frame sideways without affecting the content.

Check browsers

Scrolling is an element which works differently in different browsers, namely on the Mac and PC. Although we could write a single script that would work on both, we'll add a little device that will alter the script depending on the viewer's platform.

```
<HTML>
<HEAD>
<SCRIPT>

function getPlatform(){
  if (navigator.appVersion.indexOf("Windows") > -1) {return "Windows";}
  if (navigator.appVersion.indexOf("Macintosh") > -1) {return "Macintosh";}
  if (navigator.appVersion.indexOf("X11") > -1) {return "Unix";}
  if (navigator.appVersion.indexOf("Unix") > -1) {return "Unix";}
  return "Unknown";}
```

```
if (getPlatform() == "Macintosh") {
  document.write('<FRAMESET ROWS="64,"> <FRAME
SRC="script4.htm" SCROLLING="NO"> <FRAME
SRC="http://www.futurenet.co.uk"> </FRAMESET>');
}
else{
  document.write(' <FRAMESET ROWS="80,"> <FRAME
SRC="script4.htm"> <FRAME SRC="http://www.futurenet.co.uk">
</FRAMESET>');
}
```

```
</SCRIPT>
</HEAD>
</HTML>
```

```
script4.htm
<HTML>
```

```
<BODY BACKGROUND="background.gif" onload="myScroll();">
<TABLE WIDTH="2000">
<TD>&nbsp;&nbsp;&nbsp;</TD>
</TABLE>
```

```
<SCRIPT>
```

```
var y = 0;
var graphicsize = 126;

function myScroll() {
  if (y <= graphicsize) {y = y + 1;}
  else {y = 0}
  window.scroll(y,0);
  setTimeout('myScroll();', 20);
}
```

```
</SCRIPT>
```

```
</BODY>
</HTML>
```

1 JavaScript provides you with two properties which tell you most of the important details about the machine being used to view your page. The `navigator.appName` property returns the name of the browser, usually *Navigator* or *Explorer*. The `navigator.appVersion` property returns the exact version of that browser, including the version number and the platform.

The format of the returned version can be a little vague, so it's a good idea to guild your own function, such as this, to give a clearer answer as to which platform is being used.

2 Depending on the platform being used, we want a slightly different frameset arrangement. First, we use our function to determine the viewer's computer. Then we use an if statement and the `document.write` method to write all of the frameset HTML.

We should issue a warning here. Although HTML is generally universal, it will render differently on different browsers, and on different computers. This produces a lot of combinations, and if you start to write different HTML for each one, you can quickly spend more time fine tuning pages than creating real content.

3 The easiest way to produce a banner is to use a graphic as the body background. This way it is tiled automatically. On some platforms, in order for the banner frame to scroll, the contents of the frame has to be wider than window.

Of course, we don't actually want any content in this frame. The solution is the create a very wide table with a single cell. You'll need to add the ` ` between the `<TD>` tags to make the table render properly, without actually having any visible content.

4 Now we come to the script which scrolls the banner frame to the left in one continuous loop. Using the `window.scroll` method, it scrolls the banner one more pixel to the left each time around. The speed of the loop is controlled by the `setTimeout` command, and you'll want quite a short time delay.

Once the banner has scrolled the entire width of the original graphic to the left, it resets itself and starts back at the beginning. You'll need to enter the exact pixel width of your graphic to make the transition smooth, and make it appear as an infinitely wide banner.

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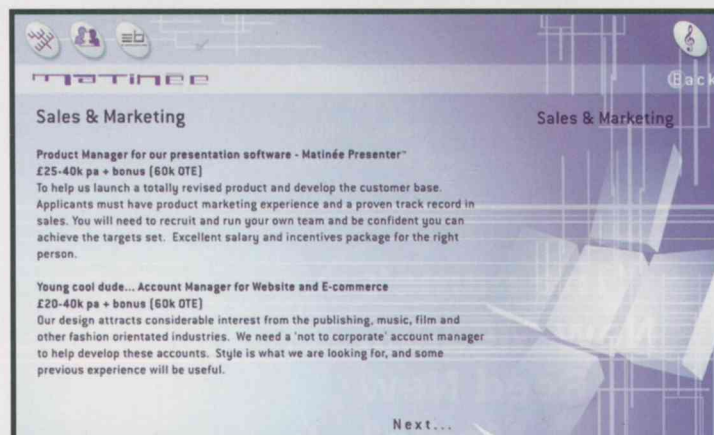
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1. The Matinee home site, Revolution 2000, makes typically extensive use of *Flash*, creating a dazzling experience for the visitor and showcasing Matinee's talents to maximum effect.



Matinee

Rocking sound, smooth visuals and big ideas collide in a cutting edge way at Matinee, says designer Ben Adams. *"We create Web experiences as opposed to Websites..."*

When you walk down the street and pass a big, old house, you have no idea what's going on behind its closed doors — a spot of serial killing, a touch of pirate radio broadcasting, or even some ground-breaking Web design. Matinee, from its unlikely location of five houses in Reading, has built a small multimedia empire. A kind of home from home for the business of Web design, among other things.

'Among other things' is an important phrase when you talk about Matinee. Remember multimedia? Before the Web it was the word that created a lot of buzz — a loose catch-all phrase to describe how sound and vision would converge in computers. Around that time, when everyone was after a slice of the multimedia action — usually tourist boards who wanted to produce a cutting-edge CD-ROM or visitors' kiosk — Matinee was a true multimedia company.

The company was originally created in 1982 by current MD Chris Broderick — a musician who decided to build his own recording studio in the basement of his house in Reading. The move into Web design in 1997 was a natural one for Matinee — already skilled in providing audio services to corporate clients with its in-house recording studios, and experts in video production and editing, thanks to a couple of AVID editing suites. It was Macromedia's *Flash* technology

that brought this audio-visual specialist company into the on-line fold.

"We waited until *Flash* came along which could deliver true multimedia in an on-line environment," explains Matinee's marketing co-ordinator, Asomi Ithia. And the move into Website design is remembered by the version of *Flash* that was around at that time — *Flash 2*. Matinee has created cutting edge Websites for the likes of the Jordan Grand Prix team, Electronic Arts, Chrysalis, De Morgan, and even Belgium's Ministry of Science.

No competition

What makes Matinee unique is that it has many compelling selling points. "As a business, people ask us who our competitors are. We can safely say there is no direct competition to us as a business," says Asomi. Certainly you won't wander around many design houses that have Keep Quiet notices hanging from doorknobs and red recording lights illuminating the corridors.

"Lots of people do Web design but we as a company offer complete solutions for all aspects of media requirements," Asomi continues. "We're strong in all areas. We're not trying to develop multi-skilled people. We get experts for all areas of our business." This means Matinee is more than the sum of a few coders

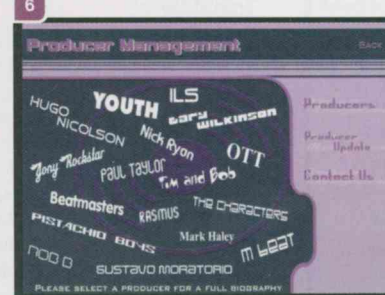
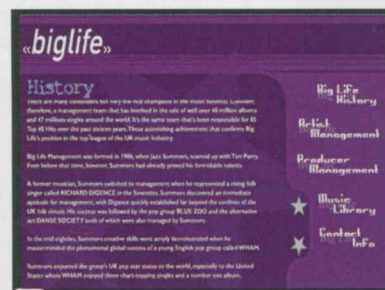
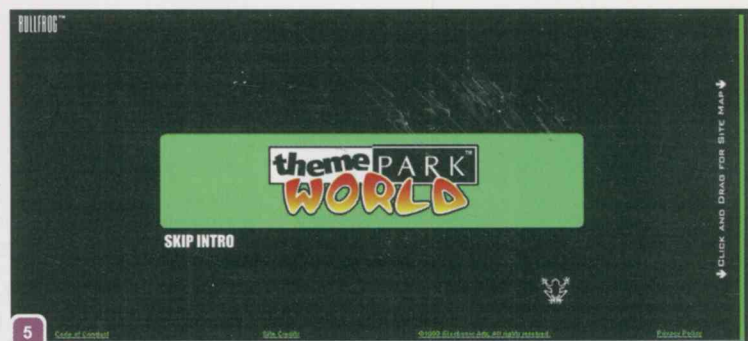
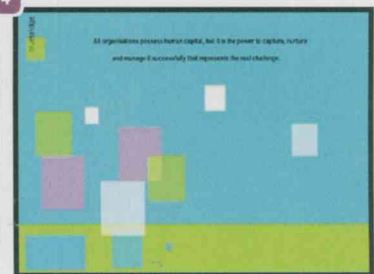
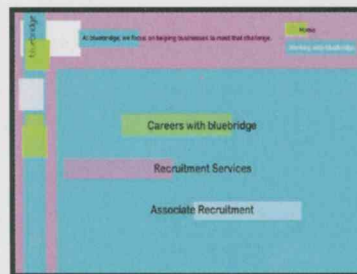
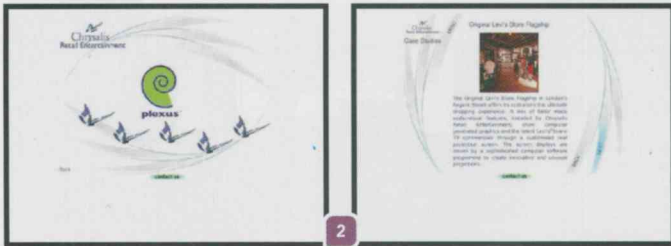
and illustrators. The audio experts who create the sound for games companies such as Acclaim and produce soundtracks for corporate training videos and CD-ROMs, also forge tracks for Matinee's *Flash* animation work.

Still, the heart of Matinee's Web team contains at least two good illustrators, three who specialise in 3D work, a handful of HTML coders, and a talented bunch of hardcore programmers who, jokes project designer Ben Adams, "we keep upstairs in the loft". Ben heads up one of Matinee's studios and tries to ensure that the "madly freakish" designers at Matinee are kept in touch with the realities of Web design. He points out that the lines between each job are not etched in concrete: "We love what we do and so we all do everything".

These realities are primarily about meeting customer requirements. *Flash* is Matinee's key area of expertise but Ben points out that "it's not the best for every job". The wow factor is certainly important to Matinee. "We talk about the wow factor and creating infotainment on-line. We combine information with entertainment," says Ithia. But, Ben points out, "we don't sell sites that look wow-y just for the sake of looking wow-y".

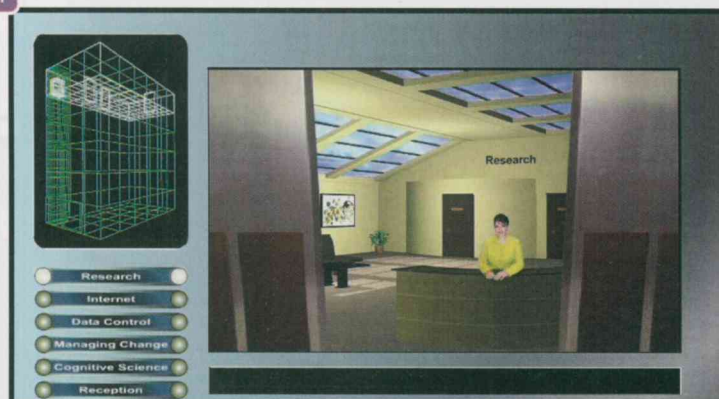
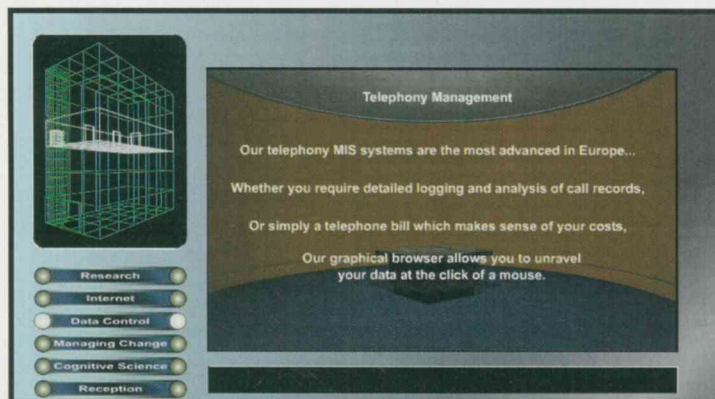
However, Matinee hasn't yet developed a site that doesn't use *Flash*, although it has developed pure HTML sites that exist as daughter sites to the main *Flash* site. It did this with the Website for games company Bullfrog, at www.bullfrog.com. Bullfrog provides a good example of Matinee's philosophy in action. "We use animations to deliver information in interesting ways. We want to get people talking about a site, generate interest in it, and make visitors return for a second or third visit," says Ben, underscoring the notion of the wow factor.

Exploiting the interactive nature of the Web is important to Matinee. "We create Web experiences as opposed to Websites," opines Ben. Hence the extensive use of *Flash* that can easily combine



2. The Chrysalis Entertainment Website brings to life the company's butterfly logo.
3. UKCCL uses Flash to entice gamers to do battle over the Web, with a unique 'fragometer'.
4. Matinee has breathed life into the corporate site with its work for recruitment specialists Bluebridge.
5. The site for Theme Park World captures the colour and fun of the Bullfrog game.
6. Big Life is a colourful site for a music management company.

1. Matinee created a businesslike yet engaging on-line presence for communications company DeMorgan.



Expert tips

Streamline your Flash movie and stop visitors hanging around...

Testing initial movie playback

Check to see whether your on-line animation creation will stream over an Internet connection. Press [Ctrl/Cmd]+[Enter] in *Flash* and switch the bandwidth profiler on. Scan across the bandwidth graph in the search of 'peaks' (anything above 200 bytes).

Find any offending symbols

If you find any large peaks, work out which symbols are causing the peak either by observing which symbols are entering the frame at the points which the peak occurs, or by exporting the movie with the Produce Size Report option selected and studying the text file.

Produce a preloader

To produce an optimised *Flash* movie, you need to iron out those peaks, which is done by producing a preloader at the start of the movie loading any 'offending' symbols into memory beforehand. A *Flash* movie only ever loads each symbol into memory once, no matter how many times it is used within the movie, therefore by loading it in the first few frames while amusing the user with a catchy 'loading' animation, it leaves the rest of the movie to stream cleanly, stopping any glitches and pauses within a movie.

• See opposite to learn how to create a preloader.

powerful animation with knockout sound to create a fully involving Web experience that doesn't take an eternity to download.

"It's something that isn't boring," sums up Ben, when asked what makes a Web experience. "A Web experience is something that people will want to see just because they want to see it. They'll tell people to go and look at this site, even if they have no interest in the site and what it's about," he elaborates.

But, like any good Web designer, he qualifies that with caution. "At the end of the day, you can't have something that will blow people's socks off and then they don't know where to click. Getting the information across is the most important thing."

And three clicks is still the magic number in Matinee's book. "We abide by the three-click rule. If visitors can't get where they want in three clicks, we've failed," explains Ben. Matinee's current Website, delicately titled *Revolution 2000*, shows how sites can be made simple to navigate. This is the third version of their site and it has already nabbed them the silver award from the International Visual Communications Association (IVCA) in March. Last year, the company won the gold award and both sites have, unsurprisingly, featured as Macromedia's Shocked Site of the Day.

To boldly go

"It was a bold step to go down the *Flash* route and have a whole site totally *Flash*," says Ben, but the gamble paid off with the IVCA highlighting Matinee's "cutting edge use of *Flash*". In addition to Macromedia's wonder vector tool, Matinee uses the usual Web design tools — *Dreamweaver* ("but we tweak the raw code in a simple text editor"), *Photoshop*, *FreeHand* and *Illustrator*. In addition they use *3D Studio MAX* for 3D work and *Director* to produce the odd Shockwave movie.

It's the PC versions of the software that Matinee uses because its Web design operation is entirely PC-

based. "Why develop on a Mac if it's going to be viewed on a PC?" says Ben. And the login stats for Matinee's sites prove the minority status of Mac ownership. Ben even jokes that "hopefully Microsoft and Intel will take over the world and we'll get some standards". Brave, controversial and a little bit serious too.

The team keep a Mac in the corner "for testing purposes", but it's the lack of standards between platforms and browsers that gives Ben the most headaches. "It's not a problem, it's a challenge," he says diplomatically, after expressing a wish for Netscape *Navigator* to, shall we say, quietly expire. Asomi says that the most difficult part of his marketing job is the Web side of things because "it's the area that's moving fastest and you always have to keep on top of things".

Matinee has its eyes peeled for new ideas and new ways of doing things that can make their clients' Websites even more exciting. After all, it has a cutting edge reputation to protect. "I spend half my time researching new technologies," calculates Ben. "Everything is evolving so fast and there's so many new players. We'll always keep our eyes open."

At the moment, they're experimenting with Macromedia's *Generator* and the added functionality that *Flash 4* brings, that can handle additional programming and updates on the fly.

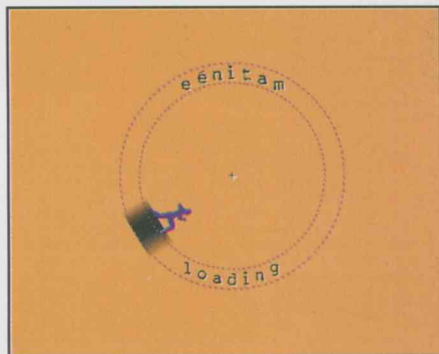
Matinee also has a new site in development for Belgium's Ministry of Science that promises to be rather funky. "It's a clever concept," enthuses Asomi. Using *Flash*, the visitor can navigate different levels of an imaginary building and use their mouse to, say, interact with the receptionist or cause a jug of coffee to steam up. It sounds intriguing, like playing *Zelda* on the N64. But on the Web. With just your browser. "We perceive we're ahead of the game," concludes Asomi. Way to go, Matinee. Games are fun. **ica-s**



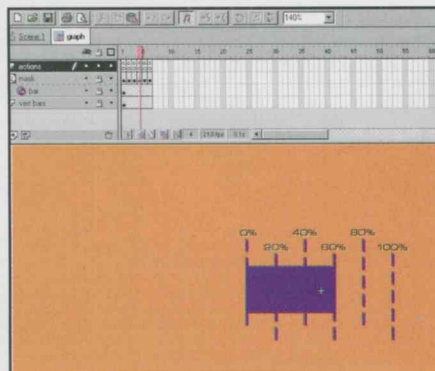
For more information about Matinee, [t] 0118 958 4934 or visit [w] www.matinee.co.uk which contains links to the sites featured here.

Make your own preloader

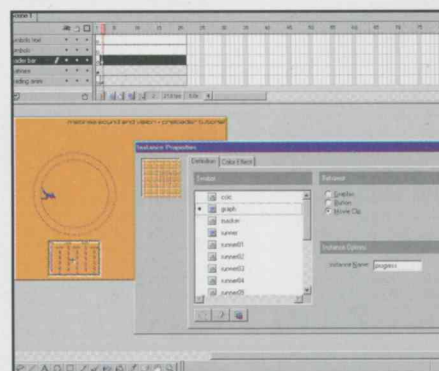
With a preloader, visitors to your site can be entertained while your *Flash* movie downloads. Matinee shows you how in six easy steps...



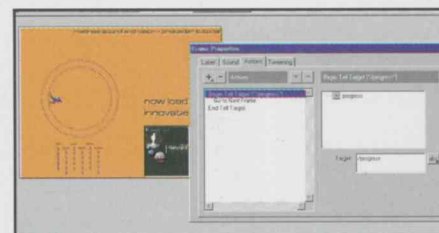
1 Firstly you want to make a simple (therefore small in file size) looping animation to amuse the user while the preloading takes place. This can be anything from the word 'Loading' flashing on screen, to in this case an animated character running around a circle (The movie clip named Running Man).



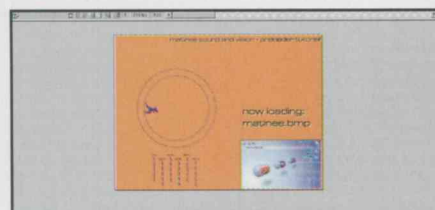
2 You may want to produce a 'percentage loaded' style bar to show the user how long they have to wait until the fun starts. In this case we have produced a simple six frame movie clip of a bar graph, with a stop action on each keyframe (The movie clip named Graph).



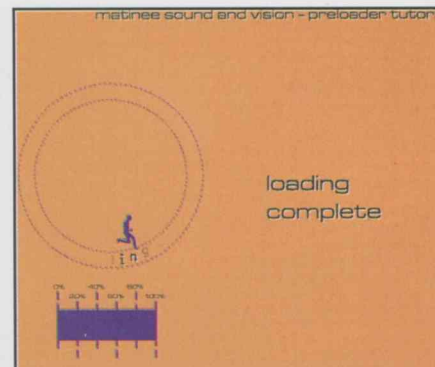
3 Insert six or seven blank frames at the very start of the main movie and place the animated loader, and the progress graph on the first frame, on separate layers. Double click on the progress graph and type an instance name into the field – in this case we'll call it 'progress'.



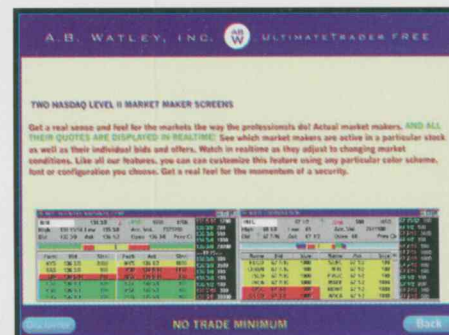
5 In order to get the progress graph working, we must use a simple tell target to tell the progress graph to move forward one frame. Double click on each of the keyframes with preloaded symbols, and add an action to tell the movie clip with the instance name 'progress' to move forward one frame. Double click on the keyframe, select the actions tab, and click the [+] button, and then select Tell Target. Select the instance called 'progress' from the box on the right, now click the [+] again and select Goto from the list, finishing by selecting Next Frame from the list on the right. Finally click OK. Repeat this for all of the 'preloader' keyframes.



4 Now we preload the symbols that are causing the peaks. Make five or six blank keyframes on a separate layer, starting on frame two (after the frame with the two loading animations). Start dragging the symbols from the library on to the stage, so that they lie outside the stage, hiding them from the user's view. In this case we have placed them on the stage to show you what's going on. In addition, you may want to drop the alpha of these to 0 per cent to make them truly invisible. Sounds can also be preloaded by adding them to a keyframe, and dropping the volume to zero. Placing the symbols to be preloaded evenly over the blank keyframes produces a gradual preload, allowing us to make use of the progress graph.



6 And that's about it. What you should have now is a *Flash* animation that has an initial peak when loading, but presenting the user with an animation, and a progress bar while the content loads, leading to a completely seamless, glitch-free animation.



2. American bank AB Watley wanted an interactive module on their site to attract new visitors.

3. Matinee was hired by Belgium's Ministry of Science, to create their Website. The result was colourful and attention-grabbing – and new developments are on the way.



Illustration: Magdaorch Telephone 01274 202147

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71 Flash tips

Flash is rapidly becoming the most dominant format on the Web. With powerful scripting, fast downloads and groovy animation capabilities, is it any wonder? And just when you thought it couldn't get any better, here we present 71 essential tips to get you using *Flash 4* to the max...

Optimising Flash

Scale up

Save precious kilobytes in *Flash 4* by creating vector-based animations with 50 per cent smaller dimensions than you intend to display them at. When you embed the resulting Shockwave *Flash* file into your Web page, scale up the dimensions of the movie by the required amount using the height and width attributes.

Vector's better

Never use a bitmap image if a vector image will do. You can transform simple bitmaps to vectors using **Modify>Trace Bitmap**.

Smooth out

Reduce the number of vectors in an image using **Modify>Curves>Optimise**. Experiment with the Smooth and Straighten options too.

Clutter down

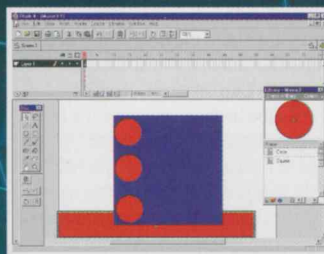
Always try to keep any objects that are made up of a lot of vectors on separate layers.

Separate stills

Place animating objects on a separate layer to still objects, especially when you're doing keyframe animation. This will help keep file sizes down and make movies play back more smoothly.

Reuse Symbols

Instead of re-drawing simple shapes, use graphic Symbols. There's no need to draw a new object on screen every time a circle is needed, for example. Create a



Reusing symbols keeps down the file size.

circle as a graphic Symbol and drag it from the Library. Use the Colour Effects pop-up and the Object Inspector to alter the appearance of the Symbol Instance.

Reduce fonts

Try to only use one or two different fonts in your movie — the more fonts on screen, the larger the resulting file size. Simple, sans serif fonts generate a lot fewer vectors than fancier decorative fonts, too.

Keep them together

Avoid breaking fonts apart as this too will increase the number of vectors in a movie scene.

Low spec preview

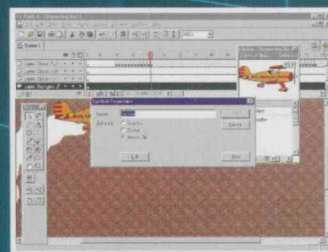
Bear in mind that *Flash* animations can be affected by the speed of the machine they're played back on. Always try to preview your movie on a low specification computer.

Less is more

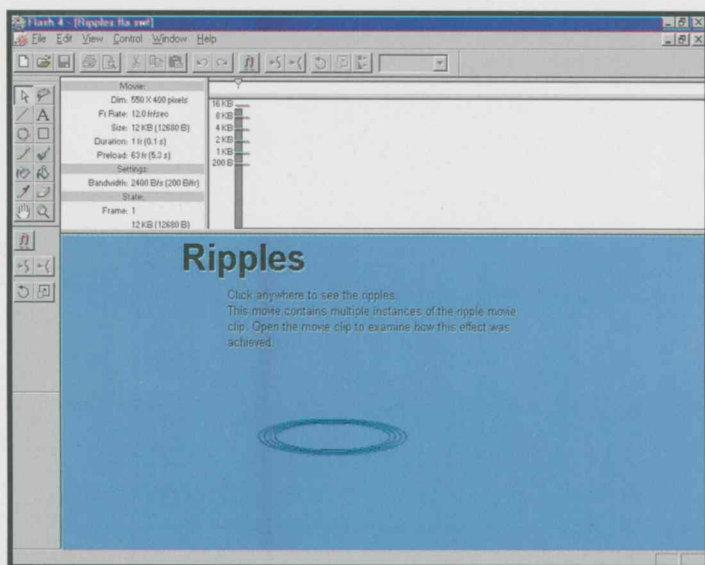
Multiple animated objects may put a strain on the user's CPU. Avoid filling the screen with movement just for the sake of it... For similar reasons, scaling lots of objects from very small dimensions to very large percentages can slow down your movies too.

Stream small

Movies destined for streaming from the Web will perform a lot better if you keep the initial frames of the sequence as small as possible.



Look in the properties dialogue of individual media elements for extra options.



Control the flow of your movies by tailoring file sizes frame by frame.

Individual image compression

Set individual compression options for bitmaps within *Flash* movies by selecting them within the Library, then going to Options>Properties. However, optimising your images in *Fireworks* or *Photoshop* first, then using the default

Movie Clips have their own internal timeline, independent of the main timeline. Existing *Flash* movies can be converted to Movie Clips, or you can create them from scratch by going to Insert>New Symbol and choosing Movie Clip.

Instead of building animations with huge timelines, break them into Movie Clip Symbols instead

compression options, may lead to improved results.

Test bandwidth

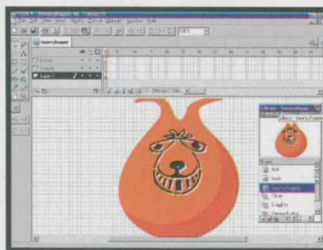
In Test Movie mode, *Flash* generates a temporary SWF version of your current movie. To see how the movie would perform on the Web, go to View>Bandwidth Profiler. A chart appears showing the frame rate, size in Kb and duration for the current frame. To change bandwidth emulation, go to Control and select one of the predefined modem speeds, or create a custom speed of your own.

Buttons, movie clips and ActionScripts

Break down

Instead of building animations with huge timelines loaded with still elements and short instances of animation, try breaking down movies into Movie Clip Symbols instead.

traditionally thought to be. This means you can create blank Movie Clips that contain ActionScript interactivity, name the instance of the clip and then call the actions from within the main movie or from other Movie Clips. You could, for example, create a variable that stores a series of text strings that is called from another Movie Clip on the main stage, rather than clutter that clip up with extraneous scripting. This is a rather primitive way of emulating the user-defined Functions that appear in other



Movie Clips are mini-movies that you can control from the main timeline.

scripting and programming languages — but it works!

Label layers

Use layers to organise interactivity. When you need to add ActionScript to a movie, add a new layer and call it Actions rather than trying to place it on a layer that contains animation. This lets you see exactly where everything is on the Timeline. Put frame labels and sounds in their own layers too...

Where the Action is

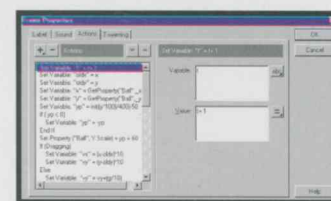
ActionScript Actions can be applied to three different types of object and you'll find the Actions tab in the appropriate Properties dialogue. They can be applied to Buttons, usually but not exclusively as the product of a Mouse Event and they can be applied to individual Frames in a Movie. In the latter instance ActionScripts are used to trigger events which alter the timeline or affect objects on it. You can also place ActionScripts on Frames and Buttons within Movie Clip Symbols. These can be used for anything from storing variables, setting object properties to controlling animation.

Different states

Make sure that you apply button actions to the instance of the button that appears on stage, rather than to different button frame states.

Edit Symbols

To apply Actions to a button that's contained within a Movie Clip, you must



ActionScripts make *Flash* much more than just another animation package.

go to Symbol Editing mode for that Movie Clip, select the button you want to edit, then choose Modify>Instance.

Variable button

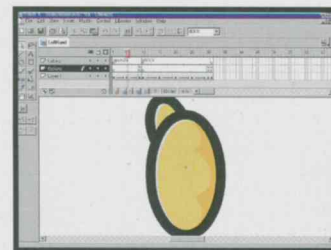
You can build a button that performs a different action depending on the number of times it's been clicked using Tell Target:

- Create a Movie Clip containing a sequence of several animations. At the beginning of each animation stage, including Frame 1, insert a Stop action.
- Place an instance of the Movie Clip on the main stage, select the clip and choose Modify>Instance and name it 'clip1'.
- Create a new button and place it on the main stage. Select the button and choose Modify>Instance. Click on the Actions tab.
- Under actions, add the following ActionScript using the dropdown menu:

```
On (Press)
Begin Tell Target ("/clip1")
Go To Next Frame
End Tell Target
End On
```

Capture keys

Flash 4 includes an ActionScript command that allows you to capture keyboard input. Select On MouseEvent in the Actions tab of Instance



Properties for a button and choose Key Press. Specify any key you like in the text box.

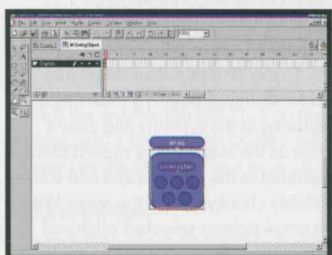
Drag and Drop

Want a menu bar that users can drag and drop anywhere on screen?

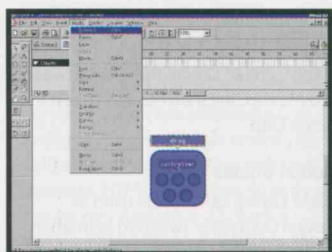
- Create your menu or navigation bar as normal. Before you finish, place a rectangular button Symbol at the top of the bar.



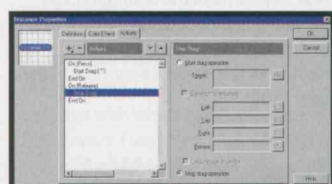
Select all the components of the menubar and use Insert>Convert to Symbol to turn it into a Movie Clip.



Click the Edit Symbol icon in the top right of the stage and select the clip you just created. Select the rectangular button Symbol at the top of the bar and choose Modify>Instance.



Add the following script in the actions dialogue using the dropdown menu:
On (Press)
Start Drag ("")
End On
On (Release)
Stop Drag
End On
Go to Control>Test Movie to try out your handiwork.



Control freak

The ActionScript command Set Property can be used in conjunction with Movie Clips to seriously trim back the need for Keyframe animation. Clip Properties you can directly set include the co-ordinates, scaling, rotation, alpha transparency and name.

Publishing

Chop it up

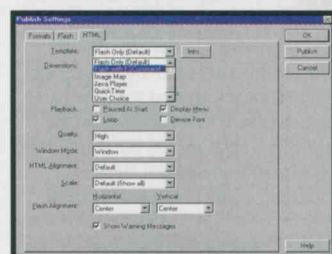
If you have a large, linear *Flash* movie it might be better to break it down into smaller segments before publication. Using the Load Movie action you can then start playing segment 1 of a movie while segment 2 downloads in the background either into an existing Movie Clip, or into a new Layer.

Loop while...

Use a small loop using the If Frame Is Loaded action at the beginning of a file to play while the rest downloads. This may not make the file size any smaller, but it will play back more smoothly than if you attempt to stream it raw.

Templates

Flash comes with several templates for publishing files. These are standard HTML files including string variables that are quite easy to understand. You can create your own by duplicating one of the files in the *Flash 4/HTML* folder and editing it in a standard text editor. You can download an updated set of templates from Macromedia's site at [w] www.macromedia.com/support/flash/downloads.html



Make your own templates or download some from the Web.

Print frames

In the newest versions of the *Flash Player*, users can print frames from your movies with the context sensitive menu. By default every frame in a movie is printable, but you can change that. Select a frame in your movie that you want users to be able to print out and go to Modify>Frame. In the Labels tab type in the name text '#p'. Now only that frame will be printable. You can add this label to as many frames as you like.

Quick publish

If all you need to do is create a *Shockwave Flash* version of your file rather than create all the auxiliary documents that go with it, the File>Export Movie command is far

quicker than using File>Publish. Also use Export Movie when all you need to do is update a SWF file that you've already placed in an HTML document.

Workflow tips

Name layers

Name your layers rather than leaving them as the default Layer 1, Layer 2 and so on — it'll help you find things more easily.

Outlines only

When working on complex Animations you can speed up *Flash* by switching into Outlines mode. *Flash* automatically assigns a different colour to each layer. You can change the default by going to Modify>Layer and choosing a new outline colour from the palette.

No go slow

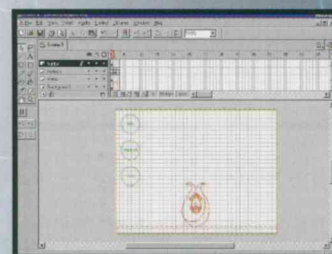
By converting animated elements on different Layers to Movie Clips, you can safely reduce the number of active Layers in a movie while avoiding the slow down you get when trying to include too many 'traditional' animated elements on one Layer.

Be prepared

When developing a large animation, leave a few blank frames at the start of the movie. This'll be of help if you need to add extra content, such as a pre-loading sequence, when you've finished.

Script preview

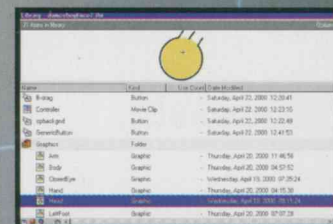
To quickly compile your movie and test the actions you've set up, use Controls>Test Movie rather than just hitting the Play switch.



Work faster in Outline View.

Mobile Library

Creating your own Library in *Flash* is simple, and it's a good idea to maintain a library containing all your favourite custom movie clips, buttons, Symbols and even ActionScripts. Create a new blank movie, and using the Import as Library option, go through your *Flash* files and look for your favourite buttons.



The Library is where all symbols are stored for a *Flash* movie. You can import or create your own easily.

Symbols, sounds and movie clips. Drag and drop them from the Library you opened to the stage, then move on to the next file. When you've finished trawling through your files (or the files you've downloaded from elsewhere), save the movie to your *Flash 4/Libraries* folder, giving it a meaningful name like 'customlibrary fla'. The next time you open *Flash*, your custom Library will appear as one of the choices in the Libraries menu. You can add to the library at any time by opening it as a movie and dragging more to it.

File folders

In *Flash 4*, you're able to organise the Library even better by creating folders for specific types of Symbol. Double-click the New Folder icon in the Library window to create a new folder, then drag and drop items to it.

Quick switch

With any other tool selected, you can [Ctrl/Cmd]-click and drag on a Symbol to reposition it without having to select the pointer tool.

Scenebreaks

Use *Flash*'s Scenes Inspector to break down your movie into stages as you work. Here you can add and rename *Flash* scenes, re-order and delete them. Using Scenes enables you to control events on the Timeline and stage better, and target which areas need optimising. When published, Scenes in Movies automatically play one after the other.

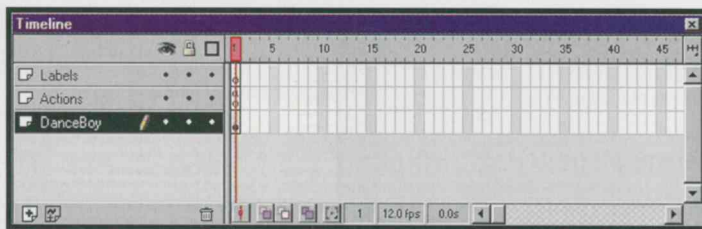
Apply to Scenes

You can target Frames in other Scenes using the Go To Action in the Instance Properties dialogue for a button or the Frame Properties dialogue. The Scene dropdown contains a list of all scenes in your current movie.

Wired for sound

Sound Sync

Selecting Sync: Stream when applying a sound using the Sound tab in Frame Properties causes the chosen sound to



Complex animations can generate a lot of layers, sort them out by naming them.

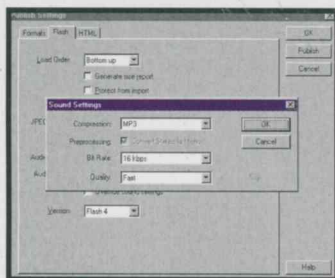
play for the number of frames available in the movie.

Loop the Loop

Enter a value in the Loop box of the Frame Properties>Sound dialogue to choose how many times you want a sound to repeat. You can't set a sound to loop indefinitely, but you can set a very high loop number.

Start and stop

To control exactly where sounds start and stop in your *Flash* movie, simply place the sound file in a movie clip and set it to stream in Properties. Then place the Movie Clip on the stage and



Set compression for every sound at once, or be more selective.

give it an instance name. Finally you should use Tell Target from the main timeline or from a button to either play or 'park' the clip.

All MP3

In *Flash 4* you can export all sound in SWF files in MP3 format from the File>Publish Settings dialogue — which means you can safely ignore any previous advice that says you should use low-quality sound files at the development stage. In fact, use the best quality sounds you can while you're building your movie and use the best compression settings for the job at the publication stage.

Selective sound

If you want to be more selective about how *Flash* exports individual sounds, highlight the chosen sound in the Library, then go to Options>Properties from the Library Palette drop-down. Short button sounds don't need to be as high quality as musical loops.

Drawing and animation tools

Alpha gradients

Use Alpha transparency across a gradient fill to create a unique effect.

- Create a new shape, then go to the Fill Colour icon. Click the colour palette icon in the dialogue that appears.
- Click New and create a new gradient. Leave one colour at 100 per cent alpha, adjust the other to around 10 per cent.
- Fill in the shape with the fill tool using the new gradient.
- As you move the gradient filled object,

you'll notice that you can see the background through it. Good for dropdown menus and general lighting effects.

Pull points

To extrude single points from a curved surface, position the arrow cursor until it changes to the 'curve' Symbol, then hit [Alt] or [Command] on the Mac, click and drag away from the shape.

No slicing

To prevent shapes and lines on the same layer 'cutting' into each other, convert them into graphic Symbols before attempting to overlay them.

Constrain lines

Holding down [Shift] while drawing straight lines constrains them to 45 degree intervals.

Rectangular angle

Pressing the 'up' and 'down' arrows on the keyboard as you draw a rectangle adjusts the radius of rounded corners.

Trace layout

In a similar way to the use of tracing images in *Dreamweaver*, you can add design artwork to *Flash* that acts as a layout tool. Designing your layout in an imaging package or scanning in a sketched design. Import the artwork into a new, empty layer. Double click on the document icon next the layer name to open Layer Properties and set the Layer Type to Guide. Lay out your movie based on the guide layer. When published, guide layers are invisible.

Motion Tweening

Flash 4 made animation with Motion Tweening a lot easier than in previous versions. Begin by placing a Keyframe on the timeline, and with it still selected import or draw the object you want to

animate on the stage. Choose Modify>Frame and under the Tweening tab select Motion. Next, insert a second Keyframe further along. *Flash* automatically creates a tweened animation between the two Keyframes. Select the second Keyframe and add alpha, rotation, colour, or scaling transforms to the object on stage — or simply move it to a new position.

Shape Tweening

Motion Tweening only works on Symbols. Shape Tweening only works on shapes — any number of shapes you like. To morph a primitive shape into text for example, begin by inserting a Keyframe in the timeline and draw a circle on the stage. Add a second blank Keyframe to the timeline and add some (suitably chunky) text to the stage. With the arrow pointer selected, click and choose the text object, then go to Modify>Break Apart. Select a frame somewhere between the two Keyframes on the timeline and choose Modify>Frame in the Tweening tab, choose Tweening:Shape.

Tweened clips

To apply Motion Tweening to tweened shapes, cheat. Create the Shape Tween as a Movie Clip, then Motion Tween the Movie Clip.

Motion Guides

Guide Layers can also be used as Motion Guides for Tweened animation. Motion Guides are paths that your tweened animation follows. Start by creating a Motion Tween as we described before. Select the Layer containing the tweened animation, then click on the blue Add Guide Layer icon on the bottom left of the Timeline window. Draw a path in the new Motion Guide layer using any of the tools available, then click back on the layer containing your animation. Select the first Keyframe of the animation and move the symbol on stage to the start of the path, then select the last Keyframe and move the symbol to the path's end.

Flash on the Web

Easy detect

You can detect the presence of *Flash* without reams of JavaScript. Publish a small *Flash* animation to a page using the *Flash 4 With Image* template. Next give the user a choice of pathways — a link to your *Flash* enhanced site if they're able to see the animation and a link to an HTML page if they don't...

Flash in Director

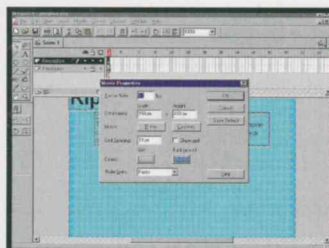
You can use simple ActionScript commands in Shockwave *Flash* files embedded in Director movies to harness the power of Lingo. In this example a Shockwave *Flash* button triggers a Director sound event, but the same technique can be used for more complex actions.

- Create a new button in *Flash*, then in the Actions section of the Properties dialogue choose Get URL in the Action field. In the URL field type 'event: name of event' where 'name of event' is a Lingo script we'll implement later.

- Export the button as Shockwave *Flash*, then import it into *Director 7* or *8*.

- In *Director* create a global script using the name of the event we entered into the URL field. For example, a Shockwave Audio cast member could be triggered with the script 'playmember <castmembername>'.

- When running the movie, clicking on the Shockwave *Flash* button triggers the Lingo event.



ActionScript can be used to communicate with Lingo and vice versa...

No gutter

If a user has the capability to view Shockwave *Flash* movies in their browser, you can link directly to the file rather than having to embed it in HTML. The main advantage of this approach is that the *Flash* file will display without any 'gutter' — a border that appears in Netscape *Navigator* browsers around embedded files.

High quality

You can set the playback mode of a movie to High within the animation rather than as an HTML parameter. Do this by selecting the first frame of your movie and going to *Modify>Frame*. Click the *Actions* tab and click on the '+' sign to add a *Toggle High Quality* action. Export as Shockwave *Flash* as usual.

Talk to the Web

Launch Web pages from within *Flash 4* movies in any window or frame you like using the *GetURL* action. Start by creating a button in your movie, then selecting it on the stage and choosing *Modify>Instance*. In the *Properties* dialogue, select *Actions* then click on the '+' for to access the drop-down menu of available actions. Choose *GetURL*, then type in the Web address you want in the URL dialogue, including the 'http' part (http://www.macromedia.com, for example). The next stage, where you define the browser window or frame accesses HTML properties directly and can be very flexible. If you have a frames-based page you can type the name of frame you want to target into the *Window* text box. Alternatively, you can use '_blank' to launch a new browser window with the targetted URL in it. Of course, Web pages you point to can contain *Flash* movies too.

Full paths

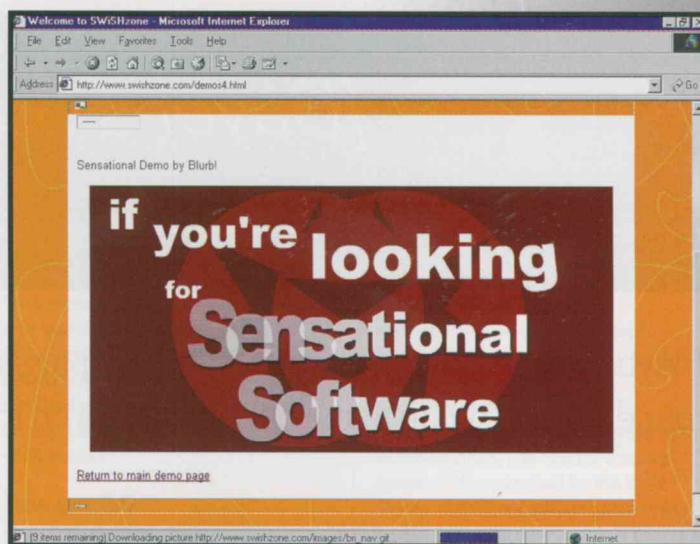
Although you can use relative URLs in *Flash*, to maintain maximum file portability it's always recommended to use full paths.

Alternative Flash

Macromedia *Flash* isn't the only package with which you can create Shockwave *Flash* files. Macromedia recently released the SWF as Open Source. And there are already several *Flash*-a-likes that have appeared in response since...

3D Flash

3D animations in *Flash* used to be horrendously complicated to create. Using a package like *3DS Max*, you had to individually vectorise each frame and import them into *Flash*. Now there are at least two standalone packages



Nothing does text effects better than *SWiSH*...

available. The older, more modestly priced *Vecta3D* lets you import 3D models, extrude 2D shapes and animate them. A trial version is available for download from [w] www.vecta3d.com. *Swift3D* is a more sophisticated affair with shading capabilities. See some examples of what it can do at [w] www.swift3d.com. Read the specifications carefully though, there's no trial version.

Flying letters

Shockwave *Flash* is becoming a popular format for creating ad banners — and that's exactly what *SWiSH* is best at. Exporting to SWF format, *SWiSH* just creates text effects using a range of preset actions. Exploding text, fading text, zooming text — you name it *SWiSH* has got it. At only \$30, it's worth having to speed up development alongside *Flash*. Download a trial or buy a copy from [w] www.swishzone.com.

Flash clone

BeOS users don't have to be left out of the *Flash* revolution — at least on the authoring side. *Moho* from Lost Marble is an animation package that shares many of the same features as Macromedia *Flash*, including vector drawing and timeline-based Keyframe animation. Available in BeOS and Windows flavours, it beats *Flash* on price at \$99. Get an evaluation version from [w] www.lostmarble.com

LiveMotion

The big news is that Adobe has created a graphics and web animation package that exports to SWF. It lacks a lot of *Flash*'s interaction routines — but the timeline metaphor is more object

oriented than in *Flash*. Read more about it in our four-page tutorial on page 46.

Generate Flash

Generator is Macromedia's server side package for delivering dynamically updatable pages that contain *Flash* components alongside database information. The plug-in components that let you author *Generator* pages in *Flash* are bundled with *Flash 4*. To deploy the pages you have to purchase

Generator though, which retails for a hefty £2800 before VAT. Or you can get *Flash Turbine*, a product that lets you add ASP functionality to your *Flash* pages instead, for just \$359!

Miscellaneous bits

Some things that Macromedia *Flash* does are just downright odd...

No Bezier

Despite starting life as a vector drawing package, Macromedia *Flash* doesn't have any Bezier drawing tools. That'll change in version 5.

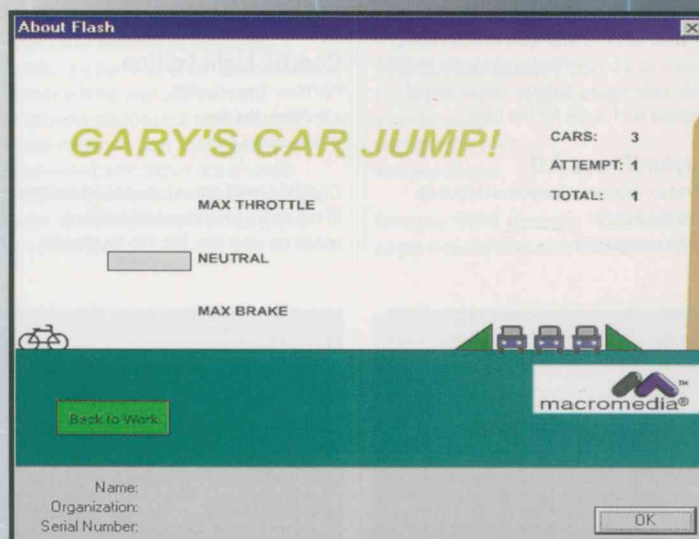
Easter eggs (1)

Easter eggs are what software developers call the hidden bits of code they put into your favourite applications, and *Flash 4* has a couple that are guaranteed to bring a smile to your face. Open *Flash 4*, then choose *About Flash* from the *Help* menu. Quickly double click on the Macromedia 'M' logo on the right of the about box, then click on the *Team* button. You're taken to a special hidden game where you get to jump over cars with your stunt bicycle.

Easter eggs (2)

If you follow the instructions above but click on the *Thanks* button instead, you're treated to a bouncing logo... **CS+5**

Flash 4 has a couple of Easter eggs that are guaranteed to bring a smile to your face



As *Flash* wasn't already enough fun, can you find this hidden game?

Software [Buyer's Guide]

Need a little inspiration? Maybe you've been seeking that elusive plug-in too long? Search no more – simply refer to our essential guide to the best packages on the market...

Acrobat 4

PC/Mac • £188 • Adobe
t 020 8606 4000
w www.adobe.co.uk

Thanks to its tight integration with *MS Office* and other leading programs, it's now as simple as clicking a button in the toolbar to convert documents or Websites into PDF (Portable Document Format) files that preserve appearance but allow for access across the range of hardware and software set-ups.

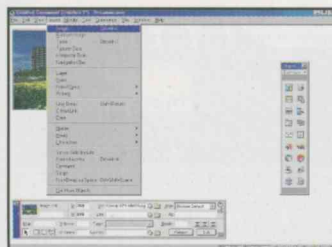
BEdit 5.1.1

Mac • £116 • Mygate
t 020 8297 9699
w www.barebones.com

One of the best tools for manipulating and searching text for the Mac, many of *BEdit's* features have been developed for Web authors who wish to edit HTML. Thanks to a built-in table designer and a Web-safe colour palette, this is one of the best such apps for the Mac.

BeyondPress 4.0

PC/Mac • £199.99 • Computers Unlimited
t 020 8358 5857
w www.extensis.com



Dreamweaver 3 supports on-the-fly content, an essential feature for corporate sites.

The plug-in of choice for Web designers with a penchant for the print traditions of *QuarkXPress*, this *XTension* will output existing or newly designed *Quark* pages into Web-ready HTML, and add hyperlinks, Java applets, animated GIFs, QuickTime movies and image maps with consummate ease.

Canoma

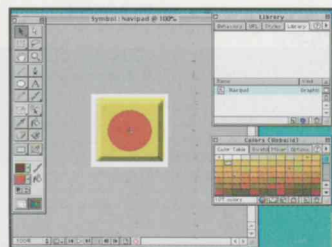
PC/Mac • £399 • Computers Unlimited
t 020 8358 5857
w www.metacreations.com

Optimised for Web standards like MetaStream and VRML2, *Canoma* will take ordinary 2D photographs and create textured 3D models from them. Despite its limitations, it works well with simple geometric shapes such as buildings and textures captured directly from the original photo.

CoolBE Light Edition

PC/Mac • Free • CoolBE
e tech@coolbe.com
w www.coolbe.com

CoolBE Light Edition is supplied for free in return for reciprocal advertising space on your site. For this laughable



Designed to complement *Dreamweaver*, *Fireworks* is the best Web graphics tool.

outlay you receive an app which can easily design animated Java banners and billboards out of any text, JPEG or GIF images. You can make your design scroll marquee-fashion, or zoom and slide across the screen.

CorelXARA! 2

PC • \$109.95 • Corel
t 020 7298 8505
w www.corel.com

CorelXARA! 2.0 will substantially assist the accessibility of your Website by tightly compressing all your JPEG, GIF and animated GIF images before you export them. It also supports *Photoshop* plug-ins for bitmap effects and will even provide you with an estimated download time for the images it creates.

DeBabelizer Pro 4.5

PC • £325 • Computers Unlimited
t 020 8358 5857
w www.equilibrium.com

Ensuring the consistency of your company or brand image across a range of media is a lot easier with *DeBabelizer Pro*, which optimises the same sets of images not just for



Crossing the floor from the world of CD design, *Director 8* is a powerful Web app too.

Websites, but also for other forms of print and multimedia publications and presentations including digital video.

Director 8 Shockwave Internet Studio

PC/Mac • £939 • Computers Unlimited
t 020 8358 5857
w www.macromedia.com

Unsurpassed as yet, *Director* is still the definitive site designer thanks to its ability to create and add Shockwave multimedia, such as animations and games, to your pages. With support for sound, video, Java and XML, *Director* is the most flexible but comprehensive tool for the earnest Web designer.

Dreamweaver 3

PC/Mac • £351 • Computers Unlimited
t 020 8358 5857
w www.macromedia.com

Apart from its beautifully executed integration with *Fireworks*, *Dreamweaver* also boasts a suite of easy-to-use editing tools which enable WYSIWYG Web authoring and additional tag modification from the same view. Fast rivaling its sister



Macromedia tops the tree in all aspects of Web design, with *Flash* providing animations.



product *Director* as the design tool of the professional, though for rather different purposes.

Drumbeat 2000 eCommerce edition

PC • £399 • Computers Unlimited
t 020 8358 5857
w www.macromedia.com

An invaluable tool for on-line shop construction, *Drumbeat* simplifies complex routines such as basket total calculations, loyalty reward points and automatic order confirmations. On top of that, it is also secure and can handle thousands of products at once.

Electrifier Pro

Mac • \$395 • Electrifier Inc
t 001 919 806 4000
w www.electrifierpro.com

Add a bit of zest to your Web pages with this sparky package which adds MIDI music, animations and digital sound to your site via a drag-and-drop interface which exports to standard cross-platform file types including animated GIF and QuickTime movies.

Fireworks 3

PC/Mac • £210 • Computers Unlimited
t 020 8358 5857
w www.macromedia.com

The latest version of *Fireworks* builds on the success of its predecessors by including support for attaching HTML and JavaScript to graphical objects. By optimising images for Web viewing and, most importantly, making vector based graphics easy, it has become an almost indispensable tool for sophisticated site designers.

Flash Writer

PC/Mac • free • Macromedia
t 01344 458 600
w www.macromedia.com

This free plug-in for *Illustrator* enables you to export graphics as *Flash* files without the need to reformat them from

bitmap form. Although it cannot handle the sound and interactive elements which make *Flash* itself so popular, it is a handy extra for speeding up Web image manipulation.

Flash 4

PC/Mac • £304 • Computers Unlimited
t 020 8358 5857
w www.macromedia.com

With added support for MP3 audio and new features such as editable text boxes and scripting commands, *Flash* has consolidated its position as the standard for vector animation, despite a strong challenge from the latest version of *Fireworks*.

Freeway 2.0

Mac • £199 • SoftPress Systems
t 0800 731 3425
w www.softpress.com

An incredibly simple HTML writer capable of producing professional looking results quickly, *Freeway 2.0* is an excellent all-in-one authoring tool for the Mac which incorporates WYSIWYG layout tools and graphic optimisation. What it lacks in sophistication it makes up for in terms of accessibility.

FrontPage 2000

PC • £105 • Microsoft
t 0345 00 10 00
w www.microsoft.com

Microsoft's premier Web page designer doubles as an effective site management tool which automatically updates internal hyperlinks whenever you alter your pages. It also features comprehensive controls for Dynamic HTML, ASP and cascading style sheets

Generator 2

PC/Mac • £2349 • Computers Unlimited
t 020 8358 5857
w www.macromedia.com

Designed to create rapidly changing, interactive or on the fly Web page

elements such as advertising banners, calendars, charts maps and headlines, *Generator* now includes a very useful drag-and-drop objects palette to speed up the process of information management and distribution via the Internet even further.

GIF Construction Set Classic

PC • \$20 • Alchemy Mindworks
t 001 905 936 9501 or
e sales@mindworkshop.com
w www.mindworkshop.com/alchemy/gifconcl.html

For a very reasonable \$20, *GIF Construction Set Classic* provides you with everything you need to create all forms of GIF, optimised for the Web. Thanks to its more advanced features it is also quick and easy to create banners and animations for your Website without complex coding.

GoLive 4

PC/Mac • £210 • Adobe
t 020 8606 4000
w www.adobe.co.uk

While the site management side of this developer has been improved for this latest version, *GoLive*'s strengths have always been in its broad but incredibly powerful range of tools which offer everything from simple HTML authoring through JavaScript, Dynamic HTML and QuickTime movie creation. Version 5 is due any day now.

Headline Studio

PC/Mac • £210 • Computers Unlimited
t 020 8358 5857
w www.metacreations.com

Not the best in its field but certainly an acceptable alternative, *Headline Studio* is a package which will produce banner ads for your site. Its main drawbacks are the lack of an internal image editor and the final size of the ads created, although it does handle text and layout well. However, there are better and cheaper ways of doing this sort of things.

HomeSite 4.5

PC • £71.25 • Unipalm
t 01638 569 600
w www.allaire.com

A complete site management and advanced WYSIWYG HTML generator, *HomeSite* handles all the latest versions of emergent Web technologies such as Dynamic HTML, JavaScript and cascading style sheets, while producing pure HTML pages, to make sure that visitors to your Website won't have to suffer lengthy download times.

HotDog Express

PC • \$39.95 • Sausage Software
t 001 03 9662 2627
w www.sausage.com

Express is a cut down version of powerful big brother *HotDog Professional*, and is one of the best routes into Web design for the novice programmer. While you cannot edit existing HTML pages using *Express*, it does serve as a complete authoring and publishing tool for functional but formulaic Web pages.

HotDog Professional 5.5

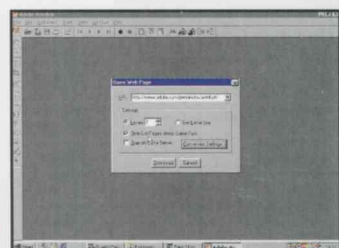
PC • \$129.95 • Sausage Software
t 001 03 9662 2627
w www.sausage.com

A more comprehensive application than the limited *Express*, *Hot Dog Professional* not only supports all forms of code-based HTML authoring and a complete set of management tools, but it also includes support for multiple users to work on a Website at the same time over a local network — an increasingly invaluable facility for large professional environments.

HTML Assistant Pro

PC • \$89.95 • Exit0 Digital Systems
e info@exit0.com
t 001 902 835 2867
w www.exit0.com

Because *HTML Assistant Pro* converts pages directly from rich text format files



Acrobat works alongside other packages to preserve the integrity of your pages.



New features make *Paint Shop Pro 6* ideal for image manipulation and Web optimisation.



For a fraction of the price of other apps, *HotMetal Pro* has all core Web design tools.



As you would expect, *Photoshop 5.5* has embraced Web-friendly features.

into Web-ready HTML, you can import documents straight from a word processor with ease. It also supports live previewing and checking of your pages in any browser and the insertion of multimedia tags into your work.

HoTMetal Pro 6.0

PC • £116 • Softquad
t 020 8387 4110
w www.softquad.co.uk

For the price, *HoTMetal Pro 6.0* is one of the best complete suites of tools for HTML authoring and general site management, thanks to its intuitive drag-and-drop interface, in-built graphics manipulation utility and additional server software bundle.

HTMled PRO 3.0

PC • \$59.95
Internet Software Technologies
e sales@ist.ca
w www.ist.ca

Another complete site authoring package with support and tools for creating cascading style sheets, animated GIFs and image maps, *HTMled Pro* also features syntax checking and an FTP interface.

IBM HotMedia 2.5

PC/Mac • free • IBM
t 0990 426 426
w www.ibm.com

If you want to spice up your sites with animations, streaming audio, visual effects and panoramas, *HotMedia* could well save you and your viewers a lot of time and aggravation. You don't have to load separate plug-ins to view these special effects — *HotMedia* sites determine what software is required.

ImageStyler 1.0

PC/Mac • £104.50 • Adobe
t 020 8606 4000
w www.adobe.co.uk

A WYSIWYG designer for creating HTML effects without the HTML,

ImageStyler is great for giving a site a little jazz. Not only does it optimise all its output for the Web, but also enables the creative user to introduce simple Java effects, such as rollovers, and image maps with a simple interface.

NetObjects Fusion 4.0

PC • £234 • Twilight Zone
t 01923 801 812
w www.netobjects.com

Fusion is a veteran site design tool, which has adapted its already strong and much admired site management facilities to include a superior point and click interface for adding pages with Dynamic HTML commands, audio and video files and Java.

Netscape Composer

PC • free • Netscape
t 020 8564 5100
w www.netscape.com

Not the best but certainly the cheapest WYSIWYG design tool, *Composer* is included free with Netscape Communicator and handles simple Web pages with ease. Although limited, it will generate all the basic HTML commands for a working site.

Paint Shop Pro 6.0

PC • £106 • Digital Workshop
t 01295 258 335
w www.digitalworkshop.co.uk

JASC's hugely successful and more than moderately powerful image editing app has a range of Web specific tools, including the ability to create and edit vector graphics. It also comes bundled with *Animation Shop 2* for adding movement to your designs.

Painter 6

PC/Mac • £299.99 • Computers Unlimited
t 020 8358 5857
w www.metacreations.com

If you fancy trying your hand at being an old master, *Painter* is the perfect tool. It enables the artist to mimic traditional

media when designing digital images, and comes complete with several Web specific functions.

PhotoTools 3

PC/Mac • £99.99 • Computers Unlimited
t 020 8358 5857
w www.extensis.com

PhotoTools features a range of special effects tools for image manipulation, with a series of command sets just for Web design. Bundled with a GIF animation program, *PhotoAnimator*, this update also features new support for shadow effects and bevel shapes.

Photoshop 5.5

PC/Mac • £399 • Adobe
t 020 8606 4000
w www.adobe.co.uk

Long the most complete graphics app for professional designers, it's no surprise that *Photoshop 5.5* has been empowered with Web-friendly extras. Packaged with *ImageReady 2.0*, an optimisation tool for net images, it remains the must-have image app.

QuarkImmedia 1.5

Mac only • £464 • Quark
t 01483 445 566
w www.quark.co.uk

QuarkImmedia enables designers to add hyperlinks and interactive multimedia to standard *Quark 4.02* pages without the need to reformat. The software required to play the multimedia is free, and the whole package is perfect for creating cross-media presentations.

QuickTime 4 Pro

PC/Mac • \$29.99 • Apple
t 0870 600 6010
w www.apple.com

The authoring tool for QuickTime movies is a complete editing package ideal for short Web movies. It includes support for streaming media so that visitors to your site can download and watch video clips simultaneously.

RealProducer 7.0

PC/Mac • free • RealNetworks
t 0870 240 2486
w www.realnetworks.com

Although the freely downloadable *RealProducer* features everything you need to add streaming RealAudio and RealVideo to your site, registering for the commercial version gives you better quality output and enables you to customise the codecs to your taste. One of the staple Web video formats.

Splash 1.2

PC • \$49.95 • Beam International
w www.gosplash.com

All you need for quick drag-and-drop Webpage design, *Splash* also includes a speedy wizard for creating Java applets to liven up your site. The only drawback is that you cannot edit the basic HTML.

Superscape 3D Webmaster

PC • £600 • Superscape
t 01256 745 745
w www.superscape.com

Not yet a common way of presenting Web pages, adding a touch of 3D interactivity can keep your site one step ahead of the rest. *Superscape* enables you to create Web-ready 3D worlds and then publish them as VRML or in its own, more compact, format.

StyleMaster Pro

PC/Mac • \$49.99 • Western Civilisation
e sm-info@westciv.com
w www.westciv.com

Cascading style sheets are now a stock feature of most HTML editing packages, but if you are unable to upgrade your older software, *StyleMaster Pro* is a handy point-and-click interface for creating CSS files separately and then importing into existing HTML.

Viscosity

PC • \$179 • Jedor Inc
w www.jedor.com

Viscosity is a Windows image and video editing package, which enables you to perform edits on single frames or entire movies and preview your work without having to re-render each time.

WebExpress 3

PC • £57.58 • The Thompson Partnership
t 01889 564 601
w www.ttp.co.uk

Despite its lack of support for Java applets, *WebExpress 3* is an affordable first-time WYSIWYG package. It will generate tables, frames and style sheets, but doesn't allow HTML tweaking.

Xara3D 3

PC • \$39 • Xara
t 01442 350 000
w www.xara.com

A complete tool for designing and rendering 3D text, *Xara3D* gives you control over all aspects such as lighting, depth, position and bevel, and exports images or animations for the Web. **ca-s**



Painter 6: the best natural media graphics package, and also full of handy Web tools.



Splash is a low-cost and Web authoring program which is ideal for beginners.

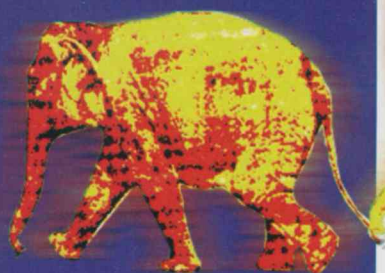
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● £100 for 13 issues

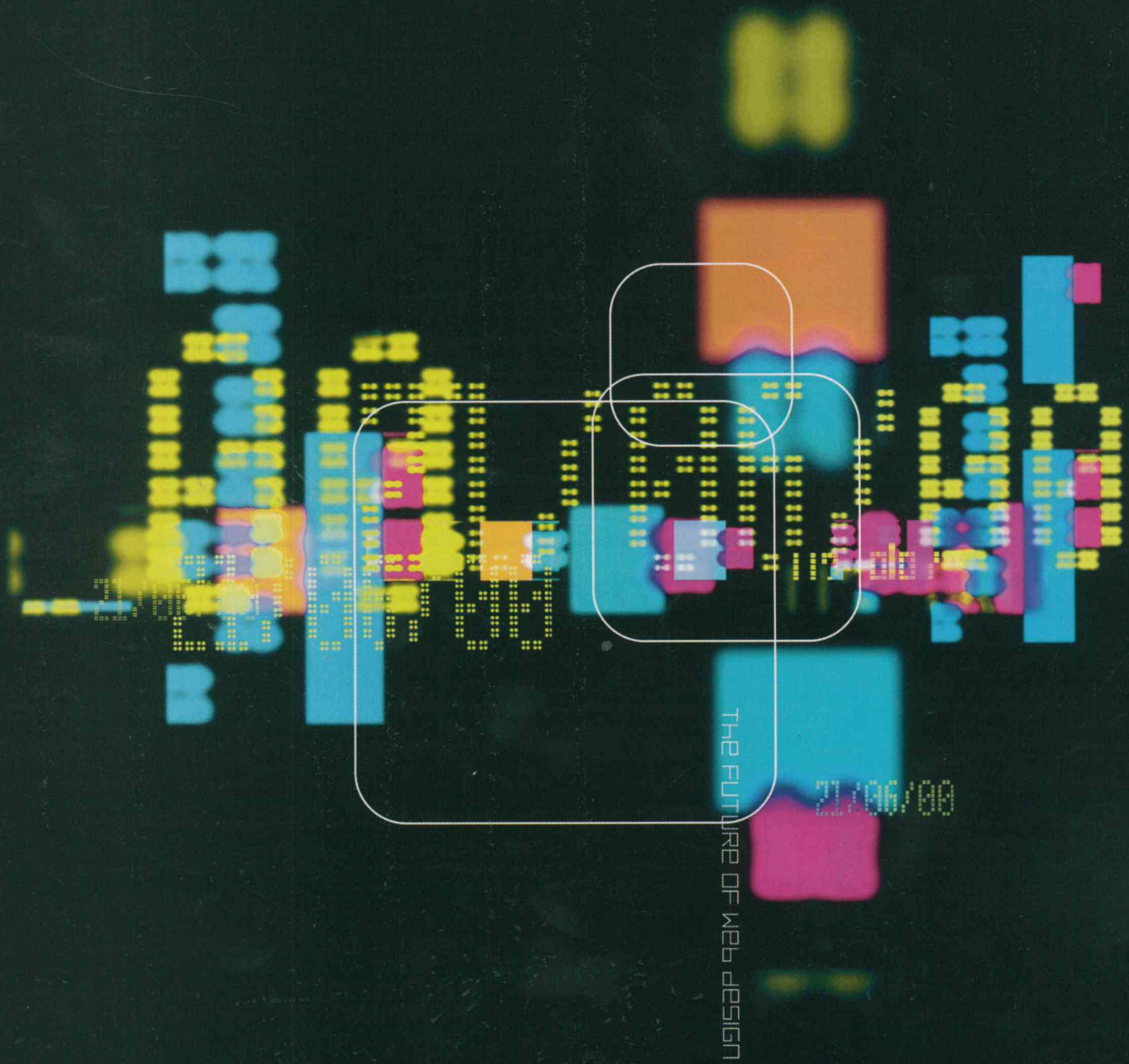
**Don't forget the Links section on the
Computer Arts covermounted CD! This
will provide you with a direct link to
the website of the specific companies
shown in this section**

To be seen here call Matt on 01225 442244 ext 2435.



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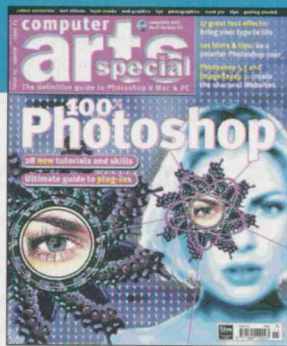
THE FUTURE OF WEB DESIGN

ISSUE ONE ON SALE 21 JUNE 2000

FOR MORE INFORMATION, TURN TO PAGE 66...

Back issues [10/06.00]

All Back issues cost £6. Postage free in UK. Add £1 per issue for European orders. Add £3 per issue for the rest of the world.



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It's 100 per cent *Photoshop*! Don't miss 28 new tutorials and skills, and our ultimate guide to plug-ins. Plus 17 great text effects to bring your type to life, and 101 hints and tips to make you a smarter *Photoshopper*. And create the sharpest Websites with *ImageReady 2*.

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Be inspired by our latest 3D special. Our modelling section will improve your skills with tutorials on the creation of Bullfrog's Dark Mistress, a monster shark and an alien insect. Meet the makers of *Walking With Dinosaurs*, and visit Europe's largest motion capture studio at Audio Motion. Plus 63 tips on lighting and rendering.

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Computer Arts Web Special – COSB0007

It's 100% Web design, with 175 essential tips, 12 all-new pro tutorials and the secrets behind on-line interactivity revealed. Be inspired by the world's greatest splash screens, meet some of Britain's most cutting edge Web designers, and enter a whole new dimension with a look at 3D on the World Wide Web.

CD Fireworks – full Web graphics application (dual), plus NetObjects *Fusion 2.02* (PC only), a complete site design program, and demos including *Dreamweaver 3*.



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Enter the world of digital video, with a little help from our 101 professional tips. Discover how to create a pop promo for MTV for under £500. Follow our expert tutorials showing you how to edit your footage with style, and all the latest software and hardware is reviewed; with a special look at Apple's *Final Cut Pro 1.2*.

CD MediaMania Video (PC only), a complete suite for creating your own video effects. Plus quality royalty-free footage and effects, and a digital video demo collection.



Computer Arts 3D Special – COSB0009

Think 3D is too difficult for you? Think again. The latest 3D Special will explain the tips and techniques from beginner to advanced. There are tutorials for *LightWave*, *Maya*, *3D Studio MAX*, 83 tips for the top packages, and inspiring profiles from pros and amateurs alike. Plus, how to get a job in 3D, resources, and more.

CD PIXELS3D/2.1.4 full version (Mac only), a complete tool for modelling, rendering and animating. Plus demos of *Cinema 4D XL 6*, *Bryce 4* and lots more.

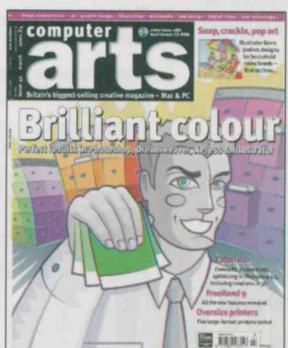
Available now!



Issue 41 – Code CA041

Dreamweaver 3 tutorial, *Smoke & Mirrors* profiled, *Maya 2.5* reviewed. **CD** Three free typefaces!

Available now!



Issue 42 – Code CA042

Colour management, *Fireworks 3* and *Photoshop* tutorials. **CD** Free *CorelDRAW 8 LE* (Mac)!

Available now!



Issue 43 – Code CA043

Cinema 4D XL 6 tutorial, *InDesign* tips, eight 21-inch monitors tested. **CD** *Fusion 2* FREE & *Fusion 5* demo.

Available now!



Issue 44 – Code CA044

Adobe *LiveMotion* beta, *Final Cut Pro* review, scanners round-up. **CD** *LiveMotion* beta & free fonts.

Available now!



Issue 45 – Code CA045

FreeHand 9 tutorial, photorealistic 3D Skills, *Discreet Combustion**. **CD** *FreeHand 9* & *trueSpace* demo.

call the hotline: +44 (0)1458 271 108

webguide

Need a little inspiration? Maybe you've been seeking that elusive plug-in too long? Search no longer...

Useful resources

The Ultimate Counter

www.ultimatecounter.com

So you want to add a hit counter to your site to see how many visitors you get? This is the place where you'll find what must surely be the Web's most popular counter service, with over 400 million counters in operation! You can use the basic service for free, and a small upgrade fee gives you more advanced options.

The Yell Web Awards 2000

<http://free-programs.com/develop.shtml>

Why waste your valuable time trying to find the best Websites or the best Web tutorials and utilities when this site has done it for you? One visit here is enough to stock your library with the essential site construction tools and the know-how to use them.

Bellsnwhistles.com

www.bellsnwhistles.com

Building your Website can demand a great deal of resources, such as graphics, applets, programming help, music files, construction tools and more. This site is the definitive starting place, with literally hundreds of files for you to download and use free of charge.

The Java Centre

www.java.co.uk

HTML might be fine for basic page design, but when

you want interactivity, you're going to need a language such as Java. The Java Centre is a central resource for all things Java in the UK, from news and events to book reviews and code snippets. There's even a series of Java applets available for download.

FreewareJava.com

www.freewarejava.com

You can really add some excitement to your Website using Java applets, and this is certainly a great place to start your search. It contains 670 downloads, not to mention links to Java e-zines, 23 tutorials, jobs and more besides. It's also a very clean, functional site to find your way around.

Anfy Team

www.anfyteam.com

Java applets can make your personal home page much more attractive to look at, and hold people's attention for much longer than plain text and graphics sites. Anfy is a versatile application that creates a plethora of effects that will really make your site pop! Be there or be square...

Meta-Builder 2

<http://vancouver-webpages.com/META/mk-metas.html>

If you're creating your page using raw HTML, rather than with a program like *FrontPage* or *GoLive*, it can be a real pain to generate the Metatags that are used by search engines to index and find your site. This cool on-line program does all the work for you. Simple but devastatingly effective.

Dr Website

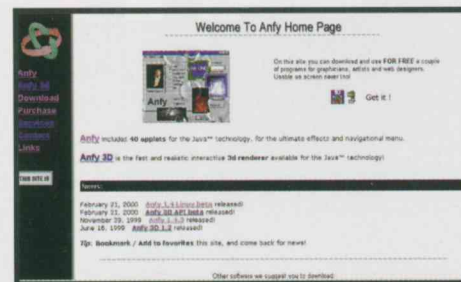
www.nerdworld.com/users/dstein/nw405.html

No matter how good you think your knowledge of Web programming is, you're bound to encounter problems from time to time, especially when new versions and commands are appearing almost daily. This site is a huge archive of questions and answers on all things Internet, and better yet, they're categorised for your browsing convenience.

Web Building

www.help.com/cat/4/index.html?tag=st.hp.fd.ont.cat_4

There are times when it's not enough just to read an FAQ or browse through an archive or previous



Help your site to stand out from the rest with Anfy Team's magnificent Java applets.

questions. Sometimes you need to ask questions and get answers yourself. This site hosts a huge number of Web-related question and answer forums, and links directly into many newsgroups too.

Graphics and design

Spooky and the Bandit

www.spookyandthebandit.com

We've included this site purely for its aesthetic and inspirational value. Although many surfers dislike the format, 108 million PCs and Macs are capable of viewing *Shockwave* content, and sites that host such material can expect viewers to stick around on average twice as long. This site uses *Shockwave* extensively, and to great effect. See page 18 for more.

Computer Arts

www.computerarts.co.uk

The recently redesigned and relaunched *Computer Arts* Website is the central repository for all things creative — news, reviews, tutorials, a forum and more. With breaking news and daily tips, it's the essential resource for all creative folk. Whether you're an art director or you're just starting on your first Website, you'll find something for you here.

Computer Graphics on the Net

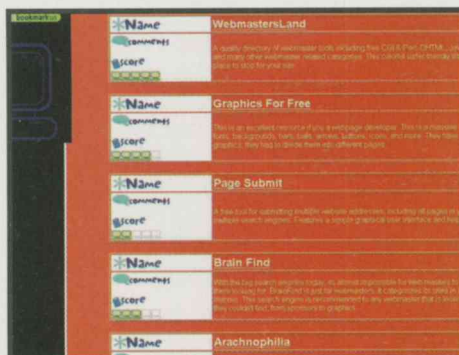
<http://ls7-www.cs.uni-dortmund.de/cgotn/>

It often seems as though America virtually owns and runs the entire Internet, which is why it's refreshing to discover this European links site. Unlike most sites, which concentrate on mainstream computer graphics, this scholarly site provides links to sites that focus on graphics development and science.

Adobe Systems

www.adobe.com

It's home of one of the world's favourite graphics companies, but it's more than that, it's also the clearing house for a lot of complementary products that you could spend months chasing down elsewhere. Of particular interest is the plug-ins page. And the Adobe Forums are a great place to talk to others in your business to sort problems and exchange views.



Let someone choose the best sites and tools for you at the Yell Awards page.

Creating Graphics for the Web

www.widearea.co.uk/designer

Although this is a relatively compact site, it's dedicated to the issues of Web graphics. It discusses the differences between file formats, talks about image maps and buttons and even offers tips on optimising Photoshop and other graphics programs for the Web.

Viewpoint

www.viewpoint.com

Probably the major player in the world of serious 3D models, Viewpoint has an extensive catalogue of movie-quality datasets costing from under £20 to hundreds of pounds each! They will also build models to your precise requirements. There's a complete on-line catalogue, which is fun to ogle over, even if you can't afford much...

Zygote

http://store.zygote.com/

Good, high quality 3D models are hard to come by, but Zygote is one of the major players in the market. Unlike Viewpoint, whose models (although excellent) tend to be expensive and very high-end, Zygote creates models and props for fun programs like *Poser* and *Bryce*, as well as covering the professional stuff.

The Poser Forum

www.poserforum.com

An independent meeting place for fans of MetaCreations' *Poser* program. The site has hundreds of free models, sets, props and image maps for existing models. More importantly, the world's most experienced *Poser* modellers and animators meet here so it's a great place to go if you're trying to take your mastery of the program to the next level.

Corel Designer.com

www.designer.com

Corel's answer to Creative Pro. It is hosted with the intention of assisting and inspiring Corel product users, although much of the advice can be adapted to other programs. Now that Corel has acquired *Bryce*, *KPT* and *Painter*, this site is very much a rival to Adobe.com in terms of value.



The ultimate magazine for creatives now has the ultimate Website. A wealth of information on *Computer Arts* and the *Specials* can be found here, along with brand new content.



Of course it's stylish, it's Adobe's home. It's also a great place to get advice from other experienced users.

Free Graphics

www.freegraphics.com

One of your key resources when building a Website will be the graphics you use. Most people acquire clip art libraries, but when you're getting started, or if you're looking for something specific, a site such as this, with links to hundreds of free graphics sites, might well be the perfect partner.

3D Café

www.3dcafe.com

You can never have too many 3D models and this site is a great source of free and commercial ones. There's also a chatroom, a modelling forum, links to other sites, a model exchange and even the chance to find jobs in the industry. This is a comprehensive site with something to offer anyone with an interest in 3D.

Cooltext.com

www.cooltext.com

Why waste time designing your own logo when this handy site will do it for you? Choose from 21 basic styles and then customise your choice on-line to create logos that are anything but mundane. A great way for beginners to create custom graphics.

Photo Secrets Stock and Royalty Free Photographs

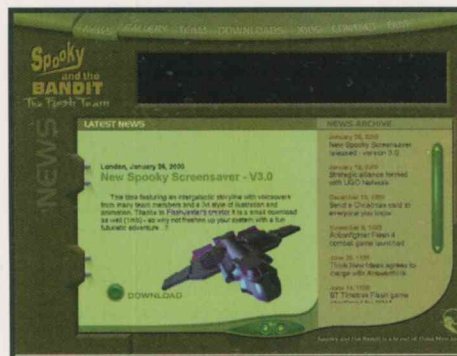
www.photossecrets.com/links.stock.html

The difference between a professional-looking site and an amateur one is often the fact that the amateur one uses corny clip art. This Website provides links and searches to millions of royalty-free stock photos which you can use to improve your on-line image.

Clip Art.com

www.clipart.com

Although free clip art may not be the way to add originality to your site, it's certainly a good way to keep your costs down when you're getting started. This is another excellent links site that provides access to dozens of other sites containing millions of items of clip art. A lot of it might be cheesy but you never know just what you might find here.



You'll believe a site can fly after you visit Spooky and the Bandit's superb Shockwave site.

Computer Graphics Resources

www.nerdworld.com/users/dstein/nw405.html

Thanks to its poor design, it's tedious to browse through this site, but it hosts a huge list of computer graphics related resources, including individuals, companies, chatrooms, articles and more. There are also many related topics, such as animation, graphics hardware and virtual art, each of which also has their own extensive directories of contacts.

Ryan Noguchi's Computer Graphics Resources

www.geocities.com/CapeCanaveral/4726/zcg.htm

This site will never win any design awards, as it's no more than a list of hyperlinks, organised by category. Nevertheless, this is one of the more comprehensive and better organised graphics-related links sites we've encountered. It's particularly good for finding more esoteric things like graphics programming, texture libraries, hardware resources and so on.

Optimising Web Graphics

http://webreference.com/dev/graphics

With so much dross on the Web, it's critical that your site loads before people lose interest and go elsewhere. The best way to do that is to optimise your images so that they're as compact as possible. This superb site is a comprehensive guide to the process.

The Graphic Vault

www.graphicvault.com

Although there are literally millions of free graphics out there, including every type of Website furniture, it's still always nice to encounter a site that offers something a little bit classy. This site offers everything you could need to make stylish looking Web pages, including textures, buttons, dividers, backgrounds and more.

Promote your site

NetMechanic

www.netmechanic.com

Net Mechanic specialises in services to enhance your Website and get it noticed. The company also

specialises in products that monitor your site so you can see it as your potential viewers do and intercept problems before you lose visitors.

Webmaster Resources

www.webmaster-resources.com/freetools.shtml

If you've created a Website that you want people to know about, this is a useful site. It includes a Metatag generator for search engine submission. It also provides a report on your Metatags. Once you're happy with the results, use Simple Submit to submit your site to over a dozen major search engines.

Submit It

<http://free.submit-it.com/>

With hundreds of search engines and millions of pages of on-line information, it can be a daunting task to advertise your Website. For a small fee, you can pay the professionals to do it for you. This site offers various levels of service as well as the ability to monitor how effectively your site is registered.

Introduction To Search Engine Design

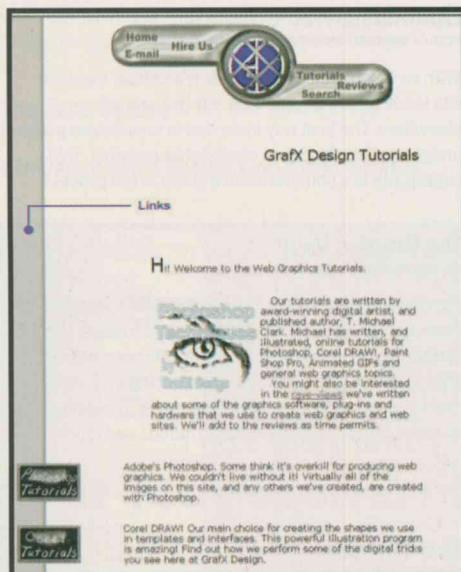
www.searchenginewatch.com/webmasters/intro.html

It's not enough simply to register your site with search engines, you've got to understand how they work too. This superb site describes the way you can move your site up the ratings so that it comes up in the first page or two, every time someone searches. This is not a site you want your competitors to visit! Just hope they don't read *Computer Arts*...

Promoting Your New Website

www.bygpub.com/webpromotion

Getting your new Website known and recognised is a task in itself. Don't try to figure it all out on your own though, this great site covers a multitude of topics including search engines, linking and so on.



Learn to use your favourite paint programs with GrafX Design's on-line tutorials.

Reference and training

GrafX Design

www.grafx-design.com/tutorials.html

There are loads of excellent tutorial sites offering general training in everything from graphics to HTML. However, this one is unusual because it provides tutorials on several specific programs, *Photoshop*, *Corel Draw* and *Paint Shop Pro*. There are also the more general tutorials covering such things as animated GIFs and the use of colour on the Web.

Creating Killer Websites

www.killersites.com/core.html#top

Although this site is actually an advert for the second edition of the best-selling book *Creating Killer Websites*, the site includes a generous number of design tips taken from the book. Even if these don't tickle your fancy, this site is genuinely appealing to look at, unlike so many sites purporting to provide Web design services or tips.

The DTP/HTML Tutorials

www.dtp-aus.com

When it comes to page layout, the basics of paper layout still apply to Web pages too. That's why this site, which includes tutorials on both desktop publishing and HTML, offers something beyond the norm. You can learn the fundamentals of good page layout, then learn how to apply them to your site.

The HTML Learning Centre

www.w3nation.com/resources/learning/html/index.html

HTML is constantly evolving, and this site offers tutorials that are bang up to date. We particularly liked the fact that it includes program-specific tutorials for *Dreamweaver*, which is one of the Web's most popular design tools, enabling you to avoid raw HTML altogether for much of the time.

Art and the Zen of Websites

www.tlc-systems.com/webtips.shtml

There aren't many sites that combine philosophy with humour and practical advice, but this is one of them. Art and the Zen of Websites is a practical, pragmatic (yet not too lengthy) look at what makes a great Website and what doesn't, and why. It's full of tips such as, 'Before you put a really dark background on your Web page, ask yourself this: why is it so much harder to drive at night than in the daytime?'

A Beginner's Guide to HTML

www.ncsa.uiuc.edu/general/internet/WWW/HTMLPrimer.html

Much as Web design programs are reducing the need for intimate HTML programming knowledge, to optimise your site and create the best site possible, you'll still need to resort to code occasionally. Here's



Here's our favourite site, the Gallery at the Poser forum. There are some seriously talented artists out there!

an excellent place to start learning, though more advanced designers will want to look elsewhere.

Steele's Docs and Tutorials

www.geocities.com/SiliconValley/Park/9784/tut.html

If you're serious about graphics, you may actually want to write your own 3D graphics applications. This site is filled with tutorials on the science and techniques for coding every conceivable type of graphics engine, from games to professional rendering engines for ray tracing packages. Heavy going but fascinating stuff.

How Stuff Works: Web Pages

www.howstuffworks.com/Web-page.htm

When you're just thinking of moving from Web spectator to Web creator, it can be very daunting. Here's a great site that puts the first steps and Web pages in general into language that even a supermodel could understand. It's ideal for technophobes, children and technology-resistant older readers too.

WebDeveloper.com

www.webdeveloper.com

There's an amazing number of people out there who are freely providing vast amounts of design and programming knowledge. This site is the hub of a vast network of Web experts who are only too happy to provide you with tips and help on every conceivable aspects of Web design, from search engines to colour schemes and beyond.

The Source for Java Technology

<http://java.sun.com/docs/index.html>

There are some first rate Java reference sites on the Web, but this is one of the more scholarly, catering for experienced Java coders. There's comprehensive documentation covering the language, as well as detailed specifications explaining the real nitty-gritty. Before you buy any books on the language, check out this site.

Hex Colour Chart

www.sunyit.edu/~vankuyw/html-ref/color.html

When you're determined to write in HTML, even simple things like specifying the colour of items on the page

can be a problem if you don't have access to a full Hexadecimal colour catalogue. Now you do! Now if someone can tell me what Papaya Whip and Navajo White look like please...

The Pixel Foundry

www.pixelfoundry.com

Where *Photoshop's* manuals stop, this site begins. It's chockful-o' hot tips goodness! The site includes Kai's *Photoshop Tips* (you may remember him as the eclectic guru who created *KPTD*). It also includes *Photoshop Tips* on-line magazine, and *Tom's Tips for Web designers*. Before you fork out on an expensive reference book, go here first.

Design Sphere

www.dsphere.net

Here's another comprehensive site where you'll find the hours passing like seconds as you lose yourself in its tips, business directory, graphics FAQ and on-line magazines (e-zines). If you're looking for staff or a job, you'll be especially interested in the jobs section, the featured artist and folio.

Web Reference

www.webreference.com

There are so many facets to designing a Website, including psychology, marketing, design, programming, funding, new technologies, security and more. This extensive site hosts FAQs, professionally-written articles, design tips, programming advice and more.

The Complete Webmaster Resource

www.biginfo.net

So you've been programming Websites for a while now, and now you need to advance to the next level. This beautifully-designed site offers tutorials on everything from basic and advanced HTML, to DHTML and cascading style sheets. It's a useful place to learn about advanced Web design.

Scott's Tutorials Hotlist

<http://cires.colorado.edu/people/peckham.scott/tutors.html>

The Internet is a place of great extremes. There are lots of ignorant selfish people, but there are millions of

altruistic folk giving freely of their time and knowledge for no reward. This site is a jumping off point to tutorials on everything from Java to Unix and beyond.

3D Tutorials

www.ruku.com/3d.html

There's no end of material helping you to learn *Photoshop*, but 3D tutorials are much thinner on the ground, which is why this site is such a valuable resource. It covers a number of programs including *Ray Dream*, *Infini-D*, *Poser*, *3D Studio* and *Bryce*. Some of the tutorials can be applied to other programs as well.

3D Artists

www.raph.com/3dartists/artgallery

This is a great site for anyone hoping to work in the 3D industry. It contains a gallery with over 640 pieces of work in it, and believe us, the standards are high. However, if you're brave enough, you can submit your own work too. There are also tutorials, a job centre and interviews with successful 3D artists.

3D Animation Workshop

www.webreference.com/3d/indexa.html

If 3D modelling is exciting but complicated, that's nothing to the challenge or rewards that comes from animating. This site has a comprehensive and ongoing 3D animation tutorial in which you can learn how to make the best of your 3D software.

Multimedia

Crescendo

www.liveupdate.com

Crescendo is one of the Web's most popular music players. Webmasters can use it to replay MIDI files and MP3s. Users can download the player software and change the skin of the jukebox to suit their mood. This is where you'll find both the player and the Webmaster's hosting scripts.

Real Networks

www.real.com

Video adds immediate impact to your site and when it comes to Internet streaming video, *RealPlayer* is one



There might be lots of free Web art on the net, but quality like this still shines above the rest.

of the most popular decoders. At this site you can also buy the encoder software as well as tools to incorporate streaming video directly into your own Website. It's not particularly easy though, so don't expect instant results.

Add Sound to Your Website

www.webdiner.com/Webadv/inter/audio.htm#basic

Although it's entirely possible to trigger wave files, play MIDI, MP3s and other streaming audio formats, it's surprising how few Web hosts know how to include such files, or understand the issues governing their use. This site provides a basic overview, with links to other related sites too.

Webmonkey

http://hotwired.lycos.com/Webmonkey/multimedia/audio_mp3/index.html

Adding multimedia files such as audio, animation, video and even *Flash* files is a great way to create interest and generate a word-of-mouth buzz about your site, provided you don't go over the top. This site provides many intelligent and well-written essays on diverse Web-related subjects, and you're bound to find something of interest here.

Official organisations

The Association of Internet Professionals

www.association.org

The Association of Internet Professionals is the leading professional association of the Internet industry. It exists to unify, support and represent the global community of Internet professionals. The organisation also serves as a forum for the ideas, people and issues shaping the future of the Internet industry — well, as much as anyone is, anyway.

The International Webmaster's Association

www.iwanet.org

If you're serious about working as a Web designer, membership of this organisation is recognised and valued the world over. With chapters all over the world, this organisation provides education and fosters advancement in the field of Web design. **ca-s**



Not only is this an elegant site to look at and use, but *The Complete Webmaster Resource* is a very useful place to expand your design knowledge.



If you're serious about Web design, perhaps you should join one of the official bodies such as the AIP.



Next issue [Photoshop]

All contents correct at time of going to press

Photoshop 6

The tidal wave is coming...
Photoshop 6 will wash away your
 preconceptions of graphic editing —
 and we'll have tips, tutorials and
 techniques to help you master it

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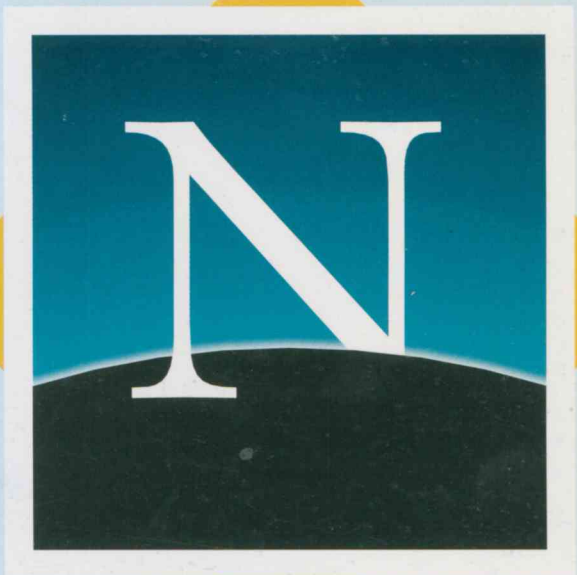


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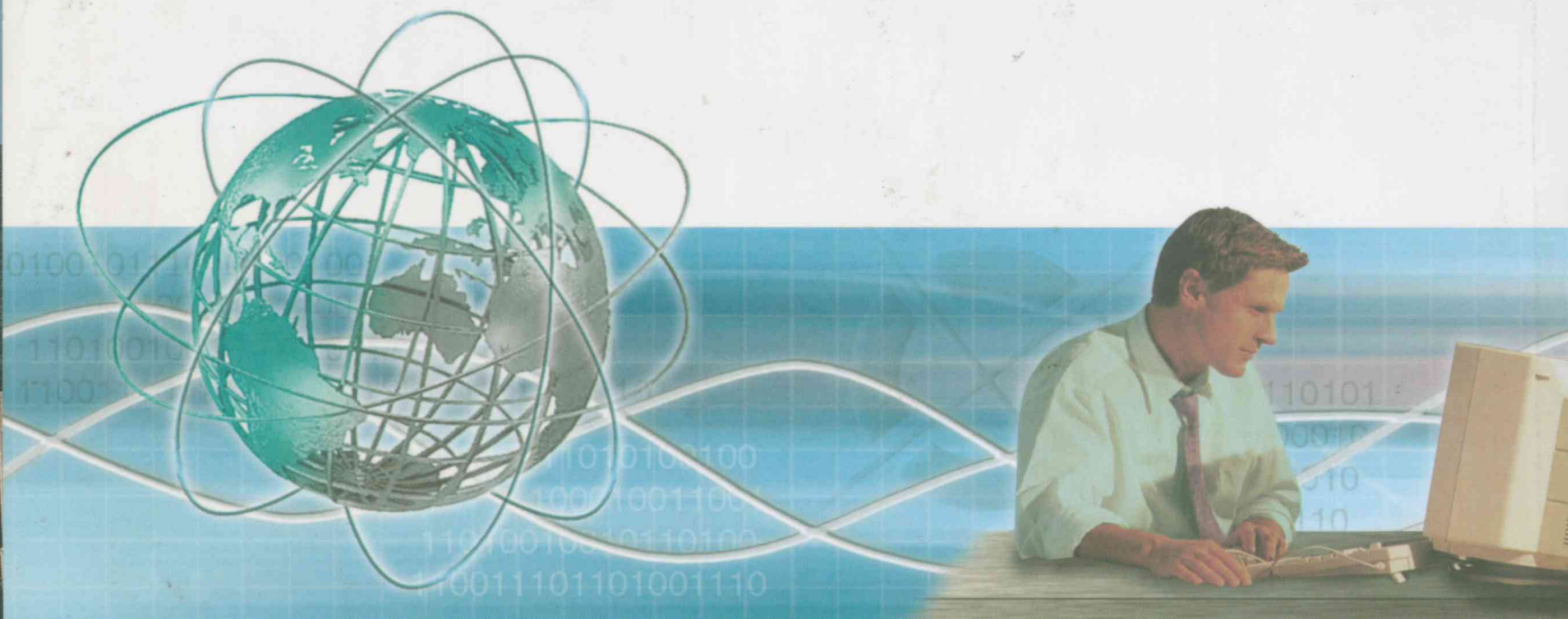
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