



Web Page Design

<http://kickme.to/tiger/>

web page design

FOR DESIGNERS

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The purpose of this site is not to teach people how to produce web pages. There is little mention of HTML or any other technical stuff other than in passing. It is assumed that the reader already has a grasp of HTML programming, or has made the decision to use one of the new WYSIWYG web page editors.

It is aimed at people who are already involved with design and typography for conventional print and want to explore the possibilities of this new electronic medium. They are probably already using page layout tools like Quark XPress, PhotoShop, Freehand and Illustrator and have discovered that designing web pages is something quite different.

Web pages can be simple and functional or as mind-blowingly experimental as you like. In either case, or anywhere in-between, the fundamental principles developed over centuries of designing for the printed page are just as valid and can be adapted and extended to a computer screen.

I invite comments from anyone interested in public dialog and debate with the sole purpose of promoting and furthering the standards of design on the World Wide Web.

The contents of this site can be [downloaded](#) as a compressed archive for reading offline.



This site has been awarded
the prestigious [High Five Award](#) for excellence in web site design

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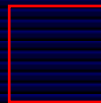
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Visits since



8/8/1996



a case history



TimeOut
London Guide

Time Out London Guide
An interactive 'Point and Click'
electronic book



Tomorrow's Newspaper

'Tomorrow's Newspaper'
Startup Screen

When I was approached by the Daily Telegraph to do an interactive visualisation of an electronic newspaper back in 1993, there was a realisation that the dissemination of daily news on sheets of paper had an uncertain future.

I had been working with Apple Computer on interface design for the, then new, Newton MessagePad, and the possibility of delivering news on a future version of such a device seemed attractive. It would be compact, light and portable, have a colour screen, sound and a pen driven interactive interface that anyone could use.

So the hardware was foreseeable, just a logical extension of existing technology, but how was the news going to be delivered to the user?

There were various possibilities for transferring the large amounts of data required, each with their own plusses and minuses. Diskettes, mini CD-ROMs, satellite communications and cellular radio were all considered - remember, this was all science fiction in 1993 - but what did emerge, was that the system, whatever it was going to be, had to be interactive to give it a unique advantage. It was no use just being able to read the virtual newspaper, the reader had to be able to respond. It must be a two way process!

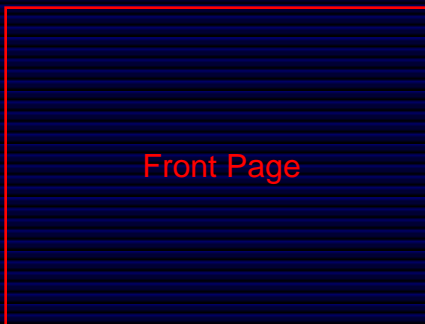
The Macromedia Director presentation was pitched at the advertising business at a number of conference venues across the world. It showed the concepts of navigating through a 'virtual' edition of the Daily Telegraph with the pen driven interface. One could click on a headline and have it expand into a whole article and on a football photograph to see Ian Wright score a goal for Arsenal as a digital movie clip. But what really caught the audience's imagination, was the demonstration of clicking on an advertisement for BMW, seeing the television commercial, and then being presented with a menu of choices to get the number of their nearest dealer, have a brochure sent to them, arrange a test drive, finance, insurance - and even driving lessons.



The 'NewsCaster'
An imaginary PDA with
a colour screen

The reaction to the presentation was awesome, the advertising men wanted it, and they wanted it immediately!

So, I was set the task of finding out how to get an electronic newspaper up and running as quickly as possible. It was obvious that it would have to be implemented on a desktop computer over the existing telephone system as the availability of A4 size PDAs with colour screens and cellular communications was then, and still is, some way off in the future. There were various bulletin board and electronic mail systems around, so the technology was, at least, in place - albeit at a very low bandwidth.



My first idea was to create an on-line PageMaker or Quark XPress where the user would have a 'reader' program that would display layouts created with a master 'server' at the newspaper. There would be a number of standard page templates built-in to the reader and maybe some permanent advertising material so that only the text and pictures needed to be transmitted down the line. It was always at the back of peoples minds that the user would have to buy this 'reader' program as part of a subscription deal to finance the whole thing. According to a poll of Telegraph readers, there would have to be versions for Windows, DOS, Macintosh and UNIX and the 'layout' version would probably have to run on Macintoshes linked into the newspaper's dedicated mainframe system because that is how they were used to working.



Spreads from the 'first'
electronic newspaper

What quickly became obvious was that it was going to take a lot of time and money to produce the custom software to implement this scheme. But just at that time, a university in the States produced a little freeware program called NCSA Mosaic. On examination, Mosaic was able to do quite a lot of what we wanted - text, pictures, hypertext linking and so on. It had none of the fancy layout or digital video capabilities that I had in mind, but it was there, easily accessible to anyone with a modem - and free!



I mocked-up an edition of the Daily Telegraph using Microsoft Word and Mosaic. HTML was in its infancy and only took a couple of days to learn. The layout possibilities were pretty abysmal but by swapping in and out of 'preformatted' mode and by using lots of multimedia style iconic buttons, it was possible to get something which, although looking nothing like a conventional newspaper, looked good in its own right and had all the required functionality. Apart from the news, there were features, advertisements for property with 'walk throughs' and 'city' pages with columns of preformatted prices.



It was a hit! The Telegraph immediately set up a new department to get the electronic newspaper on line. I went in and trained the staff on how to use HTML and within a couple of months, the Electronic Telegraph was launched on the World Wide Web.

I must now express my sincere gratitude to the project team at The Telegraph including Nora, Clive, Len and Saul whose faith and foresight helped make the whole thing happen.

At the time of writing, The Electronic Telegraph has just been nominated the Best UK Web Site by Personal Computer World magazine and is on <http://www.telegraph.co.uk/>

NCSA Mosaic,
the first net browser
displaying
prototype pages for the
Electronic Telegraph



web page design

FOR DESIGNERS

limitations, what limitations?



Corporate identity and
packaging for Frank Cooper's
Traditional Oxford Marmalade
designed on a 128k Mac with
MacPaint Circa 1984.

Remember the old maxim

Do you remember making lino cuts? At school and later at art college, I was frustrated by the relative crudity of the medium and can't say I ever did anything with which I was remotely happy. At the time, I was fighting the technique rather than working with it and my first encounters with web pages were much the same.

All I had learned about typography and page layout over the years, all the finesse of letterforms, kerning and letter spacing was treated with a smack in the face. This was HTML! This was a computer programmer's idea of shoving text down a telephone line on to who-knows-what kind of computer screen. But remembering my frustration with lino cuts, and being a little bit older and wiser, I decided to try and work within the limitations and see what I could achieve.

OK, what are these 'limitations'? After all, one person's limitation might be someone else's whole world. Well, it's all relative. Using the usual graphic designer's tools on a Macintosh, I can do just about anything that I could have done in pre-computer times, though much easier and quicker. But these tools have evolved over twelve years or so. My first attempts at graphics on a computer were with MacPaint on a 128K Macintosh in 1984. That was Limitation!

Web tools are in their infancy too, but they are snowballing along at an increasingly faster rate. Now the tools are moving faster than the standards. The specifications for HTML 2.0 have still not been finalised, yet we are using HTML 3.2 as a norm. A final version of NetScape Navigator 3.0 has just appeared and version 4.0 has been promised before the end of the year!

We are publishing web pages in the full probability that many of the readers will not be seeing them as we intend. The same HTML document will look quite different in every web browser used to view it. Some elements will be different in size and position, the colours might have changed, some will be absent completely!

about trees bending with the wind?

Like the trees, your layouts have to be 'flexible'. If you make them hard and rigid, they will most likely break.

How many times have you left a site BEFORE seeing the first image because it just takes too long?

How can a designer who is concerned about his or her work cope with this pandemonium?

In the very near future, we are going to see the 'portable document format' being introduced into web pages that will allow a much more WYSIWYG presentation of elements. But unless there is a universal adopted format, which on past records seems very unlikely, there is only going to be more confusion.

There is a plethora of plug-ins for sound, animation and all kinds of things. But you can't assume that anyone is going to have them, or can use them with their particular computer set-up. Most of their developers must think that every user has a high end PowerMac or Pentium computer crammed with memory, huge hard disks and an ISDN link into their POP. This is just not so. Somebody is surely kidding himself or probably knows it's not true - and does it anyway.

The truth is that people often switch off automatic graphic download just so that they can read the text in a reasonable time. How many times have you left a site BEFORE seeing the first image because it just takes too long?

Regardless of the styling, how cool the graphics, if people are put off by the download time, the designer has failed! It is his job to communicate and his, or his client's, communication has been rejected at the outset. In this respect, it is BAD design.





taming the electronic page

The first clue that a web page

has been designed on a

PC is that it will look too wide

on a Macintosh screen!

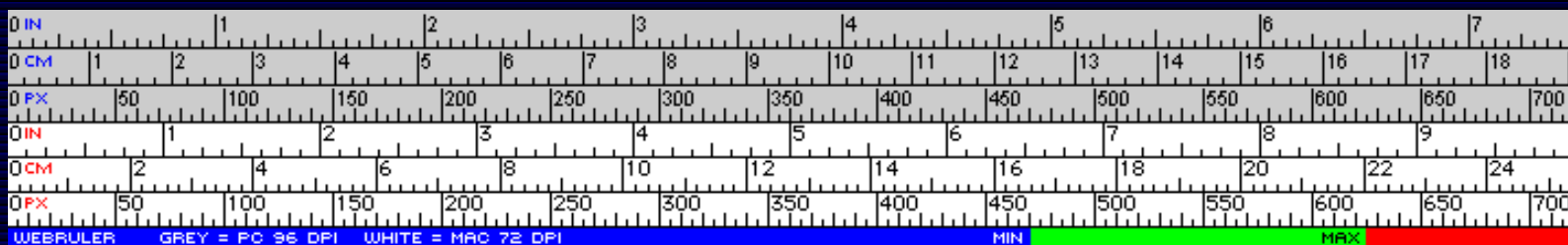
One of the first things that needs to be considered is the page size that we are going to work on. On paper, we work to A4 or Tabloid or 48 Sheet poster format knowing that the size is going to stay constant.

Not so with a web page!

We do know that a web page will be within certain height and width limits. The smallest it is likely to be is governed by the standard monitor size of 640 by 480 pixels. On a Windows PC, the browser window will make use of the full width of the screen by default. On a Macintosh, it will usually be slightly narrower so as not to hide the row of icons down the right hand side of the screen.

With the growing popularity of larger screens - 800 x 600, 1024 x 768 and more, oversized web pages can, and do, become unreadable on smaller monitors. The graphics, which are a fixed size, can be too wide to fit and the text just word wraps to the browser's width making ridiculously long, unreadable lines.

For the optimal cross-platform web page, it is a good idea to design to a minimum width of the Macintosh default of around 470 pixels and a maximum of 625 wide to accommodate people who have standard 14" VGA monitors. Even at the minimum size, it is desirable from a 'readability' point of view, to limit the text line width to 8-10 words.



This Web Ruler shows the correlation between inches, centimetres and pixels on the 96 dpi based system used on most PCs and the 72 dpi system used on Macintosh computers.

The pixel measurements are the same because pixels are absolute and determined by the computer display system. The Mac inches and

For screen-based work, only the pixel measurements are significant. The difference is only apparent in the specification of type sizes and on printed hard copy.

The blue line shows the minimum page width likely to be encountered, and the green extension the maximum when a browser is stretched to full width on a 640 x 480 monitor. People with larger monitors may stretch their windows to more than this, into the red area, but designing web pages to these widths will cause problems on smaller monitors. Download this ruler for your own use

centimetres are approximately life size (on a 640 x 480 14" monitor) whereas the PC scales are 1.3 times bigger.

[Download this ruler and a smaller pixel only version for your own web page measurements.](#)

[Mac .sit](#) [PC .zip](#)

or use the smaller 'pixel bar'.

In a multi-column layout, the column height needs to be considered too. Each column should fit comfortably into the viewable height of the screen. The reader shouldn't have to scroll a page up and down to go from one column to the next. Again the height is determined by the minimum default browser height, which is about 400 pixels regardless of computer type. The maximum page length is less easily arrived at. In theory, it can be any length but long pages take a long time to download and need a lot of scrolling to navigate. It is better to have multiple short pages than a few very long ones.





typography

Good typography is just as important on a web page as it is in any other medium. The fact that it appears on a computer screen and not on a piece of paper is immaterial, it should still be pleasing to look at and easy to read.

In every situation where type is used - in publishing, signage, packaging, television etc. - the designer has to adapt his techniques to suit the medium. A headline style that works just fine in a magazine spread would not necessarily work on a poster. A magazine is always viewed straight-on at arms length so letter spacing can be as tight as you like and the words will still be readable. A poster is, more often than not, viewed obliquely, which distorts the type to some extent. Here, a little extra letter spacing helps identification of the individual characters, and hence the words.

Designing for a computer screen has its own set of problems. Add to these the elastic nature of a web page, which has to work across different computer platforms and screen sizes, and the problems get even worse. It is the designer's job to understand these issues and to address them - to maintain some kind of control when everything else is shifting.

Ninety percent of web pages that you look at have been poured - not designed. Any current browser will take a block of text and display it on the computer screen in a reasonable typeface and size but with considerably less control than an ancient typewriter!

The first problem is that the line lengths get too long. In print, there is a relationship between the length of a line and the 'leading' - the space between lines. If the line is too long, and the leading too tight, it is difficult to read from the end of one line to the beginning of the next - lines will be read twice - or skipped. A typist can use one and a half or double spacing to alleviate this problem, but a web page designer has no such luxury. There is no concept of 'leading' in HTML as yet.

You can't easily control the space between lines, but you can make sure that they don't get too long. Restricting line widths using the BlockQuote feature to give wider left hand

The traditional techniques of using 'Colour', in typography, refers to the perceived typographic 'colour' are not very useful in relative greyness of black and white type.

web page layouts because of the On a web page, you can of course use real colour lack of fonts and type weights available to achieve similar separation and contrast.

and the fact that some sizes of the Use colour to create a hierarchy of prominence type that is available can look very ugly

margins will help, as will the use of the 'Tables' function to split text into narrower columns.

The other way to regain control is to dispense with the default 'soft' word wrap feature and put in 'hard'
 (break) characters where you want a carriage return. This allows you to keep lines short - and to control the typographic shape of the right-ragged edge.

One way to simulate leading is to insert spaces of a larger type size into lines of text using the tags. To keep things tidy, this is best done at the end of the line before a
 tag. The 'SIZE=+1' can of course be increased as required.

The HTML specifications allow for a hierarchy of headline sizes. These sizes are relative rather than absolute and are displayed in a bold typeface.

They do tend to be rather ugly though. Here, an important distinction must be drawn. There are typefaces which are designed especially for the screen and those that are produced by calculations from a basic font description.

Geneva 9 point is a Macintosh screen font
Geneva 10 point is a Macintosh screen font
Geneva 12 point

This is Helvetica 9 point (Mac)
This is Helvetica 10 point (Mac)
This is Helvetica 12 point (Mac)

New York 9 point is a Macintosh screen font
New York 10 point is a Macintosh screen font
New York 12 point

This is Times 9 point (Mac)
This is Times 10 point (Mac)
This is Times 12 point (Mac)

With a 'screen font', the type designer has considered each individual character at a pixel level and optimised the character shapes to work within the constraints of a grid. Fonts will be designed in a range of specific font sizes 8, 9, 10, 12, 14 etc. Specifying a size that is not a 'designed' font size ie. 11 or 13 point, will generate a 'calculated' font which visually approximates the chosen size but loses all the design's subtleties.

In producing a screen version of a traditional printer font, like Helvetica or Times, the designer has to keep as true as possible to the

Note how the screen fonts are more original design at the expense of 'screen legible than the screen versions of printer fonts. sympathy'.

Chicago 12 point is a Macintosh bold screen font

Helvetica Bold is mathematically derived from the roman

This is Windows Times Bold, also derived from the roman

System 10 point is a Windows bold screen font

Bold fonts are often calculated fonts based on an algorithm that adds extra pixels around the edge of a 'designed' roman font. When you get the combination of an 'undesigned' font size and the 'bolding' algorithm, that's when things start to get nasty and is, unfortunately, what you have to put up with in web page typography. It's not just the character shapes that suffer, the tracking and kerning goes too.

Italic fonts are best avoided. They are completely at odds with the constraints of a square pixel grid and will almost always look awful, especially at small sizes.

*Italic fonts fight against the constraints
of the square pixel grid
of a computer screen and should be
avoided where possible!*

Many people use graphics for headlines. These can be created in PhotoShop or other graphics packages, saved as GIF files and will generally look better than the indigenous type and give a lot more scope for individuality. They do take longer to download though, and there is the possibility that the user has switched off, or can't display, graphics. It is especially important to make use of the 'ALT' tag for graphics that contain text so that the headline message is not lost altogether.

HTML LETTER SPACING

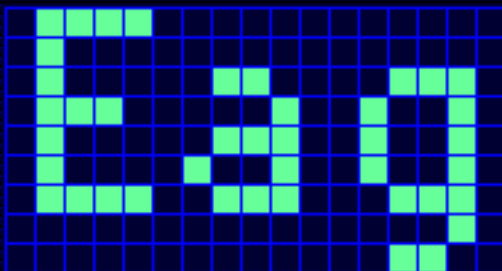
WIDE AS YOU LIKE

Typographic tricks like letter spacing are a little more difficult to achieve in HTML as it only allows one space between any two characters. You can letter space a word by inserting a discrete space between individual characters, but when it comes to word spacing, you get stuck because you need two or more. By using the non-breaking space character ' ' you can force extra spaces between characters or words. To force extra space between lines, use alternate
 and <P> tags.

This HTML rule clearly doesn't work on the dark blue background

HTML supports horizontal rules which can be used to separate blocks of text on a web page. In traditional typography, the use of rules is often frowned upon by purists. HTML rules are functional rather than stylistic elements although, occasionally they will be used for 'decorative' purposes to liven-up a bland layout. Be aware that each browser treats rules in its own way. NetScape assumes that you are using its default grey background and puts in a 3D rule that won't necessarily look right on other colours. You can, of course, insert a graphic as a rule. It won't have much of an overhead in loading time because it will compress very efficiently if it is a single colour and you can adjust its width from HTML by adjusting the IMG SRC 'Width' factor. It will not, however, adjust its width dynamically when the browser window is resized as the <HR> tag does.

Rules created in Photoshop can be any colour and have a very small file size



To form an upper case character takes a minimum of seven pixel in height. Because of their ascenders and decenders, it takes nine pixels in height to render a lower case character. So you can have a seven pixel high screen font if it has only capitals, but a normal font, with upper and lower case characters, requires nine pixels.

PC Times 8pt
PC Times 9pt
PC Times 10pt
PC Times 12pt
PC Times 14pt

Mac Times 9pt
Mac Times 10pt
Mac Times 12pt
Mac Times 14pt
Mac Times 18pt

Comparison of perceived type sizes on Macintosh and PC screens

On a Macintosh computer screen, there is a direct correlation between pixel height and point size - a nine pixel high font is effectively a nine point typeface. The Macintosh screen works on the basis that there are 72 pixel per inch, so each pixel is one point square. You can try holding a ruler up to the screen and comparing the measurements with the rulers in an application - they will be approximately the same. Note that with the introduction of multi-scan monitors, this principle is no longer always valid. Changing screen resolution from 640 x 480 on a 14" monitor to 800 x 600 on the same monitor makes the pixels correspondingly smaller, and the inch or centimetre on the application ruler smaller too.

PC fonts are different because they dispense with the WYSIWYG concept of an inch on the screen measuring one inch. Measure an inch on the ruler of a PC application, and it will be 96/72 or 1.3 inches approximately. This is because Windows considers an inch to be 96 pixels. On a 14" 640 x 480 VGA monitor, the individual pixels can not be smaller, so the inches have to be bigger. The effect that this has is that PC type sizes are specified as being about three quarters of those on a Macintosh. A 9 point PC font is physically the same size as a 12 point Mac font measured on their screens.

A 14" PC screen running at 800 x 600 does have physically smaller pixels and so its 'logical' or 'virtual' inch is closer in size to a real one.

The outcome of this is that type specified as 7 or 8 point on a PC can be fully formed whereas the smallest Mac font will be called 9 point. They are effectively the same size on the screen at the same resolution. It is only when they are printed out that the PC font will be reduced to its correct 8 point height and the Mac font, 9 points.

This layout has a 'Hard' left hand column and a 'Soft' right hand column so the right hand column is fixed in size whilst the right word wraps according to the user's browser width. A transparent, and invisible, graphic acts as a 'hydraulic jack' to fix the right hand column width

There is another factor to consider. PC users have, depending on their monitor resolution, the option of using 'Large' or 'Small' fonts. The 'Large' fonts option compensates for the fact that type can get too small to read comfortably on higher resolution monitors. So, the size of type relative to an adjacent graphic can be radically different from one PC to another. In 'hard' layouts, it is important to check this difference and the effect that it has on your design. The trick here is to mix 'hard' and 'soft' elements within your page, using the 'soft' ones to take up the slack between the more controlled ones. Don't be afraid to use space creatively, it is particularly elastic.



web page design

FOR DESIGNERS

graphics and palettes



The greatest annoyance when accessing web pages is the long wait for graphic to download and display. If you consider that it takes about 1000 bytes (1K) of data to fill a screen with plain text but this little icon takes nearly 9K, you will start to understand the predicament.

Indiscriminate use of graphics, no matter how cool, will only antagonise the reader to the point that they will switch off the automatic graphics download in their browser - and all the designer's efforts will be wasted.

Why is it that some graphics download fairly quickly whilst others take ages? It has very little to do with the physical size of the image on-screen, it is purely a function of the number of bytes of data that have to be transferred from the server to the client machine via the telephone system! - The file size!

To appreciate how it is that a large graphic can download and display quicker than a smaller one, you need some understanding of the compression techniques used. The two main graphic file formats used on the web GIF (Graphic Image File Format) and JPEG (Joint Photographic Experts Group) treat picture compression in different ways.

The GIF File Format

The GIF file format is for 8-bit (256 colour) images or less. Now, it normally takes 24 bits of data to describe the colour of each pixel on the screen. Eight bits each for Red, Green and Blue. This can give each of these colours a brightness level between 0 and 255 and by mixing them, 16,777,216 colours are possible. Although any colour monitor can display all these colours, computers may not be able to accommodate them for economic reasons.

If you only work with text and figures, colour may not be necessary at all and a waste of money. Every addressable pixel on the screen has to have a corresponding 'bit' in memory with a value of 0



This 8-bit GIF file compresses quite efficiently - 9K because of the flat areas of colour



But this GIF is only 6K because it was saved at 4 bits per pixel instead of the usual 8 bits yet all the colours are present



This similar 8-bit image is much less compact because of the gradations - 18K

or 1 indicating that it is off or lit.

If you use simple charts and diagrams, maybe 16 colours are enough, which only requires four bits of computer video memory per pixel. But more common these days are 8-bit per pixel systems where each individual screen pixel can have values from 0 to 255. By mapping these values to a look-up table of RGB values each requiring 24 bits, it is possible to choose a palette of 256 colours from the total 16,777,216 possible.

Normally an 8-bit screen graphic will be represented by a long sequence of numbers between 0 and 255. To store this image in a file, it is also necessary to say how many pixels wide the image is and how many deep so that it can be reconstructed at any time, line by line. An image that is 128 pixels wide by 96 pixels deep requires $128 \times 96 = 12,288$ bytes of computer video (VRAM) memory which could also contain about 12 screenfuls of text! It would also take 12,288 bytes of space on a hard disk to store this image, plus a little extra to store details such its width and depth, name and file format.

If you were to examine this sequence of numbers, you might well discover that there are many occurrences of 'runs' of the same number. An image with areas of flat colour like a plain black or white background will have long runs of 0s or 255s. Rather than storing hundreds of 0s, it is more efficient to say, in effect, 'the next 288 pixels have a value of 0' - which only requires a few bytes of memory. This is called 'run length encoding' and is the fundamental basis of GIF and many other graphic file formats. The GIF format uses other techniques to further improve on this compression but the overall principle is that images with large areas of flat colour will compress more efficiently. Conversely, an image that changes consecutive pixel values often, like a fine chequered pattern, will not compress efficiently, it may even increase the file size if the compression algorithm is not smart enough to realise.

sales chart - jpeg

Although it is 17K, this highly compressed JPEG file looks awful because of it's 'lossy' compression.

The JPEG File Format



The GIF picture on the left is 24K and the JPEG on the right 16K. On an 8-bit display they will look similar but on a 16 or 24-bit display the JPEG will look better.

The JPEG file format works with 24-bit images regardless of whether your monitor can display them correctly or not. If you have a display card or built-in video that can handle 24-bit (TrueColor) images, you will be able to view photographic images with all their subtleties of tone and colour. If it is set to 8-bits, the image will be 'dithered' to approximate the effect as best it can from the 256 colours available. Where a GIF image will look identical on an 8-bit or 24-bit monitor, a JPEG image will look great on a 24-bit monitor and not so good on the 8-bit because the dithering technique used is optimised for speed, not quality.

JPEG compresses the picture by intelligently removing information to reduce the file size. This process is called 'lossy' because you are losing picture information to simplify the image. You can choose how much information to throw away with JPEG compression, it is a trade off between picture quality and file size and needs to be judged on a picture by picture basis. Suffice it to say that compression ratios of 10:1 show little loss of picture quality whereas a 100:1 compressed picture will lose most of its fine detail and colours will be simplified into blocks. Compression 'artefacts' will also start to appear, strange dots or blotches that were not visible in the original



For this particular image, there is little difference between the HIGH and LOW quality JPEG compression in Photoshop. The file sizes are 30K and 20K respectively

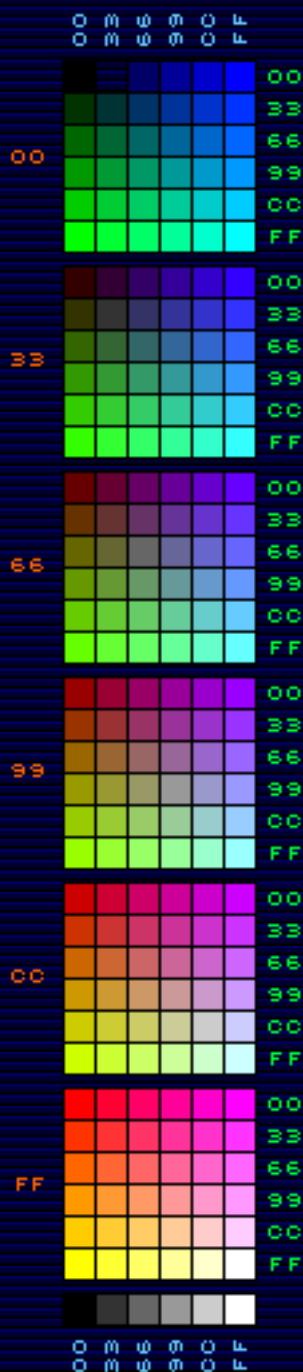
Palettes and cross platform issues

image.

It is possible to produce smaller files with JPEG than with GIF if you are prepared to accept the picture quality loss. As a general rule, it is best to use GIF for graphic images - icons, logos, buttons and JPEG for photographic ones. JPEG's compression artefacts are more apparent on graphic images. On 8-bit screens, GIF images tend to look better than JPEG but on 16-bit or 24-bit, worse. Remember, more people use 8-bit monitors than any other type.

One of the less obvious aspects of 8-bit colour and the use of palettes is that there are fundamental differences in the way they are handled by the MacOS and Windows. The whole point about palettes is that each of the 256 colours can be assigned to any of the 16,777,216 possible values in the RGB colour space. In practice, this is not quite true. The Mac palette has two colours that are fixed and can't be changed - black and white - this is so that interface elements like the menu bar and dialog buttons are always readable no matter what the colour scheme assigned to the current palette. Windows uses more colours in its interface and 'reserves' the whole 16 VGA colours plus another 4 SVGA ones.

Both platforms have a 'System' or default palette giving a good spread of colours for general



The colours in this WEB palette
are common across
all platforms ensuring consistent
and predictable results
Download [Mac .sit](#) [PC .zip](#)

purpose use but it is possible to create GIF files with optimised 'adaptive' palettes. If the picture were a seascape, for instance, the palette would adapt itself to contain mostly blues and look more like a continuous tone photograph. When the 8-bit computer screen displays that picture, the palette for the whole screen changes - except for the 'reserved' colours. So a background that was originally a non-reserved yellow, because it was mapped to a yellow slot in the palette, finds that the palette slot is now a deep sea blue and changes accordingly. But worse than that, the adjacent picture of a field of red and yellow flowers has also changed to blue because the screen can only use one 'optimal' palette at a time.

Your web browser overcomes this effect by re-mapping the GIF file to its own palette. The adaptive palette that made your picture look so good when displayed by itself, is overridden. On an 8-bit monitor, it may look less good than a picture mapped to your browsers 'System' palette in the first place, try both techniques and see which works best for your particular set of images.

Because of Window's bias towards 'reserved' colours in its palettes, there are less remappable colours than in the Mac's.

Windows icons and other interface elements use the 'reserved' colours so that they stay consistent regardless of what else is on the screen.

The two systems have (nearly) common colours that are used by NetScape and other web browsers. These are based on RGB values of 0, 51, 102, 153, 204, 255 and referred to as the '6x6x6 Palette'. The palette on the left shows the six blocks of six by six colours with 20% steps each of Red, Green and Blue. There are 216 colours which, if used, will give good results on both platforms. Colours outside this range will be dithered.

After many requests, there is now [MORE](#)
information on palettes!

Dec	0	51	102	153	204	255
Hex	0	33	66	99	CC	FF

Conversion table
showing 'preferred RGB' values
for different colour picker
scaling systems





tricks and tips

Most recent browsers can display background images. These can be small rectangular images that the browser 'tiles' to fill the window. Each single 'tile' can be as small as you like but although a 2 x 2 pixel tile will download very quickly, it requires more processing time to fill the screen, so screen updates will be painfully obvious.

Don't make background tiles too small - experiment with different sizes and number of repeats to find the best compromise between downloading time and screen redraw.

Remember that type will usually have to go over your background image. If the background has too strong a pattern, it will make the type hard to read. You can put dark type on a light background and light type on a dark background without too much trouble. When you have a mid tone background, you may be able to use colour contrast to make the type stand out i.e. yellow on blue, but you stand more chance of compromising visibility.



Multiple 'instances' of a single GIF file

Browser background images are created from small GIF tiles and will download and display fairly quickly but any GIF or JPEG image, once downloaded, can be reused in multiple 'instances' on a web page with little or no extra overhead. Fancy rules, logos, bullets and even animated icons can bring a dull page to life and won't keep the reader waiting.

By keeping the top portion of web page relatively free of large graphics, the user can start reading the page whilst the more serious downloading is happening out of sight 'down below'

Another trick to give the impression of faster downloading of larger pictures is to use 'progressive rendering'. Here the image appears in it entirety almost immediately, but in a low, chunky resolution. As more of the image is downloaded, the resolution gets better until eventually it has rendered completely. This is preferable to watching the slow progress of a linear 'wipe' from top to bottom as the main elements of the image will be recognised at the beginning, except for small embedded type, which will not be readable until near the end of the image download. Nevertheless, the constant improving of the image resolution gives the reader something 'slightly' interesting to look at and masks the passage of time - you know how time passes more slowly when you are bored!

Progressive rendering and interlacing help to mask the time delay in downloading larger JPEG and GIF files

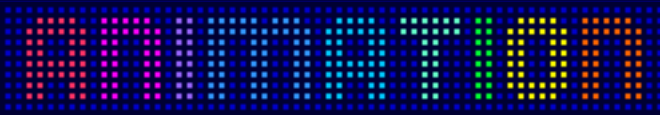
Progressive rendering has to be introduced to the original file being saved and depends on having the right program to do it. Adobe PhotoShop has an Export plug-in called GIF89a which gives the option of 'Interlacing' the saved file and PageMill has an option in its graphics editor to save the file in a similar fashion. There are various shareware utilities for manipulating web image files that include 'progressive rendering' as output options - see the [Links](#) page for details.

The other possibilities offered by the GIF89a format are transparency and animation.

Transparency is where you can choose one colour from your GIF image to be 'no colour' - like painting it on a clear acetate overlay.

So you could change the image's white background to 'clear' to get the effect of a cut-out halftone on your web page. This technique is particularly useful for 'floating' type and

irregularly shaped pictures.



This is a sequence of nine images combined into one GIF89a file with a .15 second delay between each frame

The GIF89a format also supports 'animation'. This is just a multiplicity of same-sized images with a pre-set delay between showing each - all stuffed into one GIF file like a flip book. Again, you need a suitable application to create these animations and there are shareware programs available on the Net for Mac and PC.

Be aware that animated GIF files, if running too fast, can cause problems on web pages making it difficult to click on another button or link.





web page razzamatazz



Although there are a number of other browser programs available, Netscape and Internet Explorer dominate the market. Making sure that your design works satisfactorily in all the current versions of these browsers is the very least you can do!

With all the browser software producers trying to outdo one another in terms of features and functionality, it is not surprising that deviations from the 'standard' HTML, if indeed such a thing exists, is rife. NetScape, in particular, has always had its own set of unique features. Some are relatively minor niceties like 'blinking' text, but others such as 'frames' and 'Java' are more significant in that, being at the 'bleeding edge', their effects may not be available to some users or may be unreliable if they are because of the number of 'Beta Test' versions about..

The risk for the designer is that he may not only be creating web pages for one particular browser, dismissing others with the wave of a hand, but may even be designing for a specific version of that browser.

You will see 'Best viewed with NetScape' or 'Free Download Microsoft Internet Explorer' buttons on many sites. Statement like these tend to be too general to be useful because of the many versions of NetScape 2.0. The 32-bit version of NetScape 2.02 for Windows 95 supports Java, for instance, whereas the 16-bit version and Macintosh versions do not. NetScape's versions across platforms are often out of step with one another, which surely doesn't make much sense.

When I bought NetScape as a boxed package direct from them, they sent version 1.2 even though 2.01 was the current version on-line!

Walkie-talkies are a great means of communication - provided that there is one at each end!



RealAudio streams digital audio over the Net in real time. Use it for listening to Net-based radio stations



There are versions of ShockWave from Macromedia to browse files created with FreeHand, AuthorWare and Director



QuickTime is becoming the cross-platform standard for digital video, virtual reality and video conferencing



Sun's Java is destined to become the programming environment of choice for web-centric applications

I said a little about browser plug-ins earlier. Plug-ins extend the functionality of a web browser to provide increased functionality and the display of proprietary file formats. Popular ones include ShockWave from Macromedia, QuickTime from Apple and Real Audio which gives a low-bandwidth, real-time facility for playing sound files.

If the user has the right browser software, a suitable machine and a good throughput from his modem, these plug-in do become useful and enjoyable adjuncts to web browsing.

The decision to introduce browser specific or plug-in dependant elements into your web pages should not be taken lightly. You should have a clear objective and target audience in mind.

If, having considered the implications of restricting your audience and deciding that it is appropriate for your particular message, you should then warn readers in advance. They can make the decision to keep clear, download the appropriate version of the browser or plug-in, or proceed because they already have it.

This is just plain, good manners and will help minimise frustration, wasting time, bandwidth and maybe a teensy bit of our planet's resources.

DON'T MAKE ANY
ASSUMPTIONS ABOUT
YOUR READER'S
BROWSER NO MATTER
WHAT ANYBODY
MIGHT TELL YOU!

All trade marks and brand names are acknowledged as belonging to their respective owners.

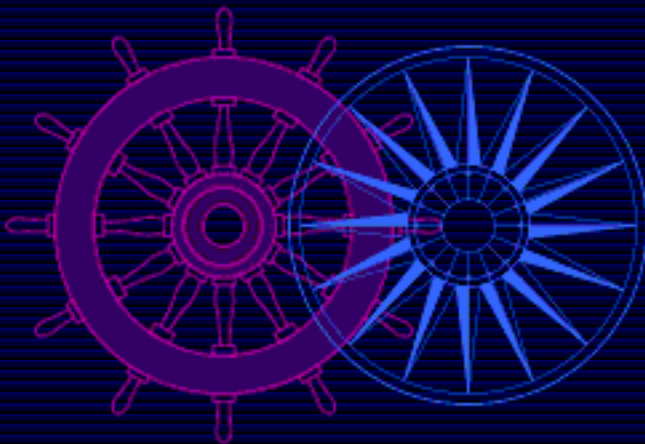


web page design

FOR DESIGNERS

navigation

In choosing styles for navigational elements you should try to reach a balance between aesthetics and functionality. All of the standard devices provided by HTML work well at a functional level and should be considered as a starting point.



The World Wide Web, by its very nature, encourages jumping from one site, from one page, from one thought, to another. It's all so easy!

Reading a book is essentially a linear process. You start at the beginning and read to the end. Some books, and all newspapers and magazines are designed to be dipped into at will. You don't have to read the whole thing, but the bits that you do read, are read in a linear fashion.

With the advent of interactive hypertext, you can be reading a line of text on one page, and with the click of a button, be transferred to a cross referenced line of text on a site on the other side of the world. Whilst this flexibility is admirable, it has the unfortunate side effect of breaking continuity of style and train of thought. At best it is distracting, at worst, it leaves the reader lost and confused.

The web page designer has to consider not only what is ON his page but what is OFF it. If the reader jumps to a 'stronger' page that is more powerful in visual terms, in content or structure, he may never come back!

Very few pieces of information can be presented in a totally random and haphazard style - they need some structure and prioritisation. I am a great believer in the 'outliner' to create multimedia or WWW content and to write copy for ads or manuals. It forces prioritisation of thought and creates a solid foundation that can be progressively elaborated upon without losing sight of the entirety. It also makes the transition from the written draft to the finished interactive CD-ROM or web page easier and more solid.

Creating a distinctive visual style and applying it rigorously is the best way to hold a series of related, or disjointed, web pages together. Like any corporate image or magazine house style, it creates its own identity - and boundaries. In navigation terms, you know when you are within it and when you have left it. Furthermore,

it communicates a qualitative statement about the company or individuals responsible for it.

If the user has chosen to switch off automatic graphics download, and many do, can your navigational scheme still work at a plain text level, or will he be lost at sea?

HOME

This hypertext home page link is simple and unambiguous

HOME

HOME

The 'naked' home page link on the left could just be a headline whilst the one on the right is definitely a hyperlinked button that changes state when clicked

HOME

HOME

The home page link on the left is obviously a button but provides no visual feedback when clicked

HOME

Another typical navigation element providing a clue to it's purpose

HTML provides navigation at a number of levels - within a page using 'anchors' - from page to page and from site to site. The mechanisms used to implement this navigation can be hypertext, buttons or image maps.

The main difference between web pages and other forms of multimedia is in the ways that these elements interact with the user. A hypertext link is fairly easily understood and works every time, no more needs to be said about those. The other two suffer from potential drawbacks.

Where the 'multimedia' button will usually go in and out like a real life button when clicked, the web page button often lacks any visual feedback, it may not even be recognised as a button at all! Ideally, an interface button will operate on 'mouseUp'. That means that once it is clicked, the user has the option to move the pointer off the screen button and let go of the mouse button to cancel the operation. Web page buttons are always activated on 'mouseDown' and because of the general tardiness of the system and the fact that the button may not change in any way when clicked, the user doesn't always know what, if anything has happened. It is possible to give a screen button a coloured frame which changes colour like hypertext when clicked but this function is often omitted deliberately for aesthetic

but giving no visual feedback when clicked reasons.



An unlabeled icon that is fairly easily understood because it is recognisable through familiarity and is in context



This could be a button or just a 'dead' bullet



This could be an imagemap with hyperlinks to other references but there is no clue to tell the user that it is not just a pretty picture!

Image maps suffer from further problems. As well as a lack of visual feedback, the 'hot' areas of the image are often unclear. With server-based CGI scripts, there is a delay as the cursor hits the image map, sends the co-ordinates to the script, and returns the new URL to the browser which, in turn, calls back to the server to find the new link. 'Client side' image maps, which do all the calculations on the local machine, are supported by some browsers but not others, so it is dangerous to use them as a sole means of navigation.

It is the web page designer's responsibility to overcome these limitations. In the endeavour to be creative and stylish, it is all too easy to overlook basic functionality. The visual clue that a button is functional can be subtle. A picture is a button if it has a fine blue frame which changes to red when the picture is clicked. A picture that looks like a button is probably a button. A 'raised' area on the screen with type on it might be a button, but it might just be someone's idea of giving emphasis to a line of type. A bullet at the beginning of a line might be a button, who knows? Click it and see? Oops, I'm now looking at a catalogue of surveying equipment and the back button at the top of the screen is dimmed, what do I do now?

Suffice it to remind that the magazine designer has only to contend with a page being turned, the web page designer has to consider many other dimensions.

If you want to know some more about the theory behind graphic symbolism, click [here](#).





web design forum

Working in the graphic design business, like any other, tends to polarise one's views over the years.

Despite what I have written here, and regardless of how much I believe them and live by them, I accept that there are countless other point of view - and just as valid.

We are all products of our own environment.

Please feel free to comment, criticise and express your own opinions about the contents of this site and web page design in general.

I can't promise to publish everything, or maintain the kind of dialog that would be more appropriate on a news group but hey ... let's give it a try!

Want to read all this offline, check out the HTML?

The whole site is available as a compressed archive to download and read at your leisure.

[LINKS page](#)

Joe Gillespie joe@pixelp.co.uk



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- ▶ [What are your influences? asks Angela Collins](#)
- ▶ [Bob Gale suggests a NEXT button - dunnit!](#)

- ▶ [Design Vs. Speed - a question from Henry Wheeler](#)
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- ▶ [Paul Anderson asks about GIF animation programs](#)
- ▶ [Peter Small asks about cross platform palettes](#)



William Barnard asks about new graphic file formats

I have heard that there is a new graphic file format that sorts out the dreaded gamma problems between Mac and PC, what can you tell me about it?

It's called PNG (Portable Network Graphics) and is intended to replace the GIF format eventually. It combines tight compression with an 'intelligence' that adjusts the gamma of a picture depending on which platform it is running. It isn't very popular just yet, but hopefully, new browsers will have built-in support for it.

Find out the whole story at [W3C](#).



This site wins top web site design award!

I am delighted to announce that Web Page Design for Designers has been awarded the prestigious High Five Award for excellence in web site design.

The High Five Award is administered by David Siegel of Studio Verso in San Francisco. David is the author of the top-selling book [Creating Killer Web Sites](#) and is also a member of several W3C committees defining the future of HTML.

Winners are selected on the basis of design, conception, execution and content, with an emphasis on clear information design and visual aesthetics. Naturally, I am thrilled and honoured with the accolade.

Web Page Design for Designers was featured on the [High Five Awards Site](#) from October 23rd - 29th and can be accessed through 'Previous Winners'.

Joe :?{



Translating DTP files into web pages - Sandie French

Is there some easy way I can turn existing Quark XPress and PageMaker files into web pages?

Yes, there are a number XTensions and plug-ins that will convert these files into HTML documents but don't imagine for a minute that they are going to look anything like the files that you started with.

It is just not possible to translate sophisticated DTP layouts into web pages without making some compromises. Although they may be convenient, I have found that using such translators leaves a lot to be desired in terms of web page layout and efficiency.

You have to remember that the design criteria for a web page is quite different from that of a printed page. You have to consider bandwidth, file sizes, which graphic file formats to use and the fact that your web pages are going to appear on numerous combinations of computer platforms, monitors sizes and browsers.

Designing a web page requires a completely different mindset from a conventional 'paper' page layout and unless you start with very simple layouts with small or no graphics, I would advise starting again and working WITH the medium and not trying to IMPOSE a design upon it. Square pegs! Round holes!



Richard Scott asks about adaptive palettes

In your section on graphics, you seem to endorse the use of the Netscape web palette for GIF files in preference to using adaptive palettes. I have seen comparisons of the two methods and using an adaptive palette produces much better results. Why are you so against this method?

Richard, I am not 'so against' it, my preference for the use of the 6x6x6 palette is for two reasons. Using an adaptive palette for GIFs does work better in some instances, especially when there is a predominance of one colour. Where there is no colour dominance, and if an image has a broad palette of colours, I find that the 6x6x6 web palette gives better and more consistent results across platforms. The only way to tell is to try both methods for any given image on a variety of Mac and PC systems and compare the results, and then to ask yourself if you should be using a GIF at all!

My main objection is due to bad experiences with a number of PC video cards that give very unpredictable results with a multiplicity of palettes on the same page, and work fine when there is only one. I know it shouldn't happen, but it does!

What software do you recommend for producing GIF files with adaptive

palettes?

I use Photoshop with BoxTopSoft's PhotoGIF plug-in. I know that there are a number of applications that will do a similar job and before I got this plug-in, I would frequently come out of Photoshop because its own GIF manipulation facilities are pretty basic. PhotoGIF does just about anything that you could want to do with a GIF file, transparency, animation, interlacing etc. and it supports a wide variety of optimized palette, bit-depth and dithering options.

DeBabelizer does a good job too but has a dreadful user interface. See the [LINKS](#) page for details and for other Mac and PC solutions.



A comment on Design Aesthetics - Craig Stinson

I think on the WWW, there are two considerations as far as design goes. One is Design Mechanics - the use of HTML, how to optimize the delivery of the page to the end user, and what browser and version you write for. The second is Design Aesthetics - how graphic elements lay out on the page, how intuitively the links lead to where one wants to go, and look and feel type issues. The problem is that HTML is a rotten lowest common denominator for doing design work. Even with all the enhancements to browsers, that's still a problem that may be even greater as a result. While users have so much control over how their pages present themselves, I'm afraid design standards are a moving target.

I would appreciate discussing these things with you, as well as whatever else comes up in discussions.

I too think that not enough consideration is given to the 'Design Aesthetics' you mention, that is why I put this site up. Even within the constraints of HTML, I think it is possible to do something worthwhile - providing the web page 'designer' is, in fact, a designer and not just a web page 'programmer'. It took me about two days to learn HTML but a lifetime to learn about design!



Adam Gottschalk asks about smooth gradations

I look around and I see that most designers take the tack of straight colors, no gradations, no photographic transitions, etc., except if geared for those with 16 bit color systems. But some do excellent jobs at getting airbrush effects. The cool looking women with the tie dye dress on your page--she looks great and the colors blend smoothly on my system even when I set the colors to 256. How did you do that? Any tips on airbrush shadows and the like?

The 'key' colours in the gradation should be chosen from the 216 colour palette by using swatches of the same colours to draw with - it's that simple. There are 'runs' of colours within the 6x6x6 palette, using these will give the best results across all platforms. The motto is 'don't impose YOUR design on the palette' - use it. It also helps to set your monitor to 8-bits when you are creating so as not to get a 'perfect' view of your work.



Web Page Design list server

A few people have asked me for a Web Page Design list server address. There is an active web design list run by Lynda Weinman which should be of interest to anyone involved with web page design. [Lynda's Homegurrll Web Designers' List](#).



Angi Drew complains about my sexist site!

Why do your pages assume (inaccurately) that only men design Web pages? Get real, and take out all the references to "the web designer, when he..." etc etc. Here's one female Web page designer who finds them really offensive.

If anyone else finds my use of the masculine gender offensive, please accept my sincere apologies for my laziness, because that is all it is. May I just point out that you do not have to look very far on the Internet to find material that puts my transgressions into REAL perspective.



Frank Cohen on using IMG Height and Width

Thank you for writing and publishing the web designers forum site. I found it very interesting and informative. I especially like your choice of colors and background image.

One thing I didn't notice you mention is the use of the height and width statements in an IMG reference. If you add these to your IMG references most browsers will first display the page's text, then load the image. It makes the page appear to load faster and gives the user something to do - read - while the images are loading.

Thanks for pointing this out Frank. The two layout programs that I use, Adobe PageMill and Claris HomePage, put these in automatically. Your suggestion will certainly be of benefit to people who don't use these programs or prefer to hand code their HTML.



Cat amongst the pigeons - Margaret Peavy

Jo, I wish you knew what an uproar your monitor test has caused in our department. Your background looks black to me and I can only see two other shades of blue. I have been promised a new computer for ages and showed your test to my boss, but all he will do is change my monitor 'sometime'. Now the others are complaining too...

We would all like a new computer Margaret, but don't shoot the messenger!



Mark Oliver prefers 'REAL' HTML

You would seem to be an advocate of WYSIWYG web page design programs. I have not found one yet that comes anywhere near satisfying my needs compared with using a decent text editor, plain Netscape and a good knowledge of HTML.

I have tried various editors including HotMetal Pro and Netscape Gold and they all seem to have more bad points than good. Yes, you can see what you are doing as you do it, but you can't do very much.

In the early days of computer typesetting the compositors used tags not dissimilar to HTML, a few diehards still do. I can only say that if designers had to create pages for print using just TeX or raw PostScript, the business would be in a sorry mess.

When you create a page with XPress or PageMaker, you are removed from the mechanics of PostScript and can get on with the job of DESIGNING. The sooner HTML gets shoved into the background too, the better for everyone - IMHO!



Mandy Lockyear wants to make her site more exciting

I am not a graphic designer but found your site very useful and informative and it contained a lot of common sense tips that had never really occurred to me.

As webmaster of a new site for a large insurance group, I would greatly appreciate any suggestions as to how we can make a potentially very boring collection of facts and figures into a more user-friendly and exciting web experience.

In the first instance, don't lose sight of the fact that your 'boring facts and figures' are probably very important to your company's business. It is the designer's job to communicate this essential information - not to decorate or embellish it.

If you have a look at a few conventional company reports, you will see how importantly 'tone-of-voice' features in the presentation. A company in the financial or insurance business needs to communicate integrity and stability - something that the use of gratuitous 'cool' web gizmos completely negates.

'User-friendly' I am all for, and I would never endorse 'boringness' for any reason. I would just suggest that, if you are not an experienced graphic designer, that it is better to err on the side of honest, visual simplicity. Try to create (or maintain) a strong corporate image that easily identifies your company's site from others. Consider your target market, do they only use monochrome or 4-bit displays for instance? Don't ignore the fact that your company is probably spending a lot of money on advertising and promoting a particular marketing strategy. There is a lot more to all this than just being computer literate and knowing how to use HTML.



Colour fidelity - an issue for web designers

...Your grey-on-white lettering is barely there; your yellow-on-white lettering is indecipherable; the letters next to the colored triangles are completely

illegible...

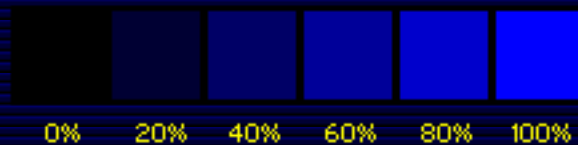
...Maybe I'm colour blind or is grey and blue text on a maroon ground derived from your "colour theory"?

... it may be very fashionable but I can't say I like your black background...

Judging from the mail I get, the majority of people can read this site without any problem. The three contradictory messages above describing my background colour as variously, white, maroon and black bring up an important issue.

Whereas the graphic designers that this site is aimed at are likely to have his/her monitor adjusted for maximum possible colour fidelity, other people may not - or may be blissfully unaware that they even have a problem.

Macintosh users will normally have their monitor's gamma set to 1.8 or thereabouts by default. This means that the 20% steps of colours in the 6x6x6 web palette (especially blue) will look like even, 20% increments of tone. A typical PC monitor will not have any gamma compensation, or any facility to alter it, so colours at the dark end of the spectrum will be indistinguishable. Where the corrected gamma monitor shows six even steps from black to blue, the uncorrected one will show two or three black squares and then go straight into intermediate or pale blues. Try this test on your monitor now.



Do these 20% increments of blue look even on your monitor? If not, you may need to adjust your monitor's brightness, contrast or gamma controls. If they don't even look blue, then you have serious problems!

Very little can be done about this. PC monitors are designed to display text and numbers and, in a competitive world, colour fidelity is relatively unimportant. Our own PCs exhibit considerable variations in colour values, although none of them show this site as having a white, maroon or black background thankfully. Our Macs are fairly accurate and consistent across the spectrum and only needed a minor tweak to set them that way.

The moral of this story is that, if you are designing your web pages for a mainly PC audience, be aware that darker colours will tend to lack separation and try to avoid designs that demand high degrees of colour fidelity.





WYSIWYG Vs. Raw HTML - Alan Duncan

Thank you for a very useful and informative site. I have been hand coding HTML for some time now and looking at your source code have found some tags that I don't recognize such as 'X-SAS-WINDOW' and 'X-SAS-UseImageWidth'. What are they?

The tags are inserted by Claris HomePage for its own purposes and seem to be redundant as removing them makes no difference to the page. I have noticed a few peculiarities in the code generated by both Claris HomePage and Adobe PageMill. Neither of them seem to be able to 'clean-up' the HTML of pages that have been extensively edited leaving things like silly empty FONT and UL tags. Having said that, I am using Beta versions of both products and I can tell you that this site wouldn't be here if I had to 'hand code' it!



Jasbir Gambhir's user interface problem

It was fantastic presentation of how HTML pages should be created & what points should be kept in mind while designing. But as you wrote that there might be a very good piece of graphic, how do we make the user aware that it is not only a mindblowing graphic but an active image map.

Actually, i have faced this problem several times. Last time, we made a java applet which consisted of a fantastic graphic. The graphic in turn consisted of video's, tv's etc. The user was supposed to move the mouse near the video buttons for another applet to start or press enter near those very small buttons. i was at a loss b'coz the graphic team had put a lot of effort in designing that graphic. i had to use those very small buttons for different functions but when a novice was told to use it. He just couldn't find the navigation tools.

What do U suggest ?

There are two main kinds of navigational devices - the EXPLICIT and the METAPHORICAL. The explicit one is in the form of a button or hypertext word that says BACK or NEXT, with or without an arrow or other graphic. The metaphorical is like the Trash Can on your desktop, you understand the purpose of a trash can so you make the connection. If I design an interface for playing videos that mimics the controls of a real life video tape player, the user will understand how to use it, especially if the buttons have the standard tape transport symbols. If I use different symbols or controls that don't mimic the buttons on a video player then I have to use my skills as a creative graphic designer to find a working alternative.

How do I know if it works you might ask? I 'idiot test' it!

When I designed the 'home page' for the Web Page Design for Designers site, I designed it with obvious rectangular buttons for the main menu items and also a version with less obvious buttons which were just lines of anti-aliased text.

When I tried it out on some 'idiots' (no disrespect meant to real idiots here) they had no problems with the obvious buttons but were confused by the lines of plain text because they were NOT obviously hypertext OR buttons. I found that by adding the coloured arrowheads to the ends of the lines of plain text, everybody understood what to do. So, I arrived at a solution that fits into neither the EXPLICIT nor METAPHORICAL camps but draws a little from each.

Although I have tested it and am content that it works in almost every case, I know it is not 100% perfect - but then what is?

For anyone interested in some of the [theory behind graphic symbols and their use in interface design](#), I have added a new page.



Martin Pierce wants to know about Java

You mention Java on one of your pages and I have been hearing a lot about it recently. I don't really understand what it is all about, do I need to know about it to design web pages and where can I find out? How does it compare with

HTML?

Martin, if you are a graphic designer, you probably don't need to know much about Java - yet!. I bought a book called Teach Yourself Java in 21 Days and would highly recommend it if you want to get started or you could go to Sun's web site for some pointers. I don't think I will be using it on any of my web sites for some time because, although all our machines are fast and packed with RAM, I know a lot of people still using older machines with 8 Meg of RAM and running System 7.1 or Windows 3.1 and they are going to miss out.

Java is a lot more difficult to learn than HTML, getting your brain around the concepts of object oriented programming is a major hurdle for most people and I won't go into details. I did say from the outset that this site was going to be a geek free zone!



A blatant plug for Nina - Proofreading

Hi Nina, If you are referring to the typos on my site, I usually catch them in the cold light of dawn. If you are trying to sell me your services, this site is non-profit making and can't support the expenditure. Seriously though, designers are notoriously bad at spelling and I claim no exception. Long hours, late nights, tired eyes, clumsy typing - hey, I'm starting to write your ad for free...

It's that left/right brain thing, and thanks for the copywriting -- you may see it on my Website! :) Ah, but who proofs the sites you build for others? I have a number of clients who feel that after staring at the screen for hours on end, creating away, they need another pair of eyes. So they use mine. Big sites, little sites -- they all need to be as perfect as possible. Think about it, and thanks again!

Ok [Nina](#), you got your plug, happy now? (In the absense off a gude web spel and grammer chequer, this link mite be usefull!)



Pantone colours for web designers? - David Faulder

I enjoyed your pages on web design - found via netscape's "What's new". Do you have any information regarding matching screen colours to "corporate" colours that have been designated using the Pantone system; for instance we use 420 & 211, and life would be a lot more peaceful if I could get my web pages to match - or would you argue that for screen publishing it is better to do something different because of different ways in which colours are perceived on screen and on page?

Pantone have just published a swatch book of the Web Palette at \$29.95 [Pantone ColorWeb](#). The nearest web colour to Pantone 420 is CCCCCC and 211 is FF66CC, I have checked these and they look pretty close on my Radius PrecisionColor monitor but who knows what they will look like on an office PC. (But then, have you ever seen two Pantone swatches that match exactly?)



A new way to create typographic leading?

I just found your page on the " Whats New? " section, and I must say how refreshing it is to see somebody using a clean, concise, and functionally attractive page design. I would imagine that many of the tips within it shall be referred to on numerous occasions, as I have only just recently started designing on the Internet.

I just wanted to mention, in reference to your para. on leading, that it is now possible to adjust leading in 'Body Text' etc. The 'line height' attribute sets "leading". You can specify leading in points, inches, centimeters, or pixels. For example:

```
{line-height: 20pt}
```

You can also specify a percentage value:

{line-height: 150% }

c/o. " A User's Guide to Style Sheets"

Jeremy Mac Lynn

I could not reply to you Jeremy because your email address was not recognised, but I presume you are talking about Microsoft Internet Explorer 3.0 specific tags here. I go to great pains in my ramblings to try to dissuade designers from using features that 90 percent of readers will miss out on, no matter how 'cool'. I would love to see the HTML 3.2 specs include these tags and maybe they will, but until they do and they are universally adopted.....



Hard copy? Hard luck!

I have had a few messages from people who have tried to print out these pages and are getting poor results. Unfortunately, neither Netscape nor MsIE are DTP packages and their printing facilities are fairly basic. This site was designed, and optimised, to be viewed on a computer screen and the anti-aliased headings and photographs are at screen resolution - 72 dpi. I would not expect it to print very well and that is why I have prepared an off-line version that can be downloaded on to your hard disk for reading off-line. The off-line version is updated every weekend so may not contain the latest forum messages or any additions made during the week. See the [LINKS](#) page for downloading.

If you MUST have a hard copy, try saving the pages as TEXT and print from those.



A message from Joe on his 'day off'

I would first of all, like to thank everyone who has taken the trouble to write. It is Sunday 8th September and my site has had over 10,000 visits this week and a corresponding amount of email. The mail varies from simple 'thank you' messages to requests for very complicated information, from useful tips to invitations to visit and review individual sites. I AM OVERWHELMED! As there is only one of me and I have to work and sleep sometimes, please be understanding if you do not receive a personal reply. Much as I would like to, I can't possibly reply to everyone.

I am sorry but I can't offer critiques of your home page or undertake to find specific pieces of information or links for individuals. If I can answer a question off the top of my head, I probably will, but I can not do your research for you.

I have had mail from every corner of the World with some offers to translate the site into local languages. I must point out that this site, its content and design are my copyright and you must have my express written permission to reproduce all, or any part of it by any means whatsoever. Having said that, I will not withhold that permission for any purpose that I think fair and reasonable.

Again, thank you all for help making Web Page Design for Designers such a success. Joe. :?{



A CorelPAINT tip from Sophia Chan

I was just looking for stuff on Yahoo and came by your link. I love the design of your page. Did you know you can make gifs with CorelPAINT! ? It's pretty neat. That way, I don't have to buy a GIF drawing program.

What you do is, first you download someone's gif image, it can't be interlaced or transparent, second you open it in CorelPAINT! and you can erase the picture you downloaded and then draw whatever pictures you want. If you want to adjust the area, just go to 'Area...' under 'Edit'.

I apologize if you've discovered this already but I thought this was pretty neat since I don't have to spend extra money to make a GIF.





What are your influences? asks Angela Collins

I must congratulate you on your wonderful site, it is the most beautiful and informative site I have seen on the web. I am a graphic designer and new to all this web stuff, so your site has been an inspiration.

What impresses me most is your use of color. I don't know how to describe it but it is both restrained and vibrant, which seems to be a contradiction. Can you tell me what your influences are and point me in the direction of any suitable reference books?

Ahem, thanks for the eMail Angela (or is it fan mail?), I'm glad that you like the site but it is a tricky question. We are ALL new to 'this web stuff', there are no 'old hands' in this business!

To try to answer your question, I have had a good old fashioned art college training and I suppose I must put it down to that initially. I have done a some painting too, that helps in developing an appreciation of colour.

I think that my influences are more Bauhaus than anything else, especially Herbert Bayer and Josef Albers. As far as reference books are concerned, I can't really help. I don't believe that you can learn to use colour from books, only from practice.



Bob Gale suggests a NEXT button - dunnit!

I just discovered your Web Page Design site today (thanks to Netscape's What's New page), and I read it "cover to cover." I've been following Web page design issues for a while now, and you've done a great job in pulling together the most important concepts into a coherent and attractive package.

A few thoughts on navigation: Considering that I read your whole site through in one sitting, I would have liked "next" and "previous" buttons/links instead of having to reload the main page each time. My philosophy on hypertext is that although it does give us the ability to break out of the linearity of less interactive media, reading is still a very linear process. Many readers appreciate a suggested linear course through a written work, even when it's only one of many possible paths. If the case of your site, where there does seem to be a progression of topics from general to specific and from basic to advanced, I should think that Previous/Next links (or even just Next) would be a valuable yet unobtrusive navigational feature, IMHO.

I don't usually subscribe to 'relative' navigational links. It had not occurred to me at the outset that anyone would read the site from 'cover to cover' as you put it, but I have had a surprising amount of mail from people who have said that they have done just that. I guess old habits die hard! In the light of that, I have added a 'NEXT' button.

Also, do you have any thoughts on using HTML form elements as navigational tools, such as the "Pick a section" drop-down list paired with a "Go" submit button used at www.sjmercury.com and www.washingtonpost.com? I'm considering using them on our newspaper's Web site as away of providing many navigation options on each page without using up a lot of space. I also like the way it plays with the notion of "software" vs. "content"; rather than content being this separate thing that we present within a wrapper of software called a Web browser, the software is embedded within the content itself.

This mechanism is useful where space (or lack of it) is an issue but I find it clumsy in most circumstances as it requires what I feel is 'too much' user intervention. It requires a click, a drag, and another click to achieve the functionality of a single click on an ordinary list or image map menu. It also contradicts the functionality of any other computer interface 'pop-up menu' element that executes on 'mouseup'.



Design Vs. Speed - a question from Henry Wheeler

Joe, I am very impressed by the look and content of your Web Page Design site. Most of the good looking sites on the web rely heavily on large graphic elements that take ages to download but yours looks great and downloads very

quickly. At what point do you think that a designer should start compromising design for speed?

This is a difficult one because there are so many unknown factors. I agree that it is all too easy to stick a whizzy, full screen graphic up there produced in Freehand or something at the expense of download time. I am aware of personally 'compromising design for speed' as you put it.

On my company site <http://ds.dial.pipex.com/pixelp/> I originally used separate icons along the bottom of the screen with the idea that I could 'grey-out' the icon representing the page being viewed and leave the rest 'active'.

In practice, this turned out to be very slow and annoying so I just put all the icons into one single 'image mapped' graphic. Having a common graphic on every page is more efficient from a 'bandwidth' point of view.

Although this is less than ideal functionally, I can justify it as being 'true to the medium' but it would be impossible to make any hard and fast rule.



Jeff Gates writes about more palette issues

I've just read your answers to a couple of queries about color mapping and I have a few questions:

Do you have to worry about cross platform color mapping if you are using jpegs? I know the difference between gifs and jpegs, but how do they deal with cross-platform color issues differently?

JPEGS are 24-bit images and are dithered by the browser on 8-bit displays so there are no cross platform problems with JPEGs whatsoever.

Also, is it necessary to use your web color chart if you are using only one image on a page? I was told that if you save all the images you will be using on one page in one Photoshop document, a correct color table will be created so there are no strange colors appearing in any image.

This is a good technique for producing a 'super palette' to prevent palette flashing in Director and other multimedia programs as you go from one 'frame' to another but it is not really relevant for WWW design.

However, if you are concerned about cross-platform readability, I would assume that is when one would use the color chart and color map procedure you are outlining. Correct?

Yes, but readability is the wrong term, 'readability' refers to an attribute of typographic and letterform design. What you are refering to is cross-platform colour consistency.

Somewhere, very early on, I was told by someone who was extensively experimenting with graphics on the web that one's gifs (when converted to Index Color) should be given an "adapted" palette with no dithering (as Netscape had it's own built-in dithering scheme). I notice you have suggested other choices in the Mode Change to Index Color dialog box.

Why do you recommend those choices?

Jeff, that advice could lead to disaster! I have had a lot of correspondence about palettes. As there seem to be general confusion on this subject, I have put together another couple of pages which should help to answer yours, and many other peoples questions. They will demonstrate why you should NOT use adaptive palettes and also have a link to a Photoshop Web Palette .act file that you can download. See More about [PALETTES](#).



On using invisible gifs for spacing - Mike DelGaudio

Congratulations on a very informative, and quite beautiful site. One thing I have recently discovered is the use of the "one pixel-transparent gif" as a method of placing text and images where I want them, using absolute pixel references, or as close as I can get given the "elasticity" of a web page. In viewing the source of your documents, it appears you use the "trick" extensively. I was wondering if you have any particular methods that you have had success with. Or ground rules you could suggest to use this method as effeciently as possible.

I have not used anything as small as a single pixel transparent gif, I prefer to use the ` ` tag and adjust the font size of the space. This can be used for both horizontal and vertical spacing.

The 'non-breaking space' is not supported by many web design packages and

has to be added at HTML level but, as I mention in the typography section, it is the best way of introducing letter-spacing. You can put in a nbsp and set its size to adjust letterspacing or, if you put it at the 'back end' of a line in conjunction with an 'ALT-RETURN' and make it a large size, it controls your leading.

If you do use a transparent (invisible) gif, use just one for your whole site and adjust its size using the image size tags.



A tip about rules from Joe Pemberton

Joe, I find your site very useful as a student of graphic design (at Brigham Young University, Provo, Utah, USA) and a free-lance web publisher. In your typography section you mention the use of rules, specifically on how to resize rules (or any image) by specifying its width in pixels in the "img src" tag. You mentioned that the <hr> tag automatically resizes when the browser window is resized.

You can achieve this with an image by specifying its width as a percent of the screen in the "img src" tag (<img src="x.gif" width="y%"). It may be useful to include that information among the other great tips you have published. Keep up the fine work.



Patrick Havens asks about frames

My Name is Patrick Havens and I'm in the process of changing my page over to one with frames. And my question is, what is your feelings on them. It seems to make it easier to put things in a way that people can find things easier. But are there some guidelines I should follow.

Frames were very popular when they were first introduced in Netscape but many people have stopped using them.

Used well, they can provide a static list of links to other pages or provide a constant header or footer. But you must be aware that a lot of people use 640 x 480 screens or smaller - there are still some Macintosh LC users with 12 inch screens and there are now web browsers for the Newton! There are also some web browsers that don't support frames at all.

On smaller screens, the 'usable' area of a 'frames' page design becomes disproportionately smaller and the user finds scroll bars on every pane both horizontally and vertically which exasperates the problem even further.

I find that frames create more problems than solutions and I avoid using them where possible. I would say, that if you do decide to use them, you should check the functionality of your design by reducing the size of your browser window to simulate a small screen size and see what happens.

It is also a good idea to give your readers a 'WITHOUT FRAMES' option but, of course, that means doing everything twice!



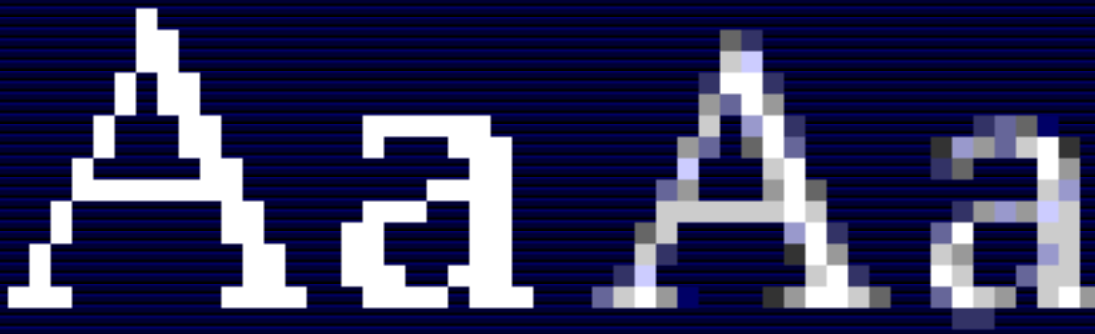
What about anti-aliased type? asks Yves Roberts

I was very interested to read your site. I too am very frustrated about the lack of typography on web pages design and the fact that type does not look so good on the computer screen.

I have read that it will soon be possible to have anti-aliased type on the screen using Adobe Type Manager 4. Will this not make everything look much better?

Yves, anti-aliasing can make type look a lot better on the computer screen but it has its pitfalls too.

Anti-aliasing type makes it look smoother by adding intermediate coloured pixels into the 'steps' in curved or diagonal lines thereby creating an illusion of a higher resolution screen. It is effectively 'blurring' the edges of the type and works well on large, bold typefaces.



A a A a

Palatino 14 point at 800% magnification shows the effects of anti-aliasing

Trying to anti-alias smaller font sizes, 18 point and below, tends to make text too fuzzy to read, especially on lighter faces. In trying to be accurate with character shapes and spacing, the technique 'fights' with the natural pixel grid of the screen and tries to put vertical lines in-between pixels. It can only simulate this by adjusting the tonal values, so you get lines which are on-grid and ones that are off-grid looking different in weight and colour.

Anti-aliased Palatino 18 point

Anti-aliased Palatino 14 point

Anti-aliased Palatino 12 point

Anti-aliased Palatino 10 point

Anti-aliased Futura 18 point

Anti-aliased Futura 14 point

Anti-aliased Futura 12 point

Anti-aliased Futura 10 point

Notice how Palatino anti-aliases more successfully than the lighter Futura because it has a vertical 'stress', the downstrokes are relatively thick. Futura has a more even geometry and blurs in all directions, even at 18 point size

I prefer to use a good screen font for small sizes of type and only use anti-aliasing for headlines.

Of course, you will have little, if any, control over the typeface your reader is using for his browser or whether ATM 4.0 is installed at all!



Lisa Clements shares a viewpoint

Thanks for this info! I am working on my web site and coming from a design background, find the (for lack of a better word) "geeky" side of all this a little daunting. Unlike print, multimedia design becomes geeky fast! Your easy to read designer viewpoint is a big help!

I have been designing a corporate site with lots of computer whizzes for the last year and am now working on my site and sites for clients without the computer genius so readily available. I love the challenge though! It is important for all designers to recognize the importance of multi-disciplinary work in these technological times!



M. Steven Hilton, Jr. asks about palette mapping

Awesome site dude.

I read the whole web design site from front to back and have a question about the Netscape palette.

Let's say I've been given 6 different gifs to put onto a website. All of them vary quite a bit, but not drastically, from image to image. (most are pics of people with a lot of flesh tones, others are logos with bright neon-like colors)

How would I go about remapping the color palette on each gif to the Netscape palette?

You will need Photoshop (or DeBabelizer) but the technique is very simple.

Download the WebPalette from my site. (webpal.gif)

Open it in Photoshop

Go to Mode Menu - Color Table

Select Save and save the palette as 'webpal.act'

Now open one of your files (in RGB mode - important!)

Choose Mode Menu - Indexed Color

Choose Custom and Diffusion and OK

In the Colour Table dialog that opens, load your new 'webpal.act'

You will have converted the file to the web palette

Save it as a GIF file.

For subsequent conversions, just choose Previous in the Indexed Color dialog or reload the 'webpal.act' if you have changed to a different palette..

NOTE: There is now a downloadable 'WebPal.act' on the new [Palettes](#) page.



A question about navigation from Sasha Pave

I have a question for navigational design, which maybe will spark some discussion:

Is it important to provide a listing of all the areas in a site on every page? For instance, if you have a site split up between 10 different areas. Should all 10 be listed on each page? It's a bit much for a menu bar.

The more savy reader would appreciate it, but simplicity would state otherwise.

It is a designer's job to prioritise information and present it in the most logical and easy to understand way. If it is essential that it is possible to directly access every area from every page then a way must be found to make it work. To put direct access on every page by default just shows that the problem hasn't been considered enough.

On analysis, it is most likely that the presentation of the information can be simplified and you are absolutely right to try to maintain simplicity. One possibility is to return to a main menu from each page, as my site does. The nature of the site is not completely linear or I would have put a NEXT button on each page as well as a HOME button. I think that this helps the reader keep his/her bearings.

The other possibility is to GROUP the areas into a more managable size (6?) and then branch out from those.



What are the Gif animation programs you mention? - asks Paul Anderson

For the Mac, I have been using [Gif Builder](#), an excellent freeware package from Yves Piquet in Switzerland. It does everything you could want, and very elegantly too.

If you use a PC, [Corel Xara 1.2](#) can now produce animated Gifs and it is certainly my favourite graphics package on the PC platform by far.



Peter Small asks about cross platform palettes

First, thanks Joe for your very helpful palette colour guide chart. It has helped me at last (after many years) to get a mind set on colour palettes.

Do colours in fact come out the same on all PCs and the Mac (in 8,16 and 32 bit) if you use those recommended mixtures of red green and blue?

In theory, yes. On a Mac screen, given the slight differences in screen phosphors, the colours will be reasonably consistent. On PCs, there is little concept of colour consistency and the same colour can vary quite considerably from one monitor and video card to another. The most significant difference between Mac and PC platforms is the 'gamma' of the screen. Without getting too technical, mid tones on a PC monitor will appear darker than on a Mac monitor. If you set up a wedge of 16 even steps of grey with Photoshop on a

Mac and then view the same file on a PC, all the dark greys run into one another. The same goes for all other colours. (Now perhaps you will start to understand why designers prefer Macs).



Joe Gillespie joe@pixelp.co.uk





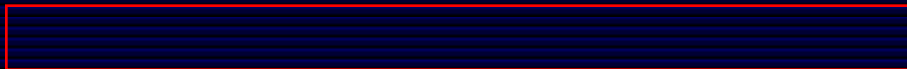
web design resources

I would like to welcome Suzanne Stephens to Web Page Design for Designers. Suzanne works as a web page designer on the other side of the World from me, on the West Coast of America, yet we communicate on a day to day basis as if we were in the same office.

Suzanne's list of Web Design Resources is compiled from references posted by readers of author Lynda Weinman's Web Design [mailing list](#). Suzanne has kindly made them available to you as part of this site.

Whenever possible, Suzanne has given credit to the Webbies Design Mailing List readers who provided these resources. While she must use her discretion in deciding which URLs to include, she welcomes your input. If you find a broken link, have been quoted or credited inaccurately, or if you don't want your name used, please [e-mail](#) Suzanne.

Use this [form](#) to submit your recommendations for additions to the list.



[ASCII Art](#) Links to software for creating ASCII art.

[Banner Advertising](#) Info on banner click-through ads.

[Books](#) Web designers recommend their favorite books.

[Colors](#) Where to go if you're in a dither. Browser safe colors, hex codes.

Copyright & Contracts Helpful info for writing contracts, info on copyright, how to contact a copyright lawyer who happens to be a really nice guy.

Counters A free Web counter.

DeBabelizer Information about this highly esteemed but not as well known image processing program which is said to perform some functions better than Photoshop.

Domain Names Links to Internic, where you go to register a domain name.

Downloadable Graphics Collections of art, images, icons, etc.

E-zines Web publications of interest to designers.

Fonts Font archives, font houses, specifying fonts.

For Macs Only Shareware and info resources for Mac users.

For PCs Only Shareware and info resources for PC users.

Frames Frames tutorials and references.

Graphics Drop shadows, Photoshop plug-ins, image maps, transparent GIFs, Web color palettes, and more.

HTML Beginning and advanced HTML, tag dictionaries, HTML tips and tricks, tutorials, etc.

HTML Text Editors Links to info on the most popular HTML text editors like my favorite, BBEdit.

HTML Syntax Validators Trouble-shoot your HTML.

<u>Java & Javascript</u>	What's the difference between Java and JavaScript? Tutorials, resource collections, tips and tricks.
<u>Layout & Design</u>	Tutorials, creative inspiration.
<u>Link Validators</u>	Knock. Knock. Anybody home? Check your links with these great programs.
<u>Marketing on the Internet</u>	Everything you ever wanted to know about marketing on the Internet.
<u>META Tags</u>	META tag how-tos.
<u>More Lists of Web Design Resources</u>	Lots more resources similar to this one.
<u>Perl & CGI</u>	Where to find CGI scripts (free and otherwise) and people to write them for you.
<u>Photoshop</u>	Drop shadows, Photoshop plug-ins, tips 'n trix, Adobe's pages and more.
<u>Pricing & Salaries</u>	Answers to life's eternal question, "How much are you worth?"
<u>Professional Organizations</u>	Graphic Artists Guild, HTML Writers Guild, WebPRO.
<u>Search Engines</u>	How search engines work, URL submission services, how to keep robots off your page, META tagging for search engines.
<u>Shockwave</u>	Get shocked here.
<u>Shopping Carts</u>	Create your own shopping cart with free (or inexpensive) CGI scripts. Cybercash.

Software Tools All kinds of Web design and Internet tools.

Tables Get in control of your layouts with the most useful design device since the single pixel GIF.

Web “Gurus” How to find your favorite Web design author’s site.

Web Design Schools Learn about Web design from the comfort of your home computer.

Web Stats The 5:00 traffic report, surveys.

Womens’ Resources Where to find a Webgrrls chapter near you. Other resources for women.

