NEW MEDIA IN CORPORATE COMMUNICATIONS

Mic Cady

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A Hawksmere Report

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Current projects include working with companies who wish to develop electronic commerce solutions, through to working within Europe on the future for the interactive industries, and acting as a consultant for the European Educational Partnership, which is seeking to find new business models for digital education and its delivery.

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Introduction

This Report is for professionals in the corporate communications arena. It assumes no knowledge of new media, multimedia or interactive media, but it (probably unconsciously) does assume an understanding of and background in corporate culture.

It would be presumptuous of me to define corporate communications for you, since I assume that, by definition, that is your business! But just in case you have picked this Report up at random, here is a broad brush definition of the objectives of corporate communications: to inform and support both internally and externally, and to promote the development of corporate culture and ideals in individuals. The key point is that corporate communications is both outward and inward looking.

In the Report that follows, I have attempted to suggest strategies and methodologies that will work for both external and internal communications, but they will often not be the same. For example, intranets are usually for internal consumption, whereas web sites are usually for a worldwide and public audience.

It is crucial that you know who your audience is. In this context, the most important question that you can ask yourself at any time is – 'who is this for?' The content, approach and tone that you use will vary dramatically depending upon the answer to that question.

I think that it is easier to get the answer right when you are addressing an external audience; it is when the communication is intended for internal use that things so often go wrong.

This is something I feel particularly strongly about, and I hope that you will be forbearing if I talk about 'people issues' at some length in what follows. Many of my experiences as a manager in large companies led me to the feeling that there is a certain kind of manager who should never be let anywhere near people! That these managers were in positions where they affected the fortunes of their company, and the professional and personal lives of employees, still makes me cringe.

New media offers unprecedented opportunities to improve (and possibly revolutionise) communications for all of us at all levels. But new media cannot compensate for bad management and bad communications. If anything, technology gives us even more opportunities to get things even more horribly wrong.

There is no magic to effective internal communications, but you do need commitment, and you do need to make an effort. Right now, part of that effort should be in gaining a broad understanding of the issues involved in new media. I hope that this Report will help you in that regard.

My principal concern here is to discuss the strategic, management and publishing issues involved in new media. Make use of technologies that fit with what you want to do, and it will give you new opportunities.

There is another entirely pragmatic reason for not dwelling on technology too much – time. You will be reading this several months after I have written it, by which time there will be new versions of browsers and tools available and there will be many more millions of people online. There may also be entirely new technologies knocking at the door. It is said that an Internet year is six months and shortening, and nothing shakes credibility so much as descriptions of technology that came and went yesterday.

An anecdote:

I admit to a number of prejudices, some of which will become clear to readers. The most obvious is a profound scepticism about the fountains of wisdom flowing within the average IT department. Such wisdom frequently includes the philosophy that technology can solve anything. Any department or enterprise driven by the notion that technology is more important than people deserves to come a cropper sooner or later. Corporate history is littered with victims of this simple truth. I've watched with horrified fascination while one very large company that I know well has been constantly deceived and run rings round by a centrally placed IT manager. As a result of his stunning ministrations, the company is now about three years behind its closest competitors, not only in corporate communications but – worse – in its Internet development.

I believe many senior managers are frightened by technology but are afraid to admit so, and, further, their grasp of IT issues is tenuous to say the least. However, there is no way that they will admit that, so they pay heed to the pearls of wisdom issued by the likes of the manager described above.

How often, even in today's people centred enterprises, do you observe senior managers actually listening properly and attentively to workers at the 'coal face'? Walking the talk is still a rare exercise, and so the levels of ignorance and mistrust remain high.

I hope some of this sounds familiar, because unless all of us – wherever we fit in the management structure – face up to these kinds of issues, then communications of all sorts are never going to do the job they should.

What is new media?

CASE STUDY

chapter 1

Chapter 1:
What is new media?

History is the best route into this particular bit of confusion.

The digital revolution began in 1984 when Apple produced its first Mac computers, with their easy to use graphical user interface. Macs had more going for them than the best operating system in the world. Firstly, they were designer friendly, built from the ground up to be machines that handled colour and graphics. Secondly, Macs had the killer application to go with all that – Adobe's PageMaker, the first computer based graphical page design and layout tool. Overnight the publishing world was transformed. Ways of working that had developed over decades became redundant. Out went galley proofs, printers' proof readers and dozens of other practices and skills. By 1990 virtually every publishing house in the UK had abandoned its old ways of working and created its design and layouts in-house, using Macs and the key applications – PhotoShop, Illustrator, PageMaker and QuarkXpress.

It says much for Macs and for the key applications, that designers – and editors – took to desktop publishing (DTP) as easily as most ducks take to water.

The invention of laser discs by Phillips in the late 80s coincided with DTP, and enabled text and pictures to be stored on large silver discs. Laser was almost immediately leapfrogged by CD-ROM, a physically smaller disc storage device that held more data than laser, albeit at a lower quality. CD-ROM drives could read text and graphics, and crucially, CD-ROMs could also hold video, animation and sound. Multimedia was born. A CD-ROM disc can hold about 650 megabytes of data – more than enough to hold the text of the complete works of Shakespeare. Text is small in data terms, pictures much bigger and video and sound very big indeed.

The first definition of multimedia is that it is a mixture of more than one media. Illustrated books do not count as multimedia, and multimedia is generally taken to mean any disk based content. Text and still pictures (as in an illustrated book) on disk count as multimedia, no matter how basic. Generally, multimedia attempts to do more than simply offer text and pictures. In titles for children, animation is frequently used, but good animation is very costly to produce. Many consider video to be an essential ingredient in multimedia, even when the quality is dreadful.

The best multimedia is perhaps that which mixes text, graphics, video, animation and sound, as and when appropriate, and when the content demands. Actually tracking down a title that fulfils this specification is not easy to do, but encyclopedias such as Microsoft's Encarta, or Dorling Kindersley titles such as *The Way Things Work* stand as excellent examples.

Case study

The Way Things Work serves as one of the best examples of multimedia. Firstly, it began life as an illustrated book, published by Dorling Kindersley. When Dorling Kindersley began to develop CD-ROMs in the early 1990s, its multimedia Managing Director, Alan Buckingham, decided that *The Way Things Work* would be one of the first five multimedia titles that the company published.The book sets out to explain the principals of science and technology for children aged 7-11.

The Way Things Work is an ideal candidate for multimedia treatment since the principals of science can be shown in action with the use of movement and sound, and therefore, by making use of interactive elements the subject becomes much more attractive.

The disc was published towards the end of 1994, and was immediately acclaimed as a masterpiece of its kind. It won numerous awards and became (and remained) Dorling Kindersley's best-selling disc. The disc was such a resounding success that the company immediately began to plan a follow up, but this proved to be very difficult. Eventually, it was agreed that the follow up should be a version two of the disc, with the addition of a new top level interface (look and feel), a series of video sequences, and an accompanying web site.

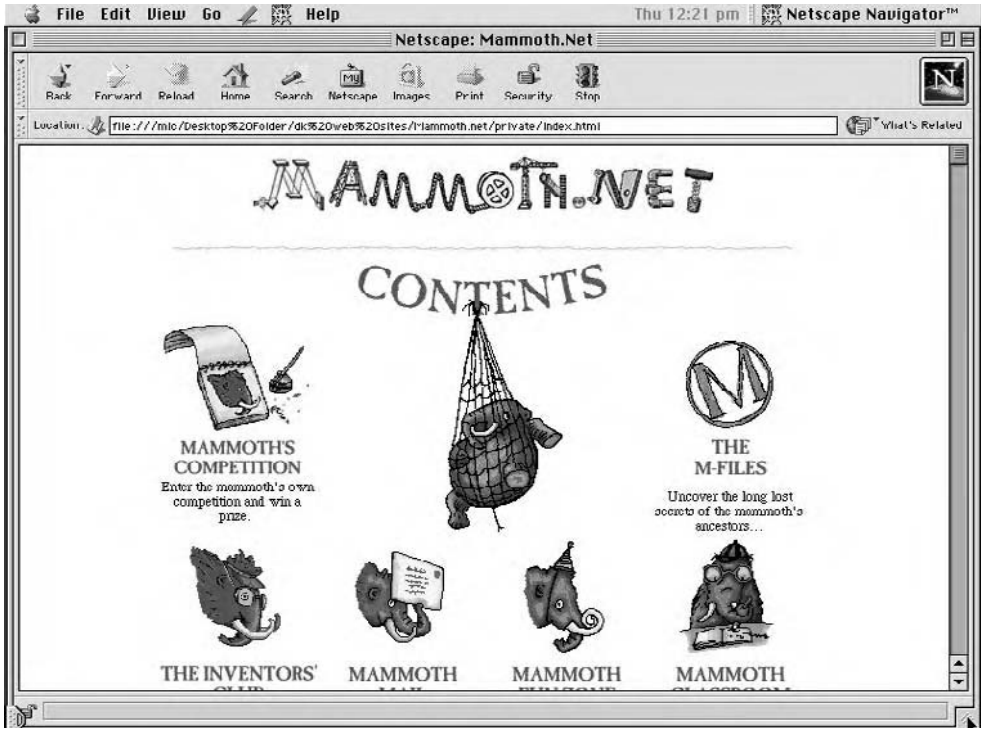

Figure 1: Screen shot from Mammoth.net, the online magazine web site which accompanied The Way Things Work II

Many lessons can be learned from the history of this one title, and they are generic lessons which apply to all multimedia. The first is that managing multimedia can be very difficult indeed – getting the right quality at the right time and to the budget requires skill and experience, much more so than in traditional publishing. Costs can very easily spiral out of control, and firm project management is essential.

Get a concept

A key point is that a good, clear, agreed concept is essential. This should be in writing, backed up with storyboards and visuals. The concept should be signed off, and once signed off, should only be 'tampered' with in extremes. 'Tweaking' agreed concepts and projects is always dangerous and can be fatal. However, this is where senior managers like to make a contribution, and this is a stage which you should treat with extreme caution. If you – as the commissioner of the work – have agreed on a concept and way of working with the maker of the work, the last thing that you want is for a well-intentioned manager to start meddling, but this will happen! The only way that you can avoid this is to make sure that those kinds of contributions are made well before anything is fixed. Good communications can help here, but as you know, senior managers might like all sorts of common sense ways of working for everyone else, but their particular cannons have to be able to roll all over the decks causing mayhem at will.

Critically important to the development of *The Way Things Work* was the issue of interfaces, and more specifically, interface metaphors. Metaphor issues are important to grasp in multimedia, and they are often not straightforward, being as much personal and subjective as they are objective and understandable.

Lastly, is the supreme point that multimedia differs from all other media types, in that by definition it mixes media, and requires an understanding of interactivity. Multimedia practitioners have to be able to understand – for example – video as well as editorial issues; technical constraints as well as design ones, etc. Interactivity runs behind all of this: what is it? When is it appropriate? Who is it for? How is it managed?

All of these topics will be covered in greater detail in the chapters which follow.

Defining new media in a nutshell

The terms multimedia, interactive media and new media are frequently muddled when they shouldn't be, but very broadly, new media is usually delivered by a network. Multimedia is usually disk-based or device-based, and it may or may not be interactive. Interactive media can be delivered in many ways, but by definition it must be capable of enabling communication: one-to-one, one-to-many, many-to-one, and/or many-to-many. Communication may simply be between the user and the application, but more and more such communication is being defined as 'mere' multimedia.

There continues to be confusion over the use and application of these terms, and an increasing number of practitioners now use the catch all phrase 'digital media'.

However, since virtually all publishing is now digital, and so is a lot of TV, and the majority of telephony… the can of worms just got bigger.

IT and communications in the workplace

E-MAIL – SAINT AND DEVIL

THE PERILS OF E-MAIL

chapter 2

Chapter 2:
IT and communications in the workplace

Before talking about where we are now, it will help to retrace our steps to where most companies were a few years ago. Tellingly, it's where a lot of companies still are right now; intellectually – they may *look* as modern as can be from the outside.

This overview can also act as a basic IT primer, and an understanding of aspects of IT is advantageous in all corporate communications today.

Back in the 1970s, there were telephones; in trays and out trays; secretaries and typing pools; and notice boards. Managers had secretaries who answered the phone and opened the post; they decided what was important and what was not; and many also took the final leap of decision-making and threw rubbish away before it reached the managers' desk.

Secretaries were very powerful, and in some cases, made all of the real decisions. Managers spent a very large amount of their time in meetings, and meetings were the single most important business tool in many companies. They were certainly the prime official communications medium. All but the most impromptu meeting was minuted, and those minutes became the bibles by which future business was conducted. Much informal communication took place outside the meetings, of course, but this was not minuted, and thus did not count. (Note: virtually all of what is now grandiosely described as knowledge management can be debated within these very simple descriptions of the management process.)

On the shop floor, communications of an official nature were limited to the notice board. This was usually a dismal collection that included health and safety regulations, rules about not smoking in the toilets, tatty bits of paper proclaiming amateur theatrics in the local hall, and sometimes, official pronouncements from the management.

If there was a computer it was a gigantic beast (a mainframe) understood only by the white-suited technologists who cared for it a within a safe and sterile steel and glass environment. Everyone assumed that only the technologists could possibly understand the machine.

Sometime in the 80s along came the Personal Computer (PC). What made it an instant success in the corporate world (rather than the creative world) was not the technology but two key applications – word processing and spreadsheets. For secretaries the former was a godsend – no more Tippex for a start! Changes could be made to documents instantly, and could then be saved to the hard disk.

In accounts departments, and for those secretaries responsible for accounting functions, spreadsheets were even more revolutionary. Documents that were either impossible or very difficult to create on typewriters were easy to make and amend on PCs, and spreadsheets could calculate as well. Things would never be the same again, but it was not until Microsoft introduced Windows, that desktop computers began to appear everywhere.

Those early machines look antique today – tiny, monochrome screens, next to no memory, small hard disks, and operating systems that were shaky and almost impossible for non-technical users to understand. However they did the job, and all of the subsequent advances and embellishments could be described as merely bells and whistles. In fact, the talk now of 'thin clients', which are effectively stripped down machines with very simple but very robust operating systems and which make calls to a server for applications and for back-up, are very like the early PCs and the terminals which preceded them; in functionality, if not looks, that is.

As more power moved to desktop computers, so less reliance was put on the big mainframes, especially in companies whose requirements were for administrative functions rather than for computing power.

This changed the nature of the job for computer specialists, and created a need for departments that would support the growing numbers of PCs. The IT department was born.

The key to the development of IT empires is the computer network described above. At heart, networks are simple: they are made up of devices connected together by wire (wireless networks – enabled by infra-red communications – have been possible for years but are only now being talked about as viable mainstream solutions). Until recently, most office networks were used for the following: printing, gathering documents from other computers or from servers and back-ups, either to servers or to other kinds of storage devices. Such communications take place via cables (Ethernet most often), and can either be simple or have more complex software management attached (Novell's NetWare was the most well-known proprietary network management solution).

Simple networks are comparatively easy to manage. Often, the most that goes wrong is users accidentally unplugging the machine from the network.

As networks grow, they become more complex to manage. For example, Ethernet cabling has a limit to its physical length before it needs a device which will push the computer signals (packets is the correct jargon) on properly. Once beyond a certain number of devices, a network (or LAN – Local Area Network) will need to be divided into smaller units, and these will need other devices to connect them and enable them to communicate with one another (routers and hubs do this).

Networks spread over more than one physical location become WANs – Wide Area Networks – and the management of the connections between the locations can be very challenging.

If and when corporate databases, document management and so forth are introduced, then network management becomes ever more complex and requires an ever growing bag of IT skills. When IT becomes all pervasive in this way within companies, the IT or wholly technical function begins to blur with other parts of the company.

Networks did not change fundamentally throughout the 80s and early 90s, but another revolution was about to hit the world of IT: the Internet. Only two elements of the Internet really impinge on corporates in any appreciable way: e-mail and the World Wide Web.

E-mail – saint and devil

E-mail has become an indispensable tool in many (though by no means all) corporates, and is a key tool in the communications armoury. E-mail's benefits are immediately obvious: it is a quick (often nearly instantaneous) and efficient way of sending and receiving written communications; generally speaking e-mail can be read across platforms and applications; it is much cheaper than old-fashioned surface mail (snailmail); it is much more easily 'filed' than paper memos and documents; and it has the key advantage that it can be sent to multiple recipients – it can be sent one-to-many, one-to-one, back-copied, etc.

It is e-mail's wonderful flexibility that makes it such a powerful tool.

However, e-mail does have one huge and potentially damaging disadvantage – itself. In the office of the 70s, the manager had a phone and an in tray, and a secretary who 'edited' both. Many managers today do not have a secretary (not even a shared one), and yet today's manager is expected to deal with far greater amounts of 'information' – from faxes, phones, voice mail, pagers, and now from e-mail and the World Wide Web. Today, managers are expected to know much more, as well as do their jobs. In today's technologically driven world, what you knew yesterday is probably not enough or true enough for today. This increases the 'fear factor', to the extent that many managers feel that they cannot afford to ignore anything, and this means they attempt to read everything. With the amount of e-mail (never mind all of the other information sources) slopping about on corporate networks this means that a manager could spend a large part of his/her day reading e-mails, rather than doing the job that they are presumably paid to do. This problem is not just confined to managers – more workers are complaining that they can't get on because of the amount of e-mail that they have to read.

So, there is just too much e-mail, taking too long to read. But there is more to it than that. Remember the secretaries who 'edited' the in trays? They were very good at weeding out the wheat from the chaff. Today's managers, busier than ever before, face a very real risk of missing the key e-mail hidden among the tide of disposable stuff. Up goes the fear factor again, and rightly so – e-mail culture is different from other communications cultures. For example, people tend not to send e-mail again if it is not replied to, presumably assuming that the recipient does not want to reply. This is not phone culture, or even memo culture, where if you don't receive a reply you try again.

E-mail can be a real curse as well as an undoubted blessing. If e-mail is part of your corporate communications portfolio (as it should be), then you need to address these issues, and define a corporate e-mail strategy. For example, if your e-mail clients can send mails with different priorities, make sure that everyone in the company knows what the rules are. Priority 1 mails must be replied to today, Priority 2 within 48 hours, and so forth. 'Information mails' or non-business mails should say just that about themselves in the mail title. Make it a rule that all such mail has a phrase like 'Nonb' (for non business) in the title and then everyone can set their mail filters to filter all such mails into a 'Read These If You Ever Have More Than 30 Spare Seconds In Your Life And It's Not Someone's Birthday Present You Should Be Buying' file.

You may go the whole hog and ban all such e-mails – which won't say much about your personnel skills but may save hundreds of wasted hours reading and worse, as the anecdotes below illustrate.

The perils of e-mail

At one company where I worked I was the amused recipient of an e-mail which was advertising the Managing Director's second hand formal black shoes for sale. Not only did this errant mail (actually intended for members of the board) reach everyone in the company, it resulted in a mailstorm of 'witty', sarcastic and aggrieved replies, all of which, naturally, went to everyone as well.

Then there are the e-mail 'trails', which often begin as someone deciding they need to cover themselves, provide some kind of alibi (as in 'I told him that it would all go pear-shaped weeks ago'), or are intended to keep all those who 'need to know' informed. Such mails inevitably end up being copied to a wider pool of recipients, which is bad enough, but they often spawn other, de-contextualised e-mails along the lines of 'Bill, I've received an e-mail from Neil that has really got me hopping; the little creep is trying to drop George right in it… blah, blah…'.

Naturally, Bill hardly knows any of the people named, let alone the sender, but feels as if he has to do something about it. So he sends an e-mail… This modern form of Chinese whispers can reach right up to board level, as I have seen on more than one occasion, and will result in an angry and mystified director phoning a beleaguered middle manager who knows that things have got completely out of hand but has no idea how to put a stop to it.

'Clever' staffers have cottoned on to the fact that such e-mails can really foul up a company. Don't underestimate the number of such stirrers that your company nurtures. It also appeals to sad staffers whose only hope of getting their name in front of the Managing Director is by some such ruse.

In summary, e-mail is potentially one of the simplest and most effective forms of 'new media' that you can use, but dig yourself a good deep hole right now and be prepared to spend the rest of your life in it if you have not got an e-mail strategy in place.

That strategy *must* include virus protection. Viruses on PC networks are a matter of fact, and only those companies with proper, enforced and continually updated virus checkers on all machines stand any chance of escaping. It simply is not worth the risk to do anything else; it is actually possible to put your company out of business if you get a bad virus infection. There will be users who try to get round this, and they are the ones who are most likely to drop your company right in it. The only way to solve this is to ensure that all machines are checked regularly, either by network monitoring software, or by physically checking each machine.

One last point on e-mail; if your company is big enough, or technically minded enough, you will probably have a 'firewall' in place. This is server software intended to prevent outsiders breaking into your systems and networks. You can make good use of such systems to ensure that e-mail 'spams' – unwanted and unasked for e-mails – are filtered out before they reach users. Such systems can filter out lots of potential trouble before it gets into the enterprise.

Contact!

The web is all about interaction and the simplest and most effective form of interaction is e-mail. If you have created a web site that has public access, the likelihood is that people will want to contact you, and presumably you will welcome that as being possible new business.

Two things follow: always provide an e-mail address for users to write to, and when they do write, make sure that they always get a prompt reply.

A brief history of the Internet and the World Wide Web

WEB DESIGN ISSUES

THE WEB TODAY

THE WEB TOMORROW

chapter 3

Chapter 3:
A brief history of the Internet and the World Wide Web

The Internet began life as a result of the Cold War, at a time when the US was concerned that its strategic computers should be able to withstand nuclear attack and be able to talk to one another in secure ways. Therefore in some ways the Internet was, and remains, simply a super computer network. The early Internet connected military computer installations across the US, and subsequently also linked universities that were engaged in military research. Academics immediately realised that this was a superb way of exchanging information, and it was universities that made the best use of the Internet throughout the late 70s, 80s and into the 90s.

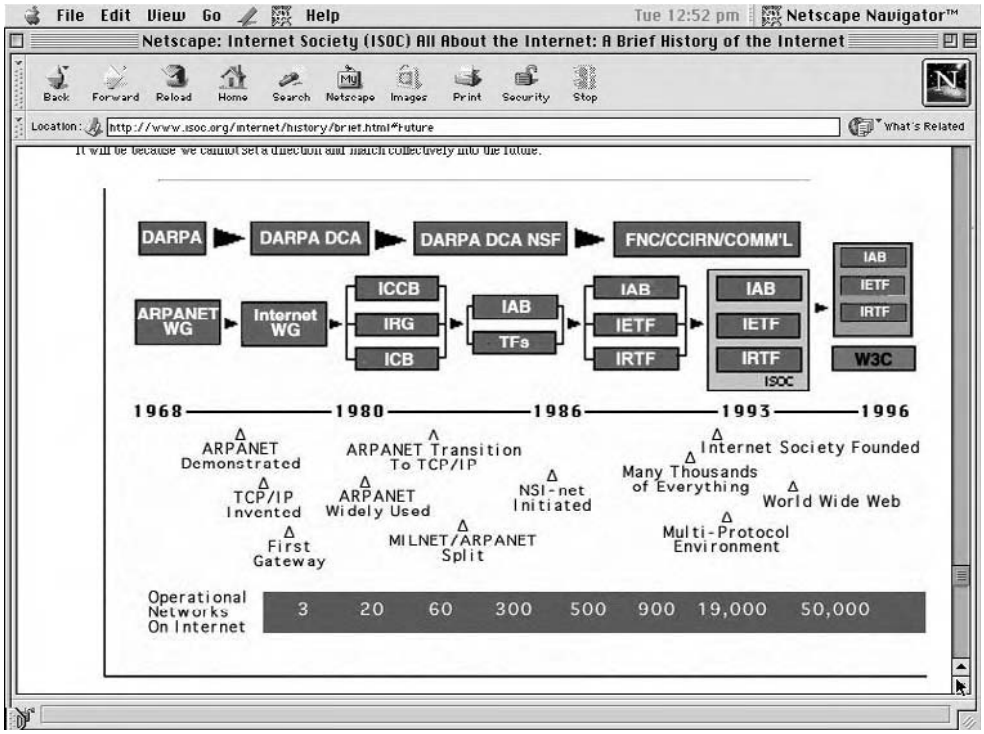

Figure 2: Screen shot from the Internet Society's web site, showing how the Internet developed from the 1960s

Eventually, the military developed other communications mechanisms, and handed the infant Internet over to the academic community.

It is doubtful if the Internet would have caused the information revolution that it has had it not been for an English researcher called Tim Berners-Lee, who thought that its use would be greatly extended if, as well as plain text files, the Internet could also transmit formatted text and pictures. He then sat down and wrote the specification for HTML (Hyper Text Mark-up Language) which enables just that. HTML is a tagging mechanism which allows text to appear as bold, italic, etc – just as in a printed book. It also has tags which allow images and other types of data to be embedded in the text. In other words, HTML enables multimedia to be delivered over computer networks. The first version of HTML was very simple, but immediately it was seen as a completely new way of communicating, and so the World Wide Web was born.

The World Wide Web is accessed via the Internet, but uses different protocols (computerspeak for the way in which computers and computer applications talk to one another). This is why you need to type http://www.mycompany.com in full. The URL (Uniform Resource Locator) acts just like an address, the http bit (which stand for hyper text transmission protocol) gets you onto the Internet, www gets you onto the World Wide Web, and mycompany.com logs you onto a specific 'site' or location on the web. The last bit is especially clever, because what is actually happening is that the web searches for a particular *computer* called mycompany.com, but there may be many web sites on any given computer, or host. Each web site has have a unique name; an international body regulates all of the names on the web and ensures that there is never more than one mycompany.com. The web is fooled into thinking that a web site is a computer. The URL is itself a translation from a string of numbers and the web language turns this into plain language that can be recognised and remembered.

Test this very simply by watching the status bar of your web browser the next time you log on to a web site – you'll see the name in its numerical form very briefly while the browser does its job of seeking and capturing the web site.

It feels as if the web has been with us forever, but this simply shows how accustomed we are to technical innovation and change. Web browsers were only developed in the early 90s and only became widely known in 1995.

Most commentators are agreed that the Internet and the web are going to change all of our lives forever. This means that a technology invented for academic use and unknown five years ago is the most important single technology on the planet today. Not bad going!

Early web browsers, of which Mosaic was the most influential and which grew into Netscape, were simple and had limited functionality. They were capable only of receiving and displaying little more than a restricted range of text and basic images. As the web became popular – which it did with astonishing speed, so

builders and viewers of web sites began to expect the same kinds of sophisticated looks as those available from desktop publishing, something which Tim Berners-Lee had never anticipated.

New breeds of designer and technologists appeared almost overnight – those capable of making web sites look as compelling as books and with interactive functionality which made multimedia producers envious.

Hardly anyone uses the version one browsers anymore, but a surprising percentage still use the version two's and three's. This is a point which web designers ignore in the same way that they ignore the fact that for the majority of web 'surfers' the net and the web are miserably slow.

Web design issues

It used to be the first part of a web designer's bible that the work created should be viewable on multiple browsers, and that it should be downloadable as quickly as possible. Unfortunately, as web 'cool' has permeated everywhere this simple set of golden rules has been thrown out.

Good manners in web design

- Design for the user, not for yourself or your cool designer friends
- Design for as many browsers, and versions of browsers as possible
- Design for optimum download times
- Design for Macintosh as well as Windows
- Design for a variety of screen sizes and resolutions
- Do not use plug-ins that need to be downloaded unless absolutely necessary or provide alternatives to plug-in sites
- Make your work easy to navigate, and never force the user to use the back button
- Make the purpose of your work clear at the top level
- **KISS** = Keep It Simple, Stupid, and remember that seven really is a magic number – seven is about the maximum number of elements that a human can take in before they become befuddled, muddled and lost.

Odd as it may seem, Microsoft very nearly missed the Internet revolution altogether. In 1995, Netscape's browser had what might be described as a monopoly position, the only opposition was AOL's proprietary browser, and a few odd ones such as the original Mosaic. It says something for Microsoft, and for Bill Gates, that when one of his managers pointed out that the Internet and web was nothing short of a phenomenon, Gates turned the company round almost overnight. Microsoft's Internet Explorer Version 1 was not a patch on Netscape, but the 'browser wars' had been declared. From the start it was a straight two-sided fight between Netscape and Microsoft, and from the start the winner was predicted to be Microsoft. But it was not an easy victory, and the software behemoth had to fight long and hard to get the market lead. By the time of the version four browsers, Microsoft had a clear lead, and the software itself was considered by many to be superior.

Rule one: check the work and then check it again

Despite the fact that HTML is supposed to be an open architecture, the two main browsers do things in slightly different but significant ways, and things that work in one will not necessarily work in the other. If your work is going to be viewed in a mixed browser environment, you must at least have it checked on the two leading browsers, and on earlier versions if you want your work to be seen by as wide an audience as possible.

Checking work on different browsers and different machines should be second nature to all web designers, but too often it isn't. This becomes all the more important depending upon the tools that are used to create the work in the first place. In the early days (as long ago as 1996!) good designers almost certainly created their work in 'raw' HTML, in other words they worked directly with the code and tags which make up HTML. Even if they created the work in WYSIWYG (What You See Is What You Get) applications such as Adobe's Pagemill and Microsoft's Front Page they always checked and re-checked the work in HTML, since the way in which such applications made up the work was by making very complex and often non-standard HTML that would often throw up errors in the browsers.

Since then the applications have become increasingly accurate, robust and comprehensive, with whole suites of tools, such as those provided by Macromedia, enabling designers to create virtually what they want or need.

When Tim Berners-Lee was working on the foundations of the web, one of the great and visionary ideas that he had was that the web should be about 'open standards'. The idea was that web content should use the same 'rules' and appear the same no matter what web browser it appeared on.

As competition became intense during the 'browser wars', so the browser developers introduced new bits and pieces of functionality that meant that things did not look the same, and the open standards were not adhered to.

The next open standard to arrive was Java, a scripting language developed by Sun and based on the programming language 'C'. It was intended to be so open that any device could read it and display its content accurately and consistently. In theory, this would have meant that everything had Java behind it, an idea which did not appeal to Sun's competitors, who then began to develop their own 'flavours' of Java.

The new kid on the open standards block is XML (Extensible Mark-up Language). The idea behind XML is that developers can separate form from content so that the formatting will always be preserved. This makes it possible to create content whose look and feel can be recreated accurately wherever on whatever. However, the clear waters of the XML dream pool look already to have been muddied by the grubby hands of dabbling commerce, and there seem to be variant forms of XML beginning to appear.

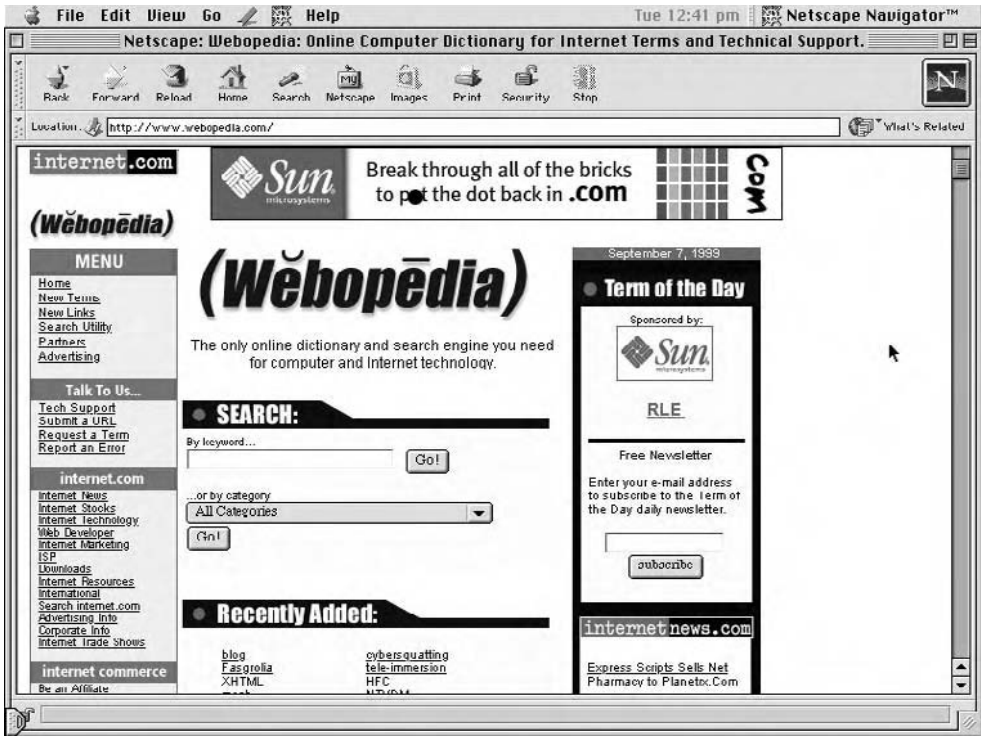

Figure 3: The front page of Webopedia.com, one of the Internet's best places to search for straightforward explanations of technological terms

The web today

Despite the fact that e-mail is the most used part of the Internet, it is the web which gets all of the hype and all of the coverage.

The number of web pages out there is huge – perhaps a hundred million by the time that you read this.The sheer quantity is itself a problem. It's not just the universally acknowledged difficulty of finding anything unless you know exactly where to hunt, it's the fact that so much of it is useless.

The web is laden down with out-of-date sites, sites that contain information that is suspect, sites that can only be described as drivel, and sites that may be potentially useful but which are so badly designed that they do not deserve to be used.

Publishing comparisons

Comparisons are useful here – hundreds of thousands of books are published each year. Today's publishing industry is a cut-throat business, and publishers simply cannot risk publishing 'turkeys', so marketing is key to the publishing enterprise. Very few books are published into a void, there are very clear niches and market corners and there are big names and big opportunities (film rights, product rights, etc). Publishers are very jealous of their brands, their reputations and their properties.

Many books are born as concepts, developed internally by senior editors and refined by authors. Many are design concepts – ideas born as visual products that will entice buyers to lever them off the shelves. Marketing people spend years learning the skills and knowledge that will enable them to be able to identify potential best-sellers, and even more years learning how to make them fly off the shelves.

Books are crafted – by designers and by editors – so that they are right for the purpose and for the market. It is a shock when you come across a spelling or grammatical error in a book; that there are so few is due to diligent editing. It is also a shock to find factual inaccuracies in a book, that there are so few is due to the diligence and care of researchers and editors. It is a shock to see books that are shoddily designed with poor use of colour and pictures, again that there are so few is due to the diligence of designers.

But, poorly conceived, badly edited, badly designed web sites published into a market vacuum are two a penny.

Why is this? For many it is simply that they are not made by people with any kind of publishing expertise or understanding – this is vanity publishing at its most self-indulgent. Such sites are generally easy to spot, and maybe they can be forgiven

since after all they are free and we can take them or leave them. But what about those sites published by companies that should know better; by companies that know the value of good marketing and of professional editorial and design values? Surely there can be no excuse for them? And yet there they are in their thousands – no editorial control, no overall design style, poor navigation, lack of feedback routes; the list is endless.

It's publishing, Jim, but not as we know it (unfortunately).

Make no mistake, the web is all about publishing. It may be about technology as far as the techies are concerned, but just in the same way that book buyers neither know nor care about the (equally, if not more, complex) technology behind their books, then web users are interested in content, not the technology that got the content there.

Since it is publishing, it should have exactly the same values brought to it as any other publishing medium. Are newspapers difficult to use and navigate around? Are magazines filled with inappropriate articles and pictures? Do gardening books have adverts for cars in them?

Again the comparison works, publishing houses have broad skills areas in them, depending on what they publish:

- editorial (always)
- design (always)
- production (often)
- marketing (mostly)
- sales and advertising (often)
- managerial and accounting (if they want to stay in business for more than a few months).

Web design outfits have:

- editorial (rarely)
- design (virtually omnipotent)
- production and technology (you bet)
- marketing (getting better)
- sales and advertising (probably)
- managerial and accounting (oops…).

If you are looking to out-source web or intranet work, make sure that you know what the skills mix is inside those companies that you are considering using.

The web tomorrow

Extravagant claims are made for the web, but it continues to grow at a fantastic rate. Two things alone hinder even faster growth – price and bandwidth.

Price varies from country to country (in the US local phone calls are free, for example, which explains a good deal about web take-up and usage there). In the UK the cost of calls undoubtedly puts people off. To connect to the web – and to the Internet – most people use an Internet Service Provider (ISP), and until recently these also cost a significant amount. The advent of Dixon's Freeserve changed all that with its free service that offered as much as any of the other ISPs. The number and kind of ISPs now offering free Internet connections grows almost daily, but some predict that this is a bubble that will burst. In the short-term, however, the notion of something for free continues to rise, and now you can get Internet enabled computers for free, on the understanding that you will subscribe to a certain service for a stated time. The age of 'free', some would say disposable computers, may actually be with us for some time as the price of the machines plummets and as the war to find and keep markets becomes ever hotter.

Bandwidth is perhaps the bigger issue, certainly in the short-term. It is the speed at which your connected device receives data. Surfing the Internet in most UK homes is a slow and miserable business.

Solutions to this are on the near horizon, but some of those solutions will only be for those in built-up areas. The most obvious of these is cable, which effectively makes bandwidth concerns go away, but cable will not reach most rural areas, simply because there is no financial incentive for it to do so. BT has a technology called ADSL (Asymmetric Digital Subscriber Line) which will offer very high bandwidth over existing telephone lines. All that will be required is a decoder box, rather like ISDN (Integrated Services Digital Network). ISDN is itself very fast, but talk to those who use it and you rapidly learn that it is not fast enough. The reason for this is that users put greater and greater demands upon the technology, pushing bigger and bigger files across the network. There will always be a demand for faster and faster communications which will allow more and more data to be transported.

Research has found that users expect information to begin to appear on a web site in three seconds. If the site has not made itself completely clear within sixty seconds users move on and never return.

For creators of web sites this surely has to mean that they constantly ask themselves: 'who are we creating this for and does the content need to be in this way?'

If the work you are creating only requires text, then only use text. If graphics make things easier to understand then use them. Are animations and movies essential? Don't use multimedia just because you can, and don't be talked into using 'cool' technology just because it's there. The only time to use 'cool' for the sake of 'cool' is when your target audience demands it.

Intranets – reality or urban myth?

FROM PAPER TO BYTES

THE STRATEGIC IMPERATIVE

TOP-DOWN PLANNING

USERS AS CONTRIBUTORS

QUALITY CONTROL ISSUES

chapter 4

Chapter 4:
Intranets – reality or urban myth?

So far we've covered the development of internal computer networks, and sketched the history of the Internet and the web. If you combine these technologies you'll come up with something very like an intranet.

Intranets use Internet protocols and, usually, browser technologies, to deliver 'content' to users. Intranets are new, but they do not necessarily represent a revolution in communications. As we touched on earlier in this Report, notice boards, if used properly, perform many of the functions that simple intranets do. In fact, some old-fashioned notice boards can be more effective than half-baked intranets.

An intranet is information delivered digitally to computers. Usually that information is presented in a browser window, and looks very much like a web site. Often, the idea for the intranet will come from corporate communications people; sometimes it will come from IT people and occasionally it will come as a management idea.

From the outset, and from wherever the idea emanates, you must ask very searching questions, and you must be informed by those who have gone before you. For example, there is compelling evidence that the vast majority of intranets do not do the job that they were intended to do. (Cranfield University's *The Intranet Benchmarking and Business Value* survey, published in the summer of 1999, provides some valuable insights here.)

The first task must be to identify what you want your intranet to do. Is it to connect everyone in your company to readily available information? Does everyone have a PC? What about the cleaners and the security people? (Ask yourself whether you want to be inclusive or exclusive – and be ready with answers when you inadvertently exclude some people.) Do all of those with PCs have machines capable of receiving the intranet in the way that you intend? Do they have colour monitors? How many colours do those monitors support? Do they have browsers? What will be the cost of any upgrades? Are you thinking of going down some proprietary route? How much will that cost? Are you thinking of taking on an outside company to do the thinking (are you mad?) and work for you? How much will that cost?

How do these costs relate to the bottom line you have set for the project? You will need a bottom line, or at the very least, some kind of measurable benefit that you expect.

From paper to bytes

The most quoted benefit from intranets is moving the internal phone book online. In theory, the savings here are obvious – no more expensive paper print runs, with the added benefit that you can update it as often as you need to. But you must be absolutely sure that you can dispense with the paper directory. If a tiny percentage of people still need it as paper then your costs will only go down by a small amount, since the cost of printing is in inverse proportion to the numbers printed (the less you print, the more it costs; the more you print, the less it costs).

If you can go digital with the phone book, then take real advantage of the fact, have the book re-thought so that it can be searched in multiple ways (by surname, by first name, by job title, by department, etc). A good company phone book can be a fantastic source of information, and moving it online can make it invaluable – who are your first aiders and fire wardens? Where are they and how do you contact them? What are the numbers of all the company fax machines and where are they located? The kind of information like this that you can add grows and grows if you think of the 'phone book' as being a key source of company information.

An intranet that struggles to do more than provide these kind of basic services is almost certainly not worth it. Remember, your switchboard can usually quote all the numbers you are ever likely to need by heart, and, if it's a good switchboard, can also tell you the name and number of that bloke who comes and mends the blinds when they get jammed, and so on.

Thinking and planning

Already we are jumping ahead of ourselves. You must fully plan out your intranet on paper before you implement anything. Write down all of the things that it should and could do. Attach some kind of value to each of those things. If it can be a real value, like savings in paper costs, that's great. If it's intangible, but worthwhile, like improving employee relations, then still put a value against it. For example, there will be real, hard costs in creating the intranet, and those costs can easily run into thousands and tens of thousands, so put that against the cost of showers, or a tennis court, or a new restaurant, etc. Is it still worth it?

What is your company's long-term IT and technology strategy? Does the intranet fit into it? If you don't have strategies of these sorts then look for a job in a company that does.

The strategic imperative

It would be nice to think that every company, regardless of size, had a coherent communications strategy in place. If only! If you are going to embark upon communications using new media, you really must know where that idea fits into the bigger scheme of things.

It may be that you can manage with a simple communications strategy, but my guess would be that you need to tie it in with your company IT strategy at the least.

None of us can escape the fact that we are in the middle of a digital revolution, and it's a revolution that can bring great returns. Ad hoc and piecemeal solutions are no longer acceptable. Strategies are critical to future proofing all companies, and strategies are not that difficult to build – you just need to know where you are right now and where you'd like to go. Then write it down and communicate it. Easy!

When you have got as full a list as you can of possible uses for the intranet, go out to all the people who are going to use it and ask them what they'd like. You'll probably need to tackle this one at a tangent, since many users will have little or no idea about what an intranet could do. However, everyone has an opinion about how communications can be improved and this can be genuinely fruitful.

Take all those ideas back and add them to your list. Then ask yourself once again who the intranet is for. The answer should be everyone; but if it comes out as 'the boss' you are in trouble.

Go back to the paper again, and begin to plan out not just what you will provide, but the structure of that provision. All projects such as this need this kind of structure applied to them. I've provided some examples of web site plans here, and these can equally be used as templates for intranet hierarchies.

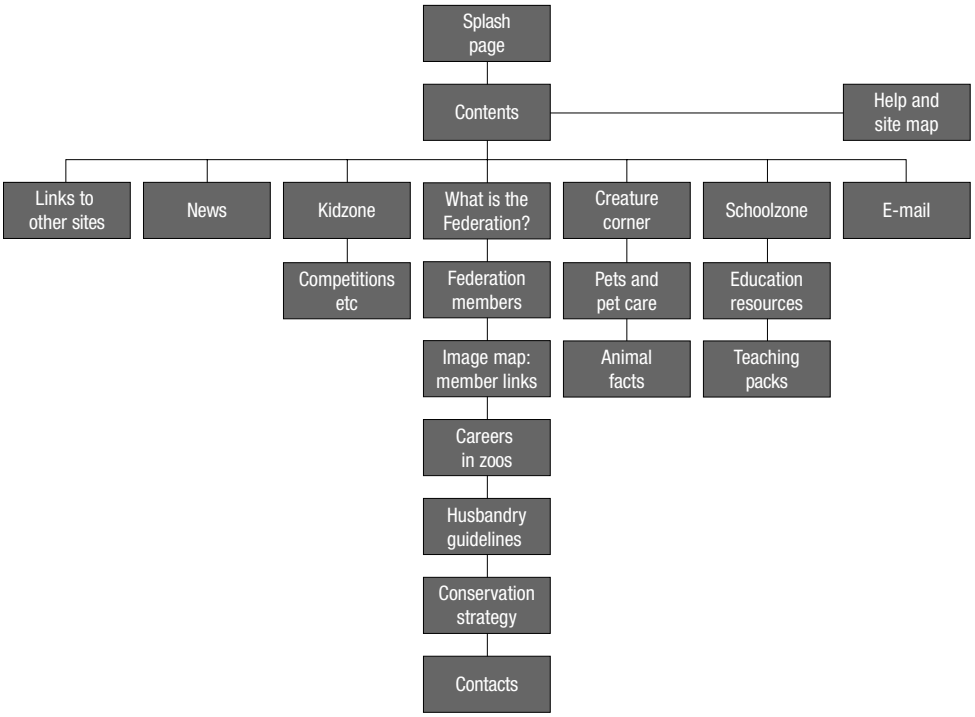

Figure 4: Web site plan – Federation of Zoological Gardens of Great Britain and Ireland

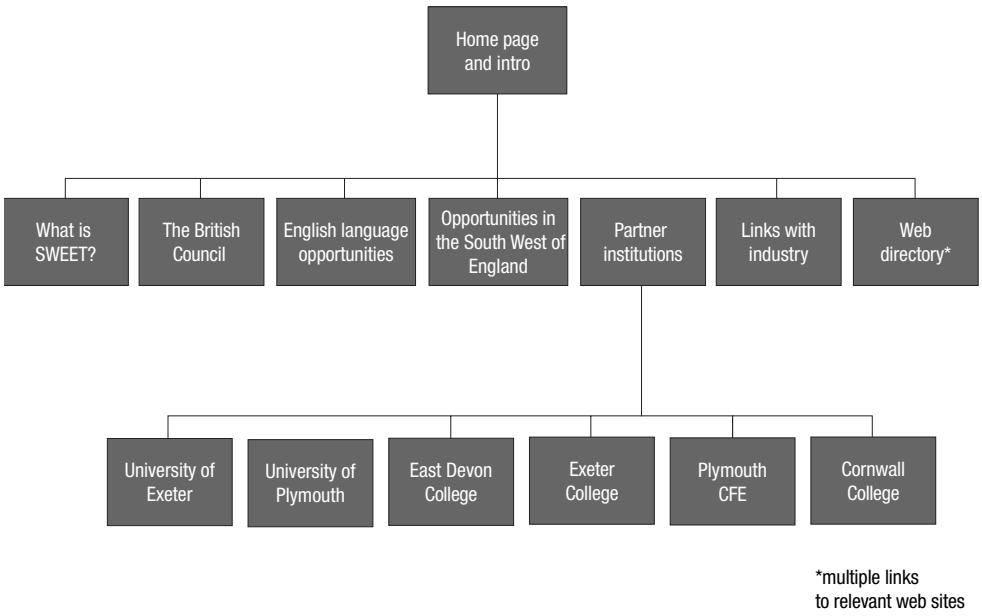

Figure 5: SWEET web site proposal

I'll now discuss what I consider to be essential elements of your planning for the 'site' overall. Much of my thinking is based upon my work in web sites and CD-ROMs, but I also spent many years planning the structure of books. One of the first lessons is that you should never expect people to be brighter than they are: people tend to take things very literally and are also really quite unadventurous (especially if it's to do with technology – for example, 'I might break it'). Another fact that might cause you to pause for thought is that the average reading age of adults in the UK is between 12 and 14.

A good rule of thumb in publishing is that you never assume prior knowledge on the part of the reader. This sounds patronising but can actually mean that you think very hard about making things simple and easy to understand, and everyone appreciates that, no matter how sophisticated they might be. The old KISS rule – Keep It Simple, Stupid – is a winner time and time again.

Top-down planning

Your top layer or entrance 'page' should do two immediate things – tell people what they have arrived at and then how they can navigate further.

Again, think in book terms, book jackets are brilliant at telling the punters what they are in for, and book contents pages should help you to navigate really fast through a book of any size and complexity. The upper layers of your intranet site should do just the same – clearly and completely unambiguously they should show the users what they are into and how to make their way through it. This is the basis of all interactive media planning, and you'd be surprised how many designers get this all wrong. This kind of structural planning is what editors are all about, so make sure you have editorial skills in whatever team you put together or have access to.

Once you have the top layers right then think of the next level down. These will be your key subject layers, which could be the phone book, company structure, notice board, in-house publications, job vacancies, feedback, etc. Below those come the sub-sections of the main topics. Keep drilling down until your structure is complete.

Make sure that you have included everything, and try to ensure that everything is within a logical 'strand' or line of information. Remember a key point about web sites/intranet sites is that you cannot flick through them, or easily see a chapter-like structure, so you must do everything that you can to make navigation clear.

If there are subjects or subject areas that could fit into more than one place, or which are natural cross references, then do just that – 'hyperlinking' is one of the things that browser technology does best of all.

Ensure that the user knows where they are at all times – this may mean having more navigational devices than designers feel happy with, but the user must come first.

When it comes to navigational devices the best thing to do is look at a variety of other sites to get a feel of what is done.

Many sites have a site map – this is either a textual index listing of all the subjects and 'pages' (which can be reached direct by clicking), or a graphic representation of the site, which can also be navigated by clicking.

The best thing that you can do is to build a graphical representation of your site. You can build it using proprietary software, or just as easily in a word processing, drawing or 'works' type package. Pin the diagram on a wall and use it as a reference all the time. Or draw it by hand – very often the best first step.

It is essential that updating is at the forefront of your mind from the start. One of the key points about this kind of publishing is that it is dynamic and changing. The nearest analogy is magazine publishing (indeed lots of web sites are called 'zines' or 'ezines'). Magazines are planned in advance, often several months in advance of publication, and you need to bring this kind of mindset to your work. It's not just a case of knowing that you are going to make changes, you also need to know what those changes are going to be.This is forward planning of a complex nature. Magazines are expensive to produce, and the only way in which most of them are viable concerns is through the advertising which they carry. Presumably your intranet site will not carry advertising (other than your own), so this is where costs come in again.You may commission all of your material internally, or you may write it yourself, but you may find that some externally commissioned articles will act as an initial draw, especially if you have a 'name' writer. If you are considering such outside commissions you should certainly consider commissioning a batch of articles.This will be cheaper in the long run – you can negotiate a better rate for more words, and you can then stagger the publication over a number of weeks, giving you instant pre-planning.

This should make you focus on what you are trying to achieve, and this brings us further into the areas of who your corporate communications are aimed at.

I've assumed for this chapter that your intranet site is for internal consumption only, and that the site reflects the ambitions and vision which you have for communicating internally. In the next chapter I will attempt to cover some of the issues that you need to address if you are creating an outwardly communicating site,

but for the rest of this chapter I would like to consider some of the other dilemmas facing the 'owners' of intranet sites.

Users as contributors

A vision for many large corporate intranets sites is that once they are established, or at least into early production, then the users will be the people who contribute to the site and keep it up-to-date. In some ways, this is taking the company notice board idea to its furthest extreme.

Think again about old-fashioned notice boards – there are the health and safety notices, there is the restaurant menu, there is the job vacancy list, someone looking to sell their car…

Quite often such things are 'published' either by volunteers (as is often the case with newsletters) or by 'private' members of staff who just want to communicate something.

It is the communications desire and drive which some intranet managers wish to tap. Often this is tackled on a departmental basis. Volunteers are found who will act as collators of information from their departments, and they then forward that to those responsible for publishing the work. Further down track, as templates (for example – see box overleaf) are introduced, the volunteer collators become publishers and send the work direct to the intranet site.

Automating the workflow

You do not need to create intranet pages afresh each time you want to add something new, and if you are using non-experts to add to the work or amend it, then you will certainly consider templates that work can be 'poured' into.

Typically the templates will be created by a designer who has a clear brief from you (as the manager) about the kinds of things people will want to publish. You'll want to create perhaps half a dozen different templates which the users can pick from.

Make sure that the templates are genuinely easy to use, and ideally, ensure that the users can export their words direct from a word processor into the template 'pages'.

Publishing via template has many attractions, but you will need to have clear quality control policies in place if you wish to avoid amateurism or worse.

Looked at idealistically such ways of working have much to commend them, but in reality there are many potential pitfalls and disadvantages that you should consider.

One of the first of these is about the people who are going to create the work. Are they really volunteers? Are they doing this as part of their present job, or outside it in their own time? How much responsibility do they have? How much time are they going to be expected to dedicate to this?

Are they going to be able to publish without supervision? Do they have editorial skills? Do they have design skills? If not, should they be trained, and by whom and how much will that cost? Do they really know what the corporate philosophies are? Are such roles part of your overall information and/or people strategy?

You need to address all of these questions before you make any of these ideas public.

Quality control issues

Whether you are undertaking the work yourself, or whether you are extending the contributors more broadly across the enterprise, there are some basic quality control issues that you must address.

Some of these are obvious things that will be part of your corporate communications lifeblood, but here is a tick list to help you:

House style

Naturally you've got one of these, and it falls into two broad areas – editorial and design.

The editorial side will cover spelling and grammar, but it will also cover appearance and broader style issues.

For example, if your company is transnational and you are writing in English, will you adopt US or UK spellings? This is not trivial – for UK English readers 'color' is just plain wrong; it is critically wrong in any educational setting. What this means is that if your work is going to be seen or used in any kind of educational setting you cannot afford to use US spellings. However, if the work is going to be read in the US, you at least need to explain why you are using non-US spellings. At the furthest extreme you may decide that you need to have two versions of the work – one in US English and the other in UK English.

Technology can help you to create the dual sites (it can even make the move from one to the other seamless for the user, with software 'reading' where the user is coming from). What technology cannot do is help to make the decisions in the first place.

Editorial house styles help with much more – are paragraphs indented or not? Do you use sub headings or not? In short, an editorial house style takes the pain out of lots of document decisions, and will mean that your work has a unified 'feel' when it is looked at and read.

Similar things apply to design styles: what colourways are acceptable in the look of your corporate logo, for example? Do you permit different colours in different circumstances? If your logo or marque exists as a colour image only, how is it rendered in black and white print? Web colours and web palettes are not the same as those for paper, so do you have rules about how your logo will look on the web or on the intranet?

What typefaces do you use, and at what sizes? Are these off-the-shelf fonts, or were they created for you? If so, what are the rules for usage?

Also, ensure that your work looks the same, or at least has editorial and design coherence, across the length and breadth of what you do, whether it be on paper, on CD-ROM, on the intranet or on the web. Your reputation may depend upon this simple coherence.

Communications strategy

I've touched on this elsewhere, but suffice it to say that you need one, and that the best strategy of this sort is bound to be tied closely to all of your company's other corporate strategies.

Training

In this context can cover a huge amount, from the formal kind of courses that we all know about, down to ensuring that someone knows how to do your job should you become unwell.

It is no good you getting a warm feeling that you are indispensable because if you are not around then nothing gets done – that's bad for business.

Training may be part of your strategic thinking about intranet development – are you going to expect 'ordinary workers' to develop your intranet? If you are, there are critical applications and ways of working that you must train your people in.

Maintenance

By their nature intranets are dynamic – you should plan for them to be changed on a regular basis, perhaps daily. Who will do that work? Who will plan the updating? Who will actually do the updating? Who will be responsible for the quality control of the updating?

If you are embarking upon this kind of development you must accept that many people in your company are going to become publishers, broadcasting information at will across the enterprise. You have to have strategies in place that ensure, as well as can be, that such systems are not abused, either deliberately or accidentally.

User monitoring

The final judges of the quality of what you have produced will be the users, and if they don't use it then you have failed.

From the ground up, build in ways to monitor the way in which the work is used. You can do this in a variety of ways – software can be installed on your server(s) that will show how may people log on and what they look at. Software such as this can provide you with a great deal of detailed information, but, beware, you'll need an expert to do the interpretation for you in the early stages, until you get used to reading what can be very arcane and complex statistics and charts.

Perhaps a better way to gather feedback is to ask users direct. You can do this via the intranet itself, or you can conduct interviews or issue questionnaires. Since this kind of thing is part of your armoury of skills anyway as a communications expert, this should present you with no problems.

Gathering this kind of information should be seen as being absolutely central to what you do in your intranet development.

No one is using our intranet!

It happens all the time – even huge corporates with very (even overly) generous intranet budgets can be faced with this 'challenge'.

The reasons can be complex, and equally, they can be horribly simple, as in 'your intranet is no good'.

Ways to avoid this embarrassment include upfront user research before you start the work, ensuring that users are consulted every step of the way. Education, as in making sure everyone knows that the intranet exists, and embedding your intranet plans within your overall communications, IT and people strategy.

Critically, make sure that all of the content is useful and that it can be accessed more effectively and efficiently from the intranet than from anywhere else.

Developing a web presence

SEARCHING THE WEB

THE POWER OF PAPER AND BRANDS

NOT IN THE HIGH STREET TOP TEN?

COSTS AND NEW MEDIA DESIGN AGENCIES

WHAT IS YOUR WEB SITE'S NAME AND ADDRESS?

LEGAL AND RIGHTS ISSUES

USING CONSULTANTS

WEB SITE PLANS

NAVIGATING THROUGH YOUR SITE

IN AT THE FRONT

CONTENT ISSUES

DESIGN

PUBLISHING ACROSS PLATFORMS

WILL USERS PAY FOR CONTENT?

NON-COMMERCIAL SITES

DEVELOPING THE SITE

SKILLS, COSTS AND SCHEDULES

PARTNERS AND PARTNERSHIPS

chapter 5

Chapter 5:
Developing a web presence

Many of the points made in Chapter 4 about intranet sites apply equally to the development of web sites, with the key and critical difference that it is likely that an intranet looks inwards, while a web site looks outwards.

The issues about making sure that the users know the site is there are just the same, except that with a web site you can increase your profile by registering the site with search engines such as Yahoo, and also by embedding special tags (instructions) in the HTML code for the site. This will mean it is much more likely that the site will be sought out by search engines.

Bear in mind that users are likely to come across your site in one of two ways – either because they know you are there – because they have seen and recorded your web site address (URL – Uniform Resource Locator – and generally pronounced earl), or by chance via a search engine.

Searching the web

Search engines – Lycos, Yahoo, Yell, etc – are effectively giant listings or directories of web sites. They work in two principal ways and it is important to understand the differences. Some of the engines have software (often called spiders) that is sent out to trawl the web looking for new sites. When found, details of these sites are recorded on the engine's servers and when you make a search that database is interrogated (as the techies say) and you may find the site or information which you seek.

Other search engines employ human experts (often editors) to sift through the results of automatic and manual searches and then categorise the results, with the aim of making the search more effective.

A key point here is that none of the engines presently are able to search the entire Internet, and none of them have details of all the sites on the Internet.

Figure 6: News.com is one of CNET's suite of interconnected, themed sites

Most search engines enable you to register your site directly, but each engine will do this in a slightly different way, so beware, and be prepared to do a fair bit of research into each engine's preferences.

Some engines have listings of 'top' sites, and these will be the ones that turn up repeatedly in search results. You can endeavour to be among these top listings, but you will need to work at it, if for no other reason that sites fall down the 'charts' rather like records do in the music charts – things peak and then fall away.

Portals, vortals and magazine racks

You cannot ignore the search engines, for the majority of people these are the 'portals' – or main points of access – by which they enter and subsequently 'surf' the Internet and web.

Until very recently, achieving portal status was considered to be a kind of 'holy grail' for web sites. If you could persuade users to use your site as their starting-off point, then you could use that as a powerful lever for advertising, etc, and thereby make money from your web presence. It has been considered essential that such portal sites offer a great deal more than ways of searching the net, and that is why these huge sites have lots of bells and whistles and content of many kinds. The idea is that you will spend time within that portal, thereby increasing its commercial attractiveness. AOL is considered by many to be the ultimate portal site.

New concepts and notions of web and net dynamics are developing.These include the idea of 'vortals' – which are vertical portals, meaning that you go to them for specific kinds of content, rather than for a general rag bag of everything. For example, you may be interested in motoring issues, so a web site that gives you lots of top-level information about motoring, and links you to lots of related sites would be of interest.

The idea is very like that of 'traditional' magazines, whose subject matter varies from the very broad right through to the specialist. It is that specialist end that vortals are most like. In fact, looking at magazine racks is something which everyone involved in new media should do as a matter of course. For example, there are clear and popular themes among magazines – gardening, lifestyle, computing, finance, etc. There is always room for more than one magazine in each theme. The obvious (though politically incorrect) example in the UK is the rise of magazines for young men. The content of these – a mix of sex, clothes, music, drink, culture, etc – is the same in each, yet at least a dozen of them appear to do good business.

One parallel here for online content is that the market has plenty of room, and that seemingly competing titles actually seem to fuel the market, rather than to limit it.

The power of paper and brands

You will want your web site to be known about and seen as widely as possible, and you may see the number of users to the site as the Return on Investment (ROI) for the initial input. If that is the case it is essential that you do not limit your marketing of the site to its online environment.

More and more statistics show that to create effective online campaigns you must use all of the traditional means at your disposal. For example, research conducted in 1999 by Cognitiative showed that 100% of users visit sites as a result of word of mouth recommendations; 67% use advertising; 61% newspapers etc.

Specifically, all of your corporate stationery and literature must carry your URL as prominently as possible. Furthermore, you should consider campaigns (adshell, taxi, hoarding, tube, media, etc) that promote your online presence.

This is partly to do with the arbitrary way by which many users reach web sites, but it is also to do with brand awareness and brand reinforcement. As you know, most people use brands that they know and trust again and again; it seems that the more you reinforce the brand awareness the more custom you will get.

If this sounds like a series of marketing truisms to you, that is precisely what they are, but it has taken the online industry a long time to realise that the vast majority of traditional marketing works in exactly the same way online.

It is branding that is frequently critical here, and this can mean the difference between success and failure for your online presence.

Not in the high street top ten?

All of this is well and fine if you are a big company with a big name (and a big marketing budget), but what if you are small, and perhaps with a name that is not going to set the high street on fire, no matter what you do?

Here then you must do some very hard thinking at the outset. First, return to basics – what do you want your web site to achieve? If you only want to do it because everyone else is, forget it, you won't get a proper ROI, ever. Similarly, online brochures rarely work unless they are properly and specifically targeted. What is your market out there? That's your target (for now, anyway).

Are you going to enable ordering of your products online? Do you have a mail order capacity and fulfilment capabilities already? If you want to sell online but do not have an infrastructure to do so then, again, you must think very carefully. There are ways of achieving something that resembles e-commerce without going to one of the big software vendors for a solution, but such solutions require lots of thought, a commitment in people terms, and, probably, some programming input.

For example, you could enable customers to e-mail you with their orders, and with their credit card number. However, before you do that, you must ensure that you have a merchant licence, and that you can guarantee security of the card details, etc. It is worth remembering here that credit card details are as safe on the net as they are on any other kind of delivery system – no one hesitates to give their number to a complete stranger when booking a theatre ticket over the phone, for example. You know that, and so do your customers, but the net has a reputation for being 'leaky', and so you need to do as much as you can to reassure customers. Conversely you need to check credit cards before accepting orders.

Some of this suspicion is justified. There are numerous (verified) stories of card details being hijacked and used by crooks. Potentially more worrying is the difficulty of cancelling anything that you may inadvertently subscribe to over the net. This can result in mysterious annual bills appearing. You must read the small print of any online transaction very carefully yourself!

Costs and new media design agencies

Once you have gone through the hard thinking of whether you can really justify having a web site, then you must think about the costs. This is where the new media industry will show you that it has no codes of best practice, and certainly nothing like a level playing field when it comes to costs.

If you are going to have your web development work done externally then you must either shop around or act on recommendation.

There are a few general rules of thumb here – you will pay more for a London-based agency in almost every case, especially if it has a name. You will not necessarily get a better job from one of the bigger agencies and you do not necessarily get what you paid for.

I know of one large international charity that was asked to pay ten times more by a large London agency than it was by a small regional design house. The charity used the smaller company and was delighted by the result. Not only was it ten times cheaper, they got a better level of service and a better level of cooperation.

New media agencies are notoriously prone to failure, and if at all possible you want to work with a company that is going to be there over the long haul. There are few ways of knowing whether a company is going to sink; the larger agencies will say that is one reason to go with them, but the bigger fishes are just as likely to go 'belly up' as the shrimps in these waters.

There are a number of reasons for this, and some of them are well worth underlining. Project management in new media companies is frequently chaotic; the companies are often run by young and enthusiastic designers whose business knowledge is poor; often there is no knowledge of how business and industry works; sometimes communication skills are appalling. There are also lots of sharks out there.

Bearing all this in mind, how can you possibly tell what kind of service you will get, and how can you tell if the company will still be there tomorrow?

First and foremost, look for professionalism. This need not be slick or laden down with ad mans shimmer, but you need to feel that the company is taking you and your project seriously. You should expect that the company will undertake a certain amount of genuine conceptual work up front, and this may well take the form of an outline plan of the site. Make sure the right questions are being asked of you – why are you doing this? Who are you doing it for? Do you get the feeling that the person you are talking to really understands the web environment? If they only talk about technology, to the exclusion of content and marketing issues, then be very wary indeed. They should show you some examples of their work,

even students have portfolios (and do not necessarily reject students or graduates, they are just as likely to have the skills that you need, often more so if they have attended courses where these issues are raised and addressed).

Critically, questions about maintenance and updating should be asked almost from the outset. I would take this as a sign that the company understands the dynamic nature of the web environment.

You should expect to be asked when and how you want the site to be updated. If not, should the company quote for updating? What does updating and maintenance mean? Who will answer the e-mails? Is the work going to be scaleable – can you add new things, take old and unworking things away?

No changes equals no custom

Web sites that do not change are dead web sites and can only do you harm. You will not get the custom that you expect and your reputation will suffer at the same time.

You would not publish the same article week after week in a magazine and expect people to read it would you? In fact you would expect to be ridiculed.

Never commission a web site without considering the issues of maintenance and updating. Basically, these are:

- How often will the topmost 'pages' change in their content and overall appearance?
- How often will you undertake new work further into the site?
- How will you make it clear to users that the site has changed and is always changing?
- How will you enable real time interaction between yourself and users of your site? This is what the web is about after all. Typically, and most straightforwardly this will take the form of e-mail, but make sure that the mail is answered promptly, properly and accurately.
- Have you budgeted for future work?
- Does your senior management understand that publishing a web site is an absolute commitment to maintaining and updating it?

Let's return to the thorny question of how much you should pay, and we could be talking the difference here between four or five hundred pounds and thousands of pounds. First, shop around, look at places where new media companies advertise (*Revolution magazine, NewMediaAge,* the Internet magazines, etc). Ask some for their rates. Look at web sites, and when you see ones that you like, find out who did the work. Ask your friends in your industry and get word of mouth recommendations – often these are some of the best.

When you have some figures and some sites in front of you, weigh up the cost against the quality. You will see, as I have said, that there is no real level of fee against quality. But you will begin to see work that matches your aspirations. If you are one of the big companies, you may go with one of the big new media companies, and you will expect the corporate-level business acumen that you expect from any other third party company that you use. You will also expect to pay. If you are clever, you will get the same level of service from an out of town company, for a fraction of the cost.

If you are small, then probably you will go with a small, local company, and you will pay accordingly.

The risk is probably about the same whoever you go with. One tip – if the ad house, or design agency that you have used for 'traditional' work announces that it now does new media work as well, I can tell you from bitter personal experience that there is no guarantee at all of the quality of the work you will get. Such agencies sometimes decide to dip their toes in the new media pool, and you may be the one to suffer from their 'experiments'.

There are many parallels and similarities between 'traditional' media design and new media design, but there are also significant differences. The best designers and their agencies understand that and take the best from each, but there are those who wing it, and that is not good enough for you or for anyone else.

Another tip – try to ensure that you are not being used as a guinea pig for some untried technology that the design agency may be testing. Also be sure that you do not get locked into proprietary solutions that another agency may not be able to unlock or unravel.

How can you ensure this does not happen to you? By asking questions. These need not be 'techie' or 'nerdy' questions. Common sense has a great role to play here! For example, how does the agency document the work that it does for its clients? Does it have back-ups of all stages of the work and can you have copies of those back-ups? Will it produce a full document for you that explains exactly how the work was done? You should insist on that.

What is your web site's name and address?

An important question that the design agency should raise with you is the issue of 'hosting'. Put simply, this is a technical issue about where your web site is located. All web sites live on computers, obviously, and yours will almost certainly be on a web server along with other web sites.

The key questions here are to do with how robust that server is and how fast its connections onto the Internet are. You do not want to be bogged down by web server technology (and that can be genuinely complex), but you do want to be assured that your web site is always accessible, and that the access is fast.

What you have to remember is that if for any reason your site is not accessible, users will blame you, not the company that is hosting your site, so your reputation suffers.

Probably the best way to find out if the service is acceptable is to ask what other sites are on the particular server, and test them yourself.

All servers crash sooner or later, and you should confirm that your site is backed up on another server that will 'kick in' automatically should the first server crash.

All responsible ISPs (Internet Service Providers) will provide these types of services and back-ups automatically, but you should at least ask, and read the service agreements.

If you are a large multinational whose site is going to be very busy, then these kinds of issues can become mission critical, and you will want to shop around to get the best services available. Generally, to be able to guarantee a constant and fast service you will look at one of the big service providers, as these have the largest and most robust server 'farms' and the 'fattest' (ie fastest) connections to the Internet.

But size is not everything, and one company at which I worked used a small and specialist provider in the US whose service and technical support was superb.

No matter what precautions you take, the speed at which you are able to access your site will vary, and this may be nothing to do with the server, but everything to do with the amount of 'traffic' on the Internet.

The Internet is growing at a fantastic rate, and on some days there is just so much data moving around it that the whole system slows down – just like traffic at rush hours.

At its worst something like gridlock can occur, usually on a specific service. This is called 'outage', and when it happens it is very annoying. My own service provider (who shall remain nameless) has had several of these 'glitches' over the past few months, and it has meant that while the service is out, I am effectively cut off.

Huge amounts of work are being put in to increase the physical infrastructure of the Internet, and there may come a time when the service is uniformly fast and efficient. Meanwhile, if you are stuck in a real traffic jam remember that the cause is likely to be the laying of cables that will carry Internet traffic!

Other factors that you should take into account when deciding upon an ISP include the amount of server space that you can have. Again, I won't get into technology – and web sites can vary hugely in size – but the key point is that you will want the flexibility to grow. Since you have to pay for the server space, you do not want to pay for more than you need, but you need to be assured that when you want more space (as your site grows) you can have it.

A small, well-made, tightly controlled web site will fit happily onto a floppy disk; a big, complex site with scripting, to enable connections to databases etc will take many megabytes. However, they do vary according to the applications used to make them, the care taken with files sizes, the amount of 'housework' done to ensure that there are no unnecessary files cluttering the thing up and so on. And, of course, you may simply have a very big site with hundreds, or perhaps even thousands of 'pages'.

What's in a name?

Ideally, I assume you want your web site to have your company or organisation's name. But what if there is another company with the same, or with a very similar name? This can be tricky, and it can end up involving lawyers, especially if the name that you want to use has been claimed by someone else.

All names on the Internet are controlled by a central body, as they have to ensure that the names are unique so that that they can be found (just like postcodes). Because the Internet is worldwide, these names have to be unique worldwide. The organisation that controls the names cares that they are unique, but does not care (that is not its job) who owns what names.

In a sense this is both simplified and made more complex by the variety of suffixes available for web names.

Let's look at an example. Typically, I could have a company whose web address was www.cady.com, but I could also have www.cady.co.uk, or www.cady.ltd.uk etc. All of these are acceptable for commercial undertakings. If I were an academic

institution I would plump for www.cady.ac.uk, and if I were a non-commercial organisation I could have www.cady.org.uk. If I were a government department I could become www.cady.gov.uk.

Going back to the commercial names, it would be perfectly possible for me to have www.cady.com but for someone else to have www.cady.co.uk. This can be very confusing for users. It can be embarrassing for you if the 'other' company runs a business that is incompatible with yours. For example, if www.cady.ltd.uk was a site that sold pornographic materials, and my own site – cady.com – sold educational software, then I would feel very unhappy indeed. This happens, and it also happens that sharp individuals attempt to buy up desirable names, in the hope that someone will come along and want to buy the name or names.

All of this re-emphasises the importance of you broadcasting your precise and exact web address as widely as possible.

Before you get that far and before you begin to panic, go to www.networksolutions.com, follow the links to the 'whois' database and type in the name, with its suffix, that you want to use. The database will do a complete search and tell you whether the name you want to use is available or not. Alternatively, use a UK commercial service such as NetNames (www.netnames.co.uk).

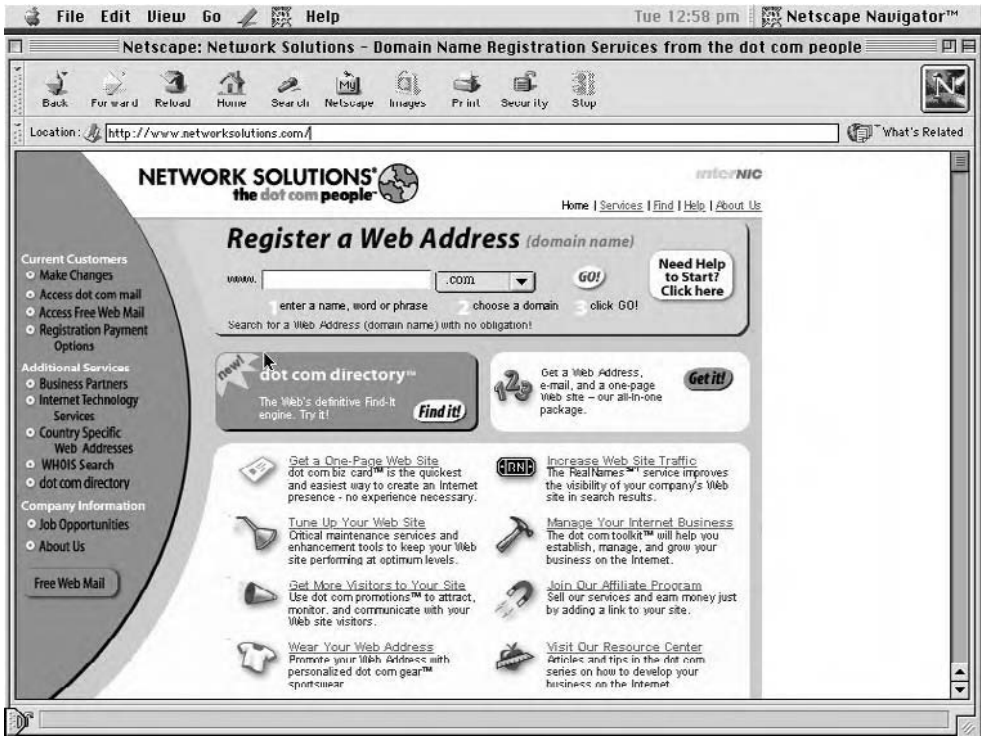

Figure 7: www.networksolutions.com has a huge amount of information about Internet names

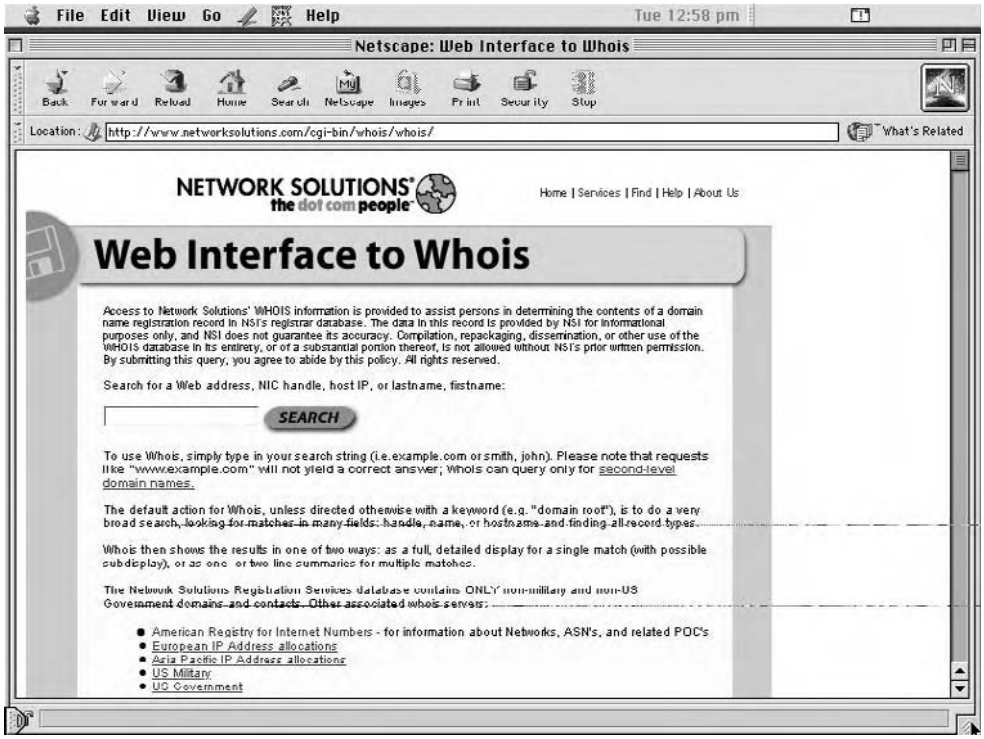

Figure 8: The Whois database of Internet names

If you cannot get the exact name that you want, then you may have to compromise, for example if all the 'cady' prefixes were taken, I might try 'cadys' or 'cady-consultants', etc.

If you are a big enough company, you will undoubtedly want to think about 'protecting' your name by registering as many variations on it as you can think of, and can afford. And there is the rub, you have to pay for the use of the name. The price that you pay depends upon how you register, or through whom, etc. Again, you should shop around for the best deal, but this is an important issue and I would recommend that you do not skimp on this. Your web name is very important to you, and you should protect it as much as you feel able.

Legal and rights issues

All of the foregoing leads naturally to some brief discussion of legal issues and the Internet. The names issue has highlighted the fact that there are complex issues that may need to be addressed, and some of these can be minefields.

Perhaps the first, and in some ways, most easy issue to discuss, centres around the whole culture of the Internet and of the web, and central to that culture is that it's all free.

This notion of freeness comes directly from the Internet's academic origins, where papers, studies, views and opinions, etc, were 'posted' by academics for the free use of all. When the web was introduced, tens of thousands of people realised almost overnight that they could 'publish' all sorts of things. This was mostly done in a genuine spirit of wishing to communicate, so you saw web sites about every conceivable subject that you could think of and a good few more that you would never have thought of.

Much of the ensuing debate about what freedom means has centred round pornography and violence, and the fact that anyone can access pornography of the most extreme kind, and that anyone can access sites that tell you how to build weapons, and may also encourage you to use those weapons.

Whatever you may think about pornography, it's as well to know that it is one of the biggest drivers of the web, with many millions of people logging onto pornography sites daily. Interestingly, many of these sites are far from free and are among the web's biggest money makers. Such sites also frequently use very sophisticated technologies and design, so you may wish to look at some of them – at your own discretion of course!

Freedom, then, is still an issue on the web, and it will be for you, possibly, in two senses:

1. You may wish to sell things.
2. By the act of publishing a web site you are making some of your content freely available. It is freely available in the sense that anyone can copy parts (or indeed all of it) onto their own computer. They might take some of your images or words and use them in their own web site, or they might, for example, copy some elements of their site into an essay.

In the first case, where you are selling things, you have all of the usual legal issues that cover fair practice, passing off, trades descriptions etc, but you also have a whole raft of issues that the web introduces. For example, under whose legal jurisdiction are you? If taxes are applicable in the country that the purchase comes from, but not in the county from which the product is purchased, who pays the taxes and to whom? These are issues which you must clarify, and they are not always straightforward. If you are concerned about these things, I would strongly recommend that you seek expert professional advice.

The second case, which concerns your content being available for anyone to use, can be more straightforward. The first thing that you should do is to ensure that every web page that you have is covered by a copyright line: © cady 2000, or whatever. Have that line as a live hyperlink to a page that explains that your web site is protected by copyright, and then explain how and in what circumstances

elements of your site can be used by others. For example, you may have no objection to your work being used by children for homework purposes, etc.

You may find that the following, originally (but not currently) used by publisher Dorling Kindersley offers some valuable clues as to what you might say on your site:

Disclaimer

Any and all users who access mammoth.net do so at their own risk, and Dorling Kindersley accepts no responsibility whatsoever for any errors or omissions that this site may contain. However, Dorling Kindersley makes every effort to ensure that the information contained is accurate, and welcomes comment and feedback.

Copyright

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The entire content of mammoth.net is copyright Dorling Kindersley. All rights reserved over the whole online magazine and/or any and all parts of it. Individual files within the magazine may be subject to further rights and restrictions.

Use

Users may download files to their local hard disks for their own use, and they may embed them into non-commercial projects for their own use. However, users may not download the whole site for any purpose whatsoever. Use for any kind of personal or commercial gain is not permitted. Manipulation of photographic images and illustrations is not permitted.

(NB: all of the above in italics is © Dorling Kindersley.)

Each of these statements was thought through very carefully, and the whole was checked and approved by the company's legal advisors.

You may find it of use if I go through some of the elements and underline why they were included. The disclaimer is a fairly standard statement that publishers make. In particular, this covers things such as recipes and instructions for building things, where it is conceivable that there may be errors. It also covers against errors of fact; and this would mean that the company was covered should an error be made as a result of information being taken from the site and used verbatim without further checking.

Not applicable to you? Look very carefully at every part of your site and I think that it would be surprising if there were not some elements which could be misinterpreted by someone.

In the copyright paragraph, the sentence about 'individual files' is included because the company made use of photographs, etc, which were licensed from others and which may have had additional rights attached to them of which Dorling Kindersley was not aware.

Since it is likely that you will be using images, etc that are not your copyright, but which you have licensed from a picture agency or wherever, you should be as careful as you can that all of the rights issues are covered. Even if the pictures are your own you should be cautious.

For example, if there are people in a photograph, have you their permission to use the picture in a publication (in this case a web site)? Such permissions are called 'model release', and really you should get each person in the picture to sign a model release form, which states that they have given their permission for you to use the image.

Over the top? What if your photograph shows a couple who are not actually a couple but who look very much as if they are, and what if that picture is subsequently used as part of a divorce action? It may just be that you are sued as a result. It can happen, and it might just happen to you. It is not worth the risk.

The paragraph on Use is problematic in its statements, since actually policing use of the web elements is very difficult. The point is that the statement is there, and if Dorling Kindersley did decide to take action, it could cite this. Look in any book and you will find very similar statements about photocopying. Everyone knows that parts of books are photocopied, but, maybe, not everyone realises that such actions are breaches of copyright and are, therefore, illegal.

As the web becomes more and more commercial, issues such as these become ever more real, and you should give serious consideration to them. The content of your web site does have real, definable value, whether it is in the use of your corporate marque, or in the statements which you make. You should do whatever you can to protect it all.

There is one other aspect of rights that is unique to the web. It concerns one of the web's special abilities – to link to other sites. Not only can you link to other sites, it is possible (using the ability to build frames in HTML) to embed a web site inside another web site in such a way as that it looks as though it were an integral part of that site. Sometimes this is done innocently and in ignorance. But there have been court actions in cases where it seemed as if an owner of a site was looking to pass off the work of others as his own. In particular there have

been cases involving news sites, where parts, or indeed whole other sites, have been embedded in the web pages of competing news providers. This is just one other thing to look out for and be prepared for, probably in your 'Use' paragraph.

Finally on this topic, it is as well to seek the help of experts to make sure that you are covered as well as you can be on these legal and rights issues. There are now numerous legal firms who specialise in such issues. Occasionally they advertise, but more often you will find them recommended by word of mouth, or you may even look them up on the web!

Using consultants

One of the ironies about new media is that it is just that – new. It means that there are comparatively few people out there who have seen it all and done a lot of it, and that's what you should be looking for in a consultant.

Going beyond irony into the realms of the preposterous are the ridiculously high expectations articulated by job adverts for new media professionals. Demands such as 'must have had at least four years experience of interactive work in multimedia, the Internet, e-commerce and interactive TV, and must also have a firm grounding in marketing and publishing' are really stretching it, especially when I know that most new media agencies would rather die than take on anyone under 30. Where do they think these people have gained their experience? The web itself has only been a commercial reality for about five years, after all. So, you can assume in reality that lots of these people know very little more about all of this than you do.

There are consultants out there who may be a little grey around the temples but who do have a genuine value in that they have seen the new media industry from both the inside and the outside, and they will have a proper understanding of all of the issues. They are few and far between, and if you track one down guard him or her with your life (and your money!), your company will be much richer in many senses. But beware, ageism and techno mania are rife, and your grey-haired guru will be under immediate and sustained fire from your young turks and from the propeller heads in your IT department – trust me on this (and admire my grey hair!). The best place to track such people down is either by word of mouth (they hardly ever advertise) or by attending conferences and seminars, where they sometimes speak.

A good seminar or conference on new media can be an excellent way of learning and thinking, but beware of the speakers who use the event as thin disguises for promoting their work and or company. That might be good marketing on their part, but you should expect impartial advice at such events, not a series of adverts.

Web site plans

In my opinion, all web sites should begin life on paper. It is much easier to see the 'big picture' when the site is in front of you as a paper plan. It does not need to be elegant. Sketchy plans may be better as we all hate making changes to something that looks neat and finished, and the whole purpose of this exercise is to make a working plan that may go through many changes.

Plan the thing from the top-down and from the bottom up. Draw it out on a large sheet of paper, and revisit the ideas again and again. Pin the drawing on the wall and spend a lot of time thinking about it.

Think about the fact that you cannot flick through a web site in the way that you flick through a magazine, think about the fact that people make decisions incredibly fast about whether they want to stay at a site or not (as short as three seconds – one, two, three – gone, and never to return), think about navigation and structure and think about functionality.

You do not need to be technically minded to undertake this early work, but you do need to know what you want to achieve. Good new media agencies will help you to shape that concept and will help you to build upon that vision. They will certainly help you with structure and navigation. Once you are satisfied with the overall structure and vision, then you can commit to a digital version of the plan.

You should also have a clear and detailed conceptual statement, and a detailed breakdown of the content. It's easiest to think of the different blocks of information within the site as something akin to chapters, but it's more helpful to think of them as 'strands' of information – each being discrete if you wish, but with clear links to the rest of the web site content. Do not lose site of that fact that web sites are hierarchical in their structure, with top levels of content that can be drilled down into or through, to reach deeper levels.

Navigating through your site

Another key point is that users may not always come in at the top level of your site. This is dependent in part upon the way in which your site is structured and upon the nature of its content and upon its size. For example, you may have specialist or specialised content deep within the structure, and users of that information will 'bookmark' those areas and always get there by the quickest route. The essential point here is that you need very clear navigation, and that you may want to try to tempt these users to use more of your site. You can only do that by having a very careful structure and by the use of 'tempters' to draw users elsewhere. You might do this by banners – 'adverts' within the specialist pages. You must be prepared to experiment here. You may find that some parts of your site never get visitors, for example. That may be for no other reason than that people do not know the stuff is there, in which case you need to re-think parts of the structure.

Analytical software tools can help you here. The best known and one of the best respected is Webtrends. This shows you how users are making use of your site in a number of ways, and can give you a remarkable amount of statistical information about who is visiting your site and what they use. You might feel that some of the information is just a little too detailed, and you will almost certainly not wish to present its findings to senior management without interpretation!

In at the front

For those users who do use your 'front door' – the topmost splash (or index) page and its immediate successor(s), you must do several things very fast.

First, make sure that the first page loads as quickly as possible. I would advise against any web wizardry at this point, what you want to do is to declare as quickly and plainly as possible what you are and what you do.

If you do that job well, users will navigate to your next page, which may well be a contents pages for your site. Some designers advocate combining those first and second pages, really it is a matter for you, and your decision will be based upon how you wish to get your message across.

Having very clear ways to navigate through online content is critical, and this is a statement that really cannot be emphasised or repeated enough. Look at the ways in which other sites enable navigation, some do it by means of what are described as navigation bars at the top and bottom of the web pages. These will typically make use of icons to help the user to move from place to place by hyperlinking. Other sites use frames, which enable the web page to be divided by what

are effectively sub-pages. Often the left-hand frame contains the ways of navigation through the site – usually this will be by chapter or strand title. The beauty of this means of navigation is that you can keep the navigation strand in place all the time, while the content changes in the right-hand frame. Some sites make use of more than two frames, but in my opinion this begins to look clumsy and it certainly confuses some users. Frames can be useful, but they can also create real problems, especially since the way in which they appear can be browser specific. Use them with care and check the work very carefully.

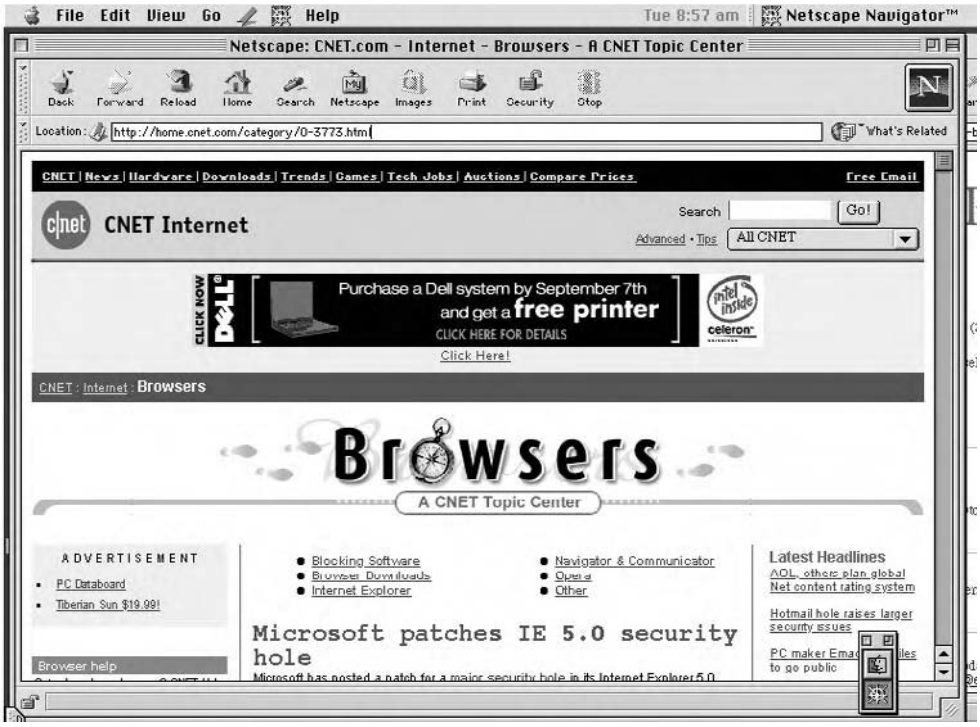

Figure 9: Browsers.com

Navigation can be made easier by the careful use of 'rollovers', which are 'buttons' or icons that change in some way when the cursor touches them. You can make almost any individual element in your site into a rollover if you wish, but used thoughtlessly you will only confuse.

Site plans that are part of the web site can be wonderful aids to navigation. These can either be text, like a traditional contents page or index, or they can be graphical (based upon your original paper plan). They work using hyperlinking.

Content issues

'Content' is such an overused word that it can become meaningless. In the context of new media however, its meaning can be as difficult to pin down as the meaning of multimedia.

Words are certainly content, so are images. Sound is content, and a combination of all three is content.

Where it gets difficult is when you push these definitions a little – is the information contained within a database (lists, names of products, prices, etc) content? Does it have to have a formal context and structure before it can be described as content?

These might seem arcane questions, but as our world becomes a place where digital information is central to everything that we do, we must be prepared to re-think many preconceptions about the nature of content. As more people use the Internet, the web and intranets, to access and use information, so they will become increasingly sophisticated in their use of such technologies, and so their expectations will grow. Already there are whole classes of users for whom the net, e-mail and other technologies, are the natural and primary ways to communicate and to gather information. Such users already manipulate digital information in incredibly complex ways, and the way in which they think about content is not constrained by 'old' ideas about books, newspapers, magazines, radio programmes, TV etc.

You should bear these things in mind when you are building your new media products, and certainly bear in mind that users will be looking at your work from a variety of standpoints – digital and non-digital, cyberspace and real space. Pragmatically, this means that your messages and communications must be consistent and clear. Do not assume that forms of words, or kinds of layout that work in one medium will work in another.

Words and text

Words work very well on the printed page, after all, designers and typographers have been grappling with how words look on paper for centuries, and we, the readers, have had a long time to get used to the conventions of type and of print. We have been brought up in a culture where we take the printed word very seriously, almost to the extent that we feel that if it is printed then it must be true.

Digital text is rather different, however. For many of us, the onscreen environment is one in which we do not feel entirely comfortable, intellectually or physically. Many of us do not like reading lots of text on screen, and would far rather see it

in printed form. This is one of the reasons that the 'paperless office' concept is not with us yet – many people receive information, memos etc digitally, but print it all out and read it on paper.

Also, many designers working in the digital industry may have leap frogged 'traditional' design training, which lays much emphasis on how words look on a page and on how readers navigate themselves around a designed area. These are tremendously important skills, and they are every bit as important in the digital arena.

One of the reasons that so many web pages are confusing to look at and difficult to understand, is simply because the right kind of design skills have not been applied.

There are some basic rules which designers ignore at their peril, the first of which has to be that old, but true and valuable chestnut: KISS – Keep It Simple, Stupid. People are easily confused and too much information turns them off, so an easy rule of thumb is to have no more than seven elements or choices on any one page or screen (whatever sort of page it might be). If you need to give more choices, then break the work down so that users can go to another level, where they get another range of choices, and so on.

When it comes to the amount of text that is acceptable on a web page, unless you are presenting highly technical or complex textual information, keep the number of words per page to below 300, and a lot less if you can. If you do need lots of text, then accept that users will probably wish to print it, and so present it in such a way that it can be printed easily and efficiently. That probably means with little or no imagery, since images are slower to print, and are probably dispensable in this context anyway.

If its words, then you should be able to read them!

Whether you are using lots of text or keeping it to a minimum, it still has to be legible on the screen. For most of us, dark text on a light background is the easiest to read. Text against a patterned background is difficult to read. Coloured text can be acceptable, but you must check its readability on a number of machines and browsers. Also consider those whose eyesight is not perfect, which is a very high percentage of the population.

The size of text is important, too. It should not be so small that users have difficulty in reading it. No one would buy a book that had, as a requirement, that the vast majority of readers needed a magnifying glass to use it. So why assume that web users are different, especially when you know that reading text on screen is more difficult than on the printed page?

HTML is much cleverer at delivering and rendering text than it was two years ago, but there are going to be many occasions still, in which HTML is not going to be able to make the kind of text that you want. In these cases the likelihood is that the designer will turn to PhotoShop or similar applications. This presents a couple of issues – one is that a file created in such an application is no longer text, but a graphic, and the other is that you need to make sure that the designer records how the file was created, so that subsequent designers know where they are.

Images

There are a considerable number of technical issues surrounding the use of images on web pages. By images here, I mean any graphic that is not text. As this is not intended to be a technical Report, I'll restrict this section to a few overview points.

The first is that graphics take longer to download than text, simply because of their file size. So, make sure that an application has been used that will pare the files size down to the minimum acceptable, or one that will create the files in a format – such as vector – that is compact. Debabelizer is an application that designers have long used to optimise the size of files, and Macromedia's Flash generates images in vector format (vector means that the image is translated as a series of mathematical co-ordinates – these make very small files).

Secondly, ensure that the graphic works on Mac as well as PC, and on both main browsers (Internet Explorer and Netscape), and on versions of those browsers back to number three. Mac users may be in a minority, but a disproportionate number of them are influential, especially in media circles, and many design studios are Mac-based. Apple's fortunes have also been turned round by its new machines, and the next version of its operating system (System 10) will contain revolutionary features.

Make sure that any graphic is relevant and has some real value. An extraordinary number of web sites still sport what can only be described as gratuitous images and graphics. Your designer should guide you here, but don't include anything just because you can. You want your site to look good, not like a parish magazine that has been run off a roneo machine, and never use clip art!

Design

You can have sound, video, animation, and a good deal more besides on your web site, but always ask yourself why before you do it.

Such elements will slow your site down, and you'll need special technical design skills to make sure they work properly.

Macromedia's suite of multimedia and web authoring tools – Director, Flash, Fireworks and Dreamweaver – enable designers to create full multimedia applications for the web, and these can be stunningly good if developed in the right hands. Such tools are state of the art, so far as most designers are concerned, and they provide complete solutions to web site construction and design if used together.

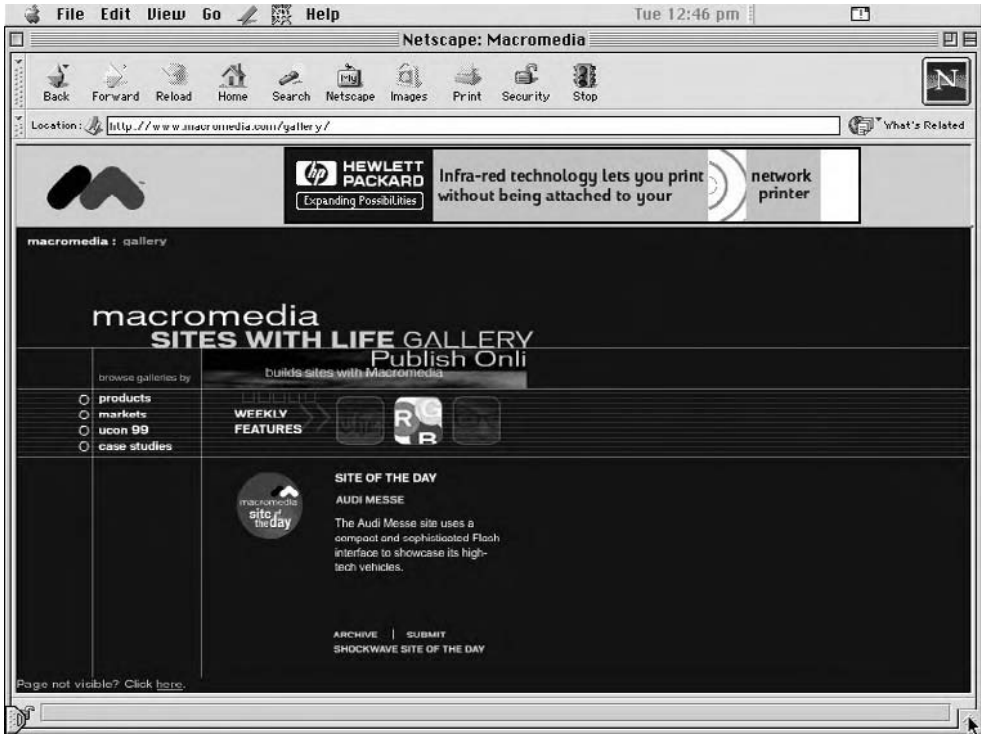

Figure 10: For many designers, Macromedia's suite of tools is the best

There are other respected applications that you may come across, these include Adobe's GoLive and Freeway from Softpress.

Shockwave is Macromedia's best-known web product (it's actually a format). 'Shocked' sites are those using this technology and they enable a greater variety of interactivity, including the addition of animation and sound in tight file sizes.

You can create 3D web sites using such tools as Apple's QuickTime VR (Virtual Reality), Live Picture and Superscape (which uses VRML – Virtual Reality Modelling Language). Generally, users will need to download a browser plug-in to be able to use such technologies. 3D and VR are seen by many as the future for interactive media, and there are some specific areas in which the advantages of such technology are obvious. Examples are house buying – where potential buyers could be shown round a house and its surroundings; exploring cities; museums and art galleries, etc.

Examples of all of these applications and technologies can be found online, and a selection of web addresses are given at the end of this Report.

Publishing across platforms

Several years ago Adobe developed a technology which had huge potential, but which only now seems to be gaining universal understanding and acclaim. Called PDF (Portable Document Format), it enables the conversion of any document into digital form, preserving fonts, colours, images, layouts and all original formats. Documents in PDF format can be created by scanning paper documents, for example, and can be viewed and used on any platform.

PDF documents are also truly interactive and can contain complex multimedia elements. If you publish in print and digitally, and have documents which you wish to be used in a variety of ways, then PDF is certainly worth investigating. You can download the PDF viewer, Acrobat Reader, for free from Adobe's web site (www.adobe.com), but in order to create PDF documents you will at least need Acrobat.

Will users pay for content?

This is one of the really big questions for publishers on the web, and, on the face of it, the answer looks to be a straight 'no'. Users search hard for free content on the Internet, and Internet culture encourages the assumption that everything is free.

However, there are signs that this is changing, and as the web and the Internet become all pervasive (as they will), this view will undoubtedly change more rapidly still. Clues can be seen within such services as those provided into UK schools by Research Machines. This company is the biggest provider of ICT systems into UK schools, and part of that service includes subscriptions to online content,

including encyclopedia content. Schools have to pay for their subscriptions, and contributing publishers (of which there are a fair number) receive a proportion of the returns.

As e-commerce spreads and becomes mainstream, so all of us will become used to paying for things online, including content. But we may pay in ways that are not obvious or straight exchanges of money for content. It is likely that broadly educational content will take the lead here, especially as such content becomes more sophisticated, and as we all begin to realise that we can educate our children and ourselves using the huge resources that the web contains. Further drivers for this will be as specialist educational publishers take their content online, and as users see that its value is far greater than much of the 'informal' stuff already available for free.

Perhaps the greatest push in this direction is the UK government's commitment to have all schools online and connected to the 'National Grid for Learning' by 2002.The National Grid for Learning (NGfL) is one of the most ambitious online initiatives anywhere in the world. Plans for content on the Grid – and content is what will make it succeed or fail – are at an early stage at present, but in three or four years time the likelihood is that every educational publisher in the UK will have much of its content available for download via the NGfL. Right now, all the signs indicate that much of the content will be free, with huge implications for publishers.This may mean that in the short-term, it looks as if users will get something for nothing, but since the real world does not work in this way, be prepared for revolutionary new business models to emerge.

Non-commercial sites

Much of what has been said in this Report up until now has been directed, more or less unconsciously, at the private sector, but there is just as much online activity in the public, non-commercial and charitable sectors.

Some of the work here has been outstanding. Sites such as the World Wide Fund for Nature (www.wwf.org), Greenpeace (www.greenpeace.org) and Friends of the Earth (www.foe.org) have set standards for design, information provision and interactivity.

In all of these cases it is the dissemination of information that is the key, and these sites do this superbly.They are real investments in the future, and have required considerable, upfront capital investment. Sites such as the WWF, which has thousands of interconnected pages, are very expensive to create, and just as expensive to maintain and keep updated.

The rules of thumb for the creation of such sites are the same as those for commercial web sites and for intranet sites, but there are some special points that should be emphasised.

Interaction is even more important on such sites, with users expecting to be able to demand all sorts of additional information, and being able to communicate directly with experts at the other end. Such sites make positive use of e-mails received, for example, by publishing them back onto the site – much as the letters pages of newspapers do. The key point here is that someone will have to read, check, and select all such mails. If you are a busy site you will be receiving hundreds of mails a day, and the administration involved in looking after them all is going to be a substantial commitment. Accuracy of content is going to be paramount, which means you will need to have experts checking and preparing the material.

Organisations such as local councils and local government bodies will wish to use their sites to increase and expand democracy, and this will only be convincing and effective if the site is not only accurate, but inclusive. Internet technology is going to be widespread, but it will not reach everyone, and the challenge here will be to reach the technologically deprived parts of society. Maybe this will be provided in libraries and in public buildings by means of terminals. Some of these will be touch-screen rather than PC, so you will need to consider the technological and navigational issues here.

As this Report went to press, the UK Government released a consultation draft of its proposed *Guidelines for the use, management and design of public sector web sites*. The first sight of this shows it to be comprehensive, timely and useful.

Connected communities

It is worth reiterating the role of schools here; remember that all of them will be connected to networks by 2002, as part of the NGfL initiative outlined above. Connected schools are likely to be real hubs of educational activity for whole communities as we enter the first years of the new millennium.

Visionary schools and their enlightened teachers are already well ahead of the possibilities opened up here, and some schools are already open late into the evenings and over the weekend. This access is now beginning to include adults as well as younger students.

Whole communities will become part of interlinked networks, with schools, libraries, museums, colleges, and other resource centres, joined via co-ordinated LANs and WANs.

Similarly, forward-thinking colleges and universities are seeing that their role is set to expand out into the community. For some educational establishments such ideas will need to be part of their arsenal of strategies for staying in business – the Internet and other networks are opening up huge new opportunities for distance and remote working. Rather like the UK's superb Open University learning institutions throughout the world, they will offer the opportunity to study and get qualifications via online connections.

This means that students will have real choices to make in the way that they learn and where they learn. It may be possible to obtain really prestigious qualifications from leading establishments, without having to leave home. It could put mediocre establishments out of business.

Developing the site

When looking for agencies to develop your site you may be advised to seek out those which specialise in such work, and who will understand your particular issues.

If you are in the educational sector – maybe building a site as part of your NGfL commitment – it may be worth your while contacting your local university, further education establishment or art school to see whether there are students studying multimedia who could help you to develop your site as part of their studies.

Some of the students on the course on which I teach did exactly that last year, and the schools involved were delighted with the work.

Many local government bodies and similar organisations do not outsource such work, but have it all carried out internally. For many, this will be the best way, both from an economic and logistic point of view. You will be in control of the work on a daily basis, both creatively and economically.

Skills, costs and schedules

If you are at the outset of the process of building an online team, what skills should you be looking for, how much should it cost, and how long will it take?

The key skills (no matter what you are doing or who you are) are – design, editorial, production, technical and managerial.

In order to save on costs, many organisations will roll the design, production and technical skills into one. Editorial skills usually include management skills; so as long as you have a sympathetic IT department, then you may be able to think in terms of a two-man team. (There are plenty of one-man teams out there, but I would argue that they will struggle to produce anything more than fairly modest work in the majority of cases, simply because of limited resources.)

Personally, I do not see any reason why the IT department should have any control over your new media team, but if you have a small team they will need IT and technical support, if only because the likelihood is that servers and cabling will be under their control.

Can you find the right mix of skills at a reasonable price? Good designer/technical hybrids are out there in some numbers, but they are very skilled and therefore in high demand. You will have to pay them accordingly!

Good editors are harder to find, but ironically, they are usually cheaper. Editors are used to their skills being undervalued, and know that they will need to start their careers at modest salaries. However, as they become more skilled and experienced – perhaps rising through the senior editor, commissioning editor scale – they become very valuable indeed, and this more as managers than as editors. The best editors live and breathe management.

In new media, the top of the pile, in team terms, are producers. The key skills here are the 'big picture' ones – where are we going? What are doing? How can we do it better? How can we do it more economically? These people will be able to straddle all of the skills in their teams (but will not be hands-on, typically), and will be able to talk 'techie' as well as commercially.

There are a few hundred really good producers in the UK at the moment. Again, their skills are underrated outside the circles that know their value, but these are the people who will shape the interactive industry of the future. Given a level playing field their salaries should be up there with senior managers.

The size of your team will depend upon your vision and upon the amount of money at your disposal, but the more skills you can take on, the better your work will be, usually. If you can afford it, then taking on specialists in each field will pay good dividends.

For example, complex technical projects will need programming skills at some point. Good programmers can ask more or less what they want in salary terms because of the shortage of such skills in the IT industry as a whole, but you may be able to snap one up who is at the start of her/his career.

Programmers are notoriously anti-social and difficult to manage – an image many of them relish and do a lot to promote. This can lead to real difficulties in both team terms and in commercial terms. You'll need to make tough decisions here, but I'd balance social skills against technical skills. You want someone who can work with you and your team more than you need an eccentric and wayward genius.

An absolute requirement is that you have people (or a person) who are always thinking and reading about the future and about future directions for new media. The industry changes very fast indeed, and you will fall behind rapidly if you do not have enthusiastic people on the look out for new possibilities. Fortunately, most people in new media are incredibly enthusiastic about their work, and will do much out of hours research.

Do they have to be young? You'll probably get them cheaper younger, and the new media industry is notoriously ageist in its outlook anyway. Often this is to its detriment, since many new media agencies are manned and run entirely by twenty-somethings, who have neither the collective experience or wisdom either to survive or to engender confidence. If possible, go with a mix of skills and ages, perhaps with a grizzled veteran of old and new media in a managerial role. The mix can be crucial, if only because ideas will be bounced around more with a good mixed team, and ideas are central to good new media.

How long will it take? Like so many of the issues raised in this section, this is very much a 'how long is a piece of string' question. A web site can be 'knocked up' very fast indeed, perhaps in a matter of hours. What you'll get will certainly reflect the amount of thinking, preparation, research and testing put in. I would argue that even if a 'quick fix' solution looks OK on day one, at some time down the track – probably tomorrow – you are going to regret it.

If you are at the start of a modest site, perhaps with thirty or so pages, then think in terms of a month from inception to publishing, depending upon your team and upon what you want to achieve. I am assuming here that you want genuinely professional work, and work that is future proofed in so far as it can be. I am also assuming that your team is not working in isolation, but has a 'client' (be it a 'real' client, corporate communications department, or a line manager) to whom it answers.

I am also assuming that you already have the required assets held digitally in some form. If you have to gather and digitise text, images and so forth in the first place, then the time scales will begin to stretch a long way into the distance.

Big projects will take many months of preparation, and that time will rise proportionately, according to the complexity and size. For example, you may be involved in an enterprise wide development that includes a web site (or sites), an intranet

and the overall ICT future of the organisation, including its knowledge and document management strategies.

If your organisation is big, then an overall ICT future plan ought to be in the pipeline if you are going to survive in the digital age. Visionary managers will be working towards getting the whole organisation behind such ventures and they will know that this has to be got right.

I would argue here that this can only be done properly with the involvement of all. These are very definitely not pure IT projects: at the heart of nearly all of these kinds of projects are people issues – the kind of issues you should claim as your own.

Partners and partnerships

Everyone in business these days knows how valuable partnerships can be, and this is especially true in new media and in online developments. Partnerships are no longer considered to be working with the enemy, but are considered to be strategic ways forward, so that all of the partners can get the best from any given situation.

New media, and in particular online developments, can offer especially rich partnering opportunities. 'Portal' web sites, for example, rely on unique sets of information to draw their audiences, and are constantly looking for new sorts of content and information to enhance their sites.

For commercial concerns there are very powerful reasons for examining these kinds of possibilities, and you may find that such partners will be found among your existing contacts. The same applies to not-for-profit organisations who may find that there are very suitable partners with whom they can build identities that would have been unthinkable as individuals.

The key requirement here is lateral thinking, firmly linked to open mindedness and a small (but significant) sense of adventure. Looking outwards rather than inwards is what this is all about.

CD-ROM and DVD

QUALITY MATTERS

chapter 6

Chapter 6: CD-ROM and DVD

The first thing to say here is that CD-ROM has not, and never did, go away. In fact, it has been very successful in corporate settings, where disc-based training has transformed the training regimes of many companies.

Despite the rise of the Internet and the web, I see no reason why this success should diminish. Discs are very easy and cheap to replicate, easy to distribute, and do not require that every machine is connected to a network.

There has been much talk of moving all such resources online – indeed that may be seen as one of the principal functions of the company intranet – but if CD-ROM based training is effective and the resources exist, then I would not be rushing to move everything online just yet. Many networks are still physically not capable of carrying the bandwidth that CD-ROM demands.

There are also issues surrounding just how effective training is over intranets. This is connected to the issues discussed above about overall intranet use, but it may be that training managers need to investigate more fully, the psychology of computer based training. People may take more seriously the idea of training that has been formally structured on disc, and training that is delivered in formal training periods, rather than in the informal way in which intranet training is envisioned.

Practically, CD-ROMs can hold approximately 650 megabytes of data, and much of that can be video and animation. DVD discs can hold approximately 18 gigabytes.

The sheer amount of information that DVD discs can hold presents challenges for new media developers. What will they fill the disc with exactly? The short-term answer is video, with its huge bandwidth demands. DVD video is already a big player in the home video market, with DVD enabled machines able to deliver very high quality material, plus levels and degrees of additional information, including interactivity.

Disc based projects are usually proportionately more complex and more costly than online projects, simply because of the assets involved. These assets include all of the text, animation, video and so forth, but also include the structuring of the concept or programme in the first place.

If you are developing disc based training products, you need all of the 'traditional' training skills plus the skills of the multimedia developers and practitioners. There is no point skimping here.

Discs are also used as external promotional tools, and here they can still have the edge over online products, if for no other reason than you can target the end audience very much more carefully at present.

You can get the best of both worlds by developing 'hybrid' discs – those that have a web connection built into the disc. Usually, this will simply be a piece of code that fires up the users browser and directs it to a specific web site. Doing this need not be vastly expensive, except that you need a corresponding and maintained web site for the user to visit!

Hybrid solutions can be very practical and it is surprising that more use is not made of them. For example if you were promoting a particular brand of car and wanted to have a full motion video of it in action, or a full 3D image of the interior of the car, and simulations of what it is like to drive, you could do all that online, but the bandwidth overhead is going to be very large.

If it's on disc you can control the content more effectively and target the users, and you can have the online connection which takes the users to a dynamic and interactive web site. That site can have e-mail, personalisation and so forth, capabilities that will mean that once the user logs on you can deliver a one-to-one service.

Disc based projects are hard to project manage, which is why so many CD-ROM developers went to the wall a few years ago. Some still try and fail. However, there is a core of companies out there which offer excellent services and which have survived and learned from the pitfalls of multimedia development.

By their nature, disc based projects are iterative, which means that they change and develop as they go through their production cycle. This is one of the reasons why project managing them can be so difficult. However, this can also mean that you can get products that are genuinely exciting and which break new ground.

Quality matters

This brings us to the quality of such products. Another of the reasons that commercial CD-ROM was seen not to live up to its expectations, was that so many of the products made were unbelievably bad. The content was frequently technically flawed, poorly designed, not targeted at any identifiable end users, and so on. Who wanted to look at ineptly edited video clips? Who wanted to spend ages delving into products whose navigation was ludicrous, only to find that the depth of content was miserable?

It would be great to be able to report that all of this is in the past, but sadly, really dreadful discs are still put onto the market, and developers tout themselves who should never be let near computers.

The only way to avoid these horrors is to shop around, and to look at enough products to be able to get a feel for what can be done and for what is good and what is bad. This last point is crucial, I've spent lots of time with bitterly disappointed people who have taken on multimedia 'experts' only to find that the completed work was shoddy if not actually unusable. Often this is because the clients did not have the courage to ask what they thought of as naïve questions, and did not quite like to say that the work seemed to be going wrong for fear that the 'expert' would dismiss their opinions.

The truth is that in multimedia the naïve questions are often the best and the ones which go to the heart of the matter. Many multimedia experts are full of genuine technical knowledge, but find it difficult to address simple questions like how will the user find his way round this product, or why is the screen that horrible off putting colour? Good, sensible down to earth questions should be asked all the way through the process. And make sure that your contract gives you plenty of time to check the product at all stages, and gives you the ability to demand changes.

Make sure you have a really good, watertight contract that covers all of the possibilities. If you've not done such contracts yourself, and you have no internal department that can help you, then get an expert to put one together for you. Publishing contracts can make good models for such things. Don't skimp on this, contracts are essential in this business.

I believe that the prospects for disc based media are good, despite some of the statements above. There are individuals and developers out there who can make work that will do everything for you and your company that you had ever imagined. Don't give up on discs yet!

Interactive and digital TV and the future of interactive media

INTERACTIVE FUTURES

MOBILE NEW MEDIA

COMMUNICATING CHANGE

chapter 7

Chapter 7: Interactive and digital TV and the future of interactive media

As I write this, the industry has gone wild for digital and interactive TV, but I do not see the public equally enthused, with many (possibly the majority) having no idea what these expressions mean, never mind thinking of investing in them. Maybe that will change over the coming months as more and more digital services roll out.

Are these technologies relevant to corporate communications? Not right now, but down the track I believe that they will be, and I think that an overview of what might come about will be of value.

Digital TV is here in the UK right now and is a reality for a couple of hundred thousand viewers. What they get for their money is better quality and more channels. They also have to have some kind of device connected to their TV to collect and decode the signals (this is called a set-top box). They are also likely to want or need a high quality TV to take advantage of the quality of the signals being received.

Digital TV can be delivered via satellite systems, cable systems and by terrestrial means.

There is no doubt that the technical quality of the digital signals is far greater than that of the analogue signals still received by the majority of UK viewers.

Digital TV also offers almost unlimited capacity. Hundreds of channels are certain to appear over the next few years, and some suggest that thousands of channels could be within sight.

The quality of the content of these channels is already a matter of debate (and some anxiety). The quality versus quantity debate over existing TV channels has surged back and forth for years, with many commentators claiming that the standards of the UK's limited number of channels beats the rest of the world hands down. If you've surfed the hundreds of channels available in the US, or the dozens available in Europe, you may be inclined to sympathise with this view. Digital TV is here to stay, but digital is not the same as interactive, and it's the interactive side of things that should concern us here.

If it has been difficult to pin down just what new media means, then it's well nigh impossible to give a 'snappy' definition of interactive TV. In fact, it might be wise to steer clear of anyone who confidently states that they can summarise its meaning.

There are two broad issues at play here – one is what the technology can do, and the other is what the programme makers can exploit from that technology in order to make programmes we want to watch.

By definition, interactivity is at least a two way street – you receive and you reply; you are spoken to and you speak back, and you can make choices.

'Ordinary' TV is interactive to the limited extent that you can toggle the channels and make choices in that way.

Interactivity can be increased on digital TV by offering the viewer more choices. This might be being able to choose one of a number of camera views during a football match, being able to choose which court to watch during Wimbledon, etc.This might be taken further to enable viewers to watch their favourite player for extended periods.

Quite what kinds of viewing experience this would provide are open to question, simply because one of the things that makes watching sport on the TV exciting is that the producers are watching multiple camera shots all the time, and are able to make split second decisions about which shots the viewer should see. Since the makers of such programmes are also very skilled, they know how to make exciting and memorable viewing. Even action replays and the like are used appropriately and with care, again to make the game more exciting for the viewer.

Deeper into the possibilities of interactive TV are ideas such as interactive soaps, where maybe you can choose story lines, actors etc. Again, questions about the nature of drama and programme construction are raised. At its most simple you have to ask yourself whether you want to interact with drama in this way. Much of our viewing is deliberately passive, after all. Also, if programmes are really to provide these kinds of opportunities, then the production costs are going to rise hugely – three or four alternate story lines are going to cost much more than one straight story, all the way from scriptwriting through to production.

The scriptwriting issue is one of the most fascinating in this context – how, exactly, do you write scripts that can be accessed and manipulated in these kinds of ways? Traditional linear scripts are tough enough, and adding interactive functionality is going to be a real challenge.

The BBC and the main TV providers have been investigating these questions for several years, and there are now one or two companies and individuals who are beginning to see ways in which these kinds of programmes might be made. But it will be a long time before these kinds of programmes become the mainstream.

Interactive futures

In reality, much interactive TV is going to be like DVD video – traditional linear viewing that has the addition of strands of information that can be accessed at any time. This might include sub titles, biographies of actors, the history of a particular character, narration by the director etc. In other words, the viewing experience is made richer by the addition of information that could not have been provided in the 'old days'.

There are those who think that the delivery of the Internet, and specifically the web, to TV screens, is where the future really lies. There are already various technologies and applications that make this a real likelihood.

For the viewer, this will offer genuine interactivity. For example, adverts will have web sites associated with them. You will be able to watch an advert in traditional passive mode, but have the ability to call up the web site that goes with the advert if you want to find out more about the product, and ultimately buy it over the online connection there and then. Some programmes would clearly benefit from this kind of interactivity. Travel is an obvious one; not only could you find out much more about specific topics covered, you could use the web connection to conduct much further and broader research into holidays. So, watch a programme about New York, make a decision to go there and book the flight, hotel, restaurants, tours and so on there and all direct from the comfort of your chair. And check whether you can afford to do this via your online bank account, and let your relatives in the US know you are coming via the e-mail that comes as part and parcel of the package.

Food programmes are another good example – see a recipe that you really like the sound of, pause or freeze the programme, go to the web site of your nearest friendly grocer/supermarket, order the goods, have them delivered and resume watching the programme while making the dish at the same time.

All of the above is technically possible, and services very like it are already in existence in one form or another.

What makes the TV route compelling, of course, is that TV is a technology that millions of people all round the world feel comfortable with, and it reaches nearly everyone. But there are some worries at basic levels. Today's TV sets are very simple to use. You turn them on, and if you don't like what you see, you toggle the channels. When you've had enough, you turn off.

Video recorders are of a different order, however, and research has shown that the majority of users do not programme their VCRs – because they don't know how. If you can't set the timing controls on a VCR, how are you going to get on

navigating complex TV content, let alone interlaced web content on a machine that is effectively a TV/computer hybrid? This will be a challenge for developers.

Many observers believe that the TV/computer hybrid will be a widespread reality very soon, and they believe that the cultural, social and technical considerations will sort themselves out. I think that this is probably the case for the computer literate, articulate and monied among us, but I think there is a real danger that substantial numbers of people will miss out, and this will create further polarisation of 'haves' and 'have nots' within our society.

For those of us creating new media these will be real issues that we have to address, especially if our jobs are in the public sectors.

Mobile new media

Mobile phones are the technological success story of the 90s. In the UK, more than 25 per cent of us have mobile phones, and the number of users is rising at an astounding rate, so much so that some of the services are already incapable of satisfying the demand for call space. In some countries – Japan, Finland and Israel are outstanding examples – usage of mobile phones is almost universal, to the extent that the terrestrial services are predicted to disappear because they are effectively redundant. Mobile phones have brought new levels of communication for many of us, from the professional on the move along with his laptop computer, to the school kids who carry them as emergency aides and cool fashion accessories. They have become indispensable adjuncts to life, and they are going to become more and more pervasive.

Increasingly, mobile phones are becoming much more like overall mobile communications devices, with users expecting that they will be able to access the Internet and other networks.

Soon, we will expect to be able to read and send all of our e-mail from our mobile phones, and we will expect to be able to download web pages in a format that is easily receivable and read on a small device with a small screen.

Such phones – WAP (Wireless Application Protocol) devices – are already available, and will soon become the norm in mobile phones. They have built-in browsers which use a cut down version of HTML called WML. Users will be able to connect direct to their corporate e-mail servers, and will be able to read their mail clearly on large (in phone terms) screens. Sending mail is perfectly possible, and will become easier as mobile communications develops.

This has considerable implications for corporate communications. The first and most obvious is that many influential professionals will expect to be receiving your information on their mobile devices, and these professionals might be your staffers, as well as they might be your customers. If you want to be seen to be at the forefront of ICT, then you will want to have a strategy to include these devices in your communications. In a few years, many will take it for granted that the way in which they do a large percentage of their work is via mobile communication devices. Interestingly, this means that the whole nature of 'work' will change, as it becomes possible to work anywhere, anytime.

This is already a reality for some, as we answer our mobiles even when 'officially' not at work, or check our e-mail in the evenings. Many think that the blurring of work and home is not good for us or for our family lives, but maybe it is better to have partners around, even if they spend a proportion of their leisure time working.

Communicating change

The definition of work itself will change even further. Most of us know that the days of one principal job or career in a lifetime are long gone, and that many of us now expect to change jobs every couple of years. Such career paths would have been considered erratic at best only a few years ago, but in some sectors it is now expected that CVs will show regular job moves.

For older, more conservative employees, this change in the nature of work is unsettling, if not downright scary. For companies which set out to create 'family' environments, these changes are going to mean that a re-think in corporate culture is necessary. Employees are going to be more independent, but at the same time may require more support in some areas of their lives. Such issues as pensions are going to become more complex, and workers will begin to look for companies which put an emphasis on help with these kinds of provisions.

Changes in technology, in work, and in employer perceptions of valuable 'knowledge workers' will mean that many more of us become 'teleworkers', our bases at home, and with no permanent desk in the office.

This is appealing for companies, since the cost savings in desk space and overheads can be huge. It can be appealing for workers, who can have all their home comforts around them, can increase their choice of places to live, and can avoid horrible commutes.

But what about those managers who believe that homeworkers spend more time drinking coffee and stroking the cat than they do working on that urgent proposal? What about those homeworkers who desperately miss the social side of the office and a good laugh with their mates? The key to all of this has to be communications, and superb, open communications throughout the enterprise will be at the heart of successful business in the digital age.

It is ironic that both new media and corporate communications can be a little tricky to define at times, but put the two together and you will create one of the most essential drivers for all business in the new century.

Resources and further information

PRINTED RESOURCES

ONLINE RESOURCES

MARKETING, PR AND COMMUNICATIONS SITES

chapter 8

Chapter 8:
Resources and further information

My intention in this Report has been to provide you with an overview of new media and its (possible) role(s) in corporate communications. I have deliberately avoided figures such as numbers of users online, for example, as these change so fast that their inevitable inaccuracy would call the rest of what I have to say into doubt. Also, facts and figures can be misleading, especially in the world of new media, and I am constantly reminding myself of that old saw: 'There are lies, damned lies and statistics'.

However, I am very aware that you will probably want to have access to facts and figures, and below is a selected list of resources that I use and find valuable. It's up to you to interpret the 'facts' as you see fit; in other words, quote them, not me!

Some of these are online resources, but I also spend a good deal of time reading 'old-fashioned' paper magazines and journals, and I've listed a few of these.

You could spend all of your time trying to keep up-to-date with new media and new technology, and you can find that many hours pass unnoticed if you start tracking information down online. Is this wasting time, or is it valuable research? I guess that's a question between you, your conscience and your line manager! But you probably do need to spend a part of each working day topping up your knowledge. I hope that the tips I give below will be useful, and will not take up more of your time than necessary.

Printed resources

Books

There are next to no books that I could recommend on new media, partly because they are genuinely thin on the ground and partly because they are out-of-date before they roll off the printing presses.

If it's books you want, get some of the classic publishers' texts such as Judith Butcher's *Copy-editing* (CUP), *Harts Rules* (OUP) and the *Oxford Dictionary for Writers and Editors* (OUP). Groundbreaking these may not be, but they remain essential tools for good publishers.

Also of great value is the *Writers and Artists Yearbook*, published annually by A&C Black. This is a brilliant resource, and has superb articles by experts on such issues as rights and contracts.

Newspapers

All of the broadsheets cover technology, and they also have supplements on new technologies. *Inter//face*, *Connected* and *Online*, published respectively by *The Times*, *The Guardian* and *The Independent* are always worth browsing.

The Guardian is probably the newspaper most targeted at media issues, and its Jobs section on Mondays and repeated on Saturdays, is essential reading.

General magazines

There is a plethora of consumer magazines that cover the Internet. I'm not going to recommend any by name, since all of them have virtues. Why not pick a different one each month? Check the cover mounted discs before you buy, as these are sometimes really good value, and can provide you with resources you might have spent hours searching for and downloading online. If you can get whatever it is free and on a disc, why spend time downloading it from the Internet?

A warning here: you must check the disc for viruses before you use it. All the magazines check their discs for viruses very carefully before publication, but the final onus is on you. One very famous computer magazine shipped a disc with a really unpleasant little virus on it a few years ago; red faces all round, including among those users who just 'plugged and played'.

There are even more general computer magazines on the shelves, and many of these are good buys, with good overviews of technology. I'm a Mac user, so I buy *MacFormat*. I get good information, and an excellent cover mounted disc.

If you want something a little more serious, then the venerable *Byte* is as good as they come. Intended for computing professionals, it has articles that cover specific issues in great depth. Carry this one under your arm and impress your colleagues! Like so many computing magazines, Byte has an excellent web site (www.byte.com). Here you'll find news, back issues and links to other sites.

Specialist magazines

NewMediaAge is aimed fair and square at online marketing, advertising and publishing professionals. Packed with information, this is an order only weekly magazine that you'll find indispensable (online at www.nma.co.uk). Very good value.

For marketing professionals, *Revolution* is an essential read. It's not on many high street racks, however, so it is best to order it. *Revolution's* online (www.revolution.haynet.com) counterpart carries a wealth of additional information.

Design Week covers commercial design, including new media, thoroughly and in-depth.

New Media Markets, from the Financial Times stable, is particularly good on TV futures. Order only, and with a hefty price tag.

By contrast, the following are all free if ordered by mail, but would be superb value if a price were attached. Order these and you will be obtaining rich and genuinely valuable information.

IT Week describes itself as the 'newsweekly for the connected enterprise', and it is just that. It covers every aspect of ICT in clear, in-depth articles, and it has superb headline sections if you are in a hurry. Online at www.itweek.co.uk.

Information Age covers all aspects of information and its management in the enterprise. If you are interested in knowledge and information, and in the people issues that are at the heart of these notions, this magazine is for you. (e-mail contact: informationage@whitaker.co.uk)

Publishing comes from the Forme stable (www.forme.com), and is intended for senior and production managers in the publishing industry, but I find that it has some of the best articles anywhere on publishing futures overall, and it always links these to real life examples.

Network Week is for the real 'techies' among you, covering as it does every aspect of networking in today's connected society. Read this if you want the lowdown on networking issues, but also read it for its BOFH column, where the secrets of the IT department will be revealed to you as never before! Read this and you'll laugh and be terrified at the same time. Online at www.networkweek.com.

Online resources

I've restricted these to a few that I know and use regularly. You could spend your entire life looking for this kind of information online, but my advice is to get a real life instead!

www.webopedia.com. Don't know what HTML stands for? Baffled by CGI? Want to know about cascading style sheets? Then log-on to this brilliant site and type in your query. It's fast and brings back exactly the information that you want. If you want to know more, or dig deeper, or dig sideways, then you can. And it's all in plain English, too!

A tremendous resource, and a far better glossary of terms than I could ever provide for you.

If I want to search, or to look for ICT news and views, I go to www.search.com and its companion, www.news.com. These are both part of the cnet stable, and are great if you are looking for ICT related topics. You can also subscribe to a good daily e-mail summary, do this at www.news.com.

Cnet also runs www.browsers.com, where you will find many versions of the two most popular browsers, plus some others you may not have thought of, and huge amounts of information about web browsers generally. All in all, a terrific set of resources.

If it's information on web design that you want, perhaps the best starting point is Webmonkey (reached via www.webmonkey.com). This is part of the Hotwired site (www.hotwired.com), which is the online version of *Wired* magazine. At Webmonkey you'll find articles and tips on every aspect of web design, with contributions from some of the most influential web designers. The broader Hotwired site covers life in the connected society generally, and is still acknowledged as being one of the coolest places in cyberspace.

To see what web design technologies can do, then you'd be hard pressed to find a better site than Macromedia's (www.macromedia.com). Here you'll find examples of everything that the company's applications can do, and you can download all necessary plug-ins if you have not got them already.

Go to www.adobe.com to learn about Adobe's PDF technology and to download the Acrobat Reader for free. Also spend time on this site to discover Adobe's vision for technologies and applications that will make publishing for print, for online and/or for disc as seamless as possible.

For information about the Internet generally, and for good historical resources, visit the Internet Society's site at www.isoc.org. If you can't find what you want on this site, it has lots of excellent links that you can follow.

There is a good deal of information available on publishing and rights issues. Some of the sites that I've used and have recommended include: www.clans.cla.co.uk. This is the site of the UK's Copyright Licensing Agency (try www.clans.cla.co.uk/www/internet.htm); www.jisc.ac.uk, which is the SuperJournal project and has good summaries of the issues surrounding electronic rights at www.jisc.ac.uk/pub/copyright/superj.htm; www.lawrights.co.uk, which covers legal issues generally; and www.alcs.co.uk, which is the site of the Authors' Licensing and Copyright Society.

Finally in this section, three sites that contain a diverse and essential collection of information, some of it from commissioned research, and some from the way in which the sites themselves are constructed and the content which they publish.

www.reuters.com is the site of the information and news company. It has commissioned reports on the Internet and where it is going. You'll need to pay for some of the detailed work.

www.kpmg.com is the site of the international management consultancy company. A great deal of interest and value here, to the extent that when checking these URLs as I compiled this listing, a very long time passed before I went on to the next site.

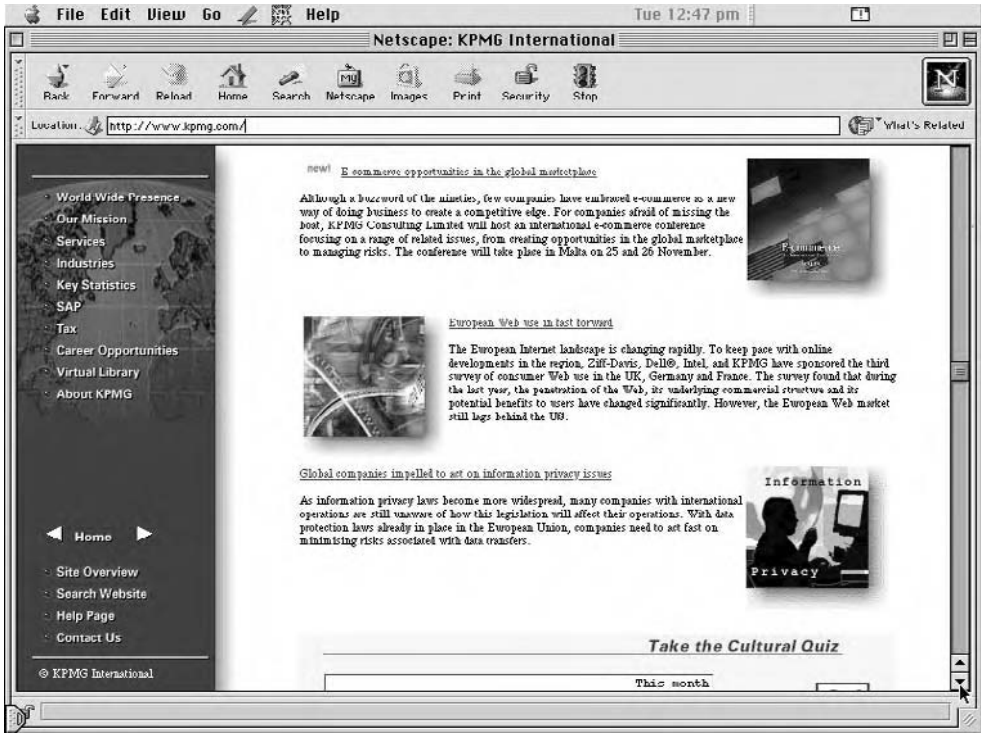

Figure 11: www.kpmg.com

www.maires.co.uk is the somewhat enigmatic address of the NOP research group. Some of the best statistics on the development of the Internet and how it is used are found here.

Marketing, PR and communications sites

www.nua.net is the site that I usually turn to first if I want marketing information or Internet statistics. It has a huge amount of information, and great links. Make sure you bookmark this site and visit it regularly, and make sure that you subscribe to its free e-mail news services. Its monthly Internet surveys contain some of the best information you'll find anywhere about Internet futures and issues.

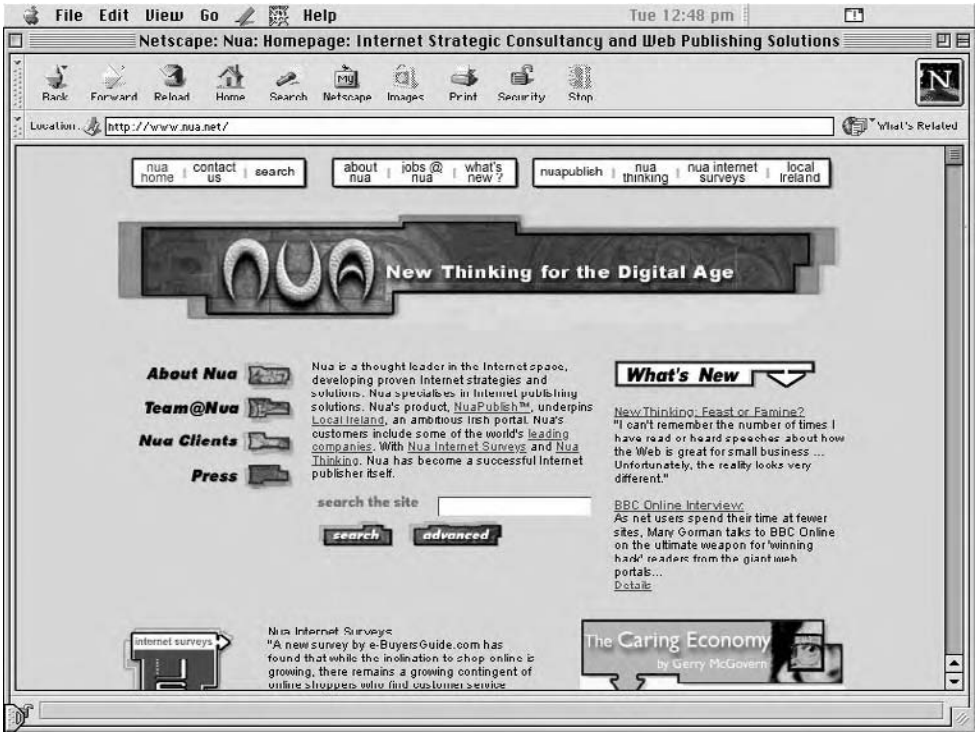

Figure 12: www.nua.net

www.webpromote.com is another site for new media marketing types. Like NUA, it has an excellent e-mail service, and publishes regular in-depth articles on all aspect of new media marketing and promotion.

www.clickz.com is also all about marketing in the digital age, and puts special emphasis on the quality and names of its contributors.

www.iconocast.com is the antidote to some of the more serious reading that you'll find about the Internet. Edited by Michael Tchong, it has articles covering every aspect of the culture of the Internet, and these are always worth reading, partly because Tchong has the ability to see a trend before most of the rest of us do, and then writes about it in ways that we can understand and relate to. Excellent and well written e-mail service available that is a must read.

Also visit www.business2.com, 'the magazine of business in the Internet Age', which assists Tchong in his online publishing.

www.imrg.org is the web site of the Interactive Media in Retail Group. Its main role is to sets standards for the interactive retail industry, and it is interesting from that point of view alone. It is a member-based organisation.

www.etimes.com says that its role is in exploring corporate interactive communications, and I've found good articles here that are more reflective and research based in their feel than some other sites.

www.webcominc.com is the site of a US based company that specialises in what it describes as 'cyber marketing'. Interesting for itself, and because it makes good summaries of online research findings, and has links back to the source of those findings.