The internet

‘It becomes clear that we’re entering a new era, the post-internet age, a world in which the Net will be everywhere, like the air we breathe, and we’ll take it for granted. It will be neither the glossy nirvana of technophilic dreams nor the dystopia of traditionalist nightmares. It will look a lot like today — but with higher contrast, sharper focus, and a wide-angle lens.’

Bruce Sterling, science fiction author and futurist

The internet is widely acknowledged to be the most influential communication development since Gutenberg invented the printing press in the 1450s. It may be the most ‘hyped’ communication medium ever developed.

The growth of the internet has taken everyone by surprise. It is certainly the fastest growing medium yet recorded. The first website was published in August 1991. In 1995 almost 19 000 sites were online. In late 2006 the 100 millionth website was launched.

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Figure 14.1: The first World Wide Web page, published in August 1991, was an instructional site explaining how to build other websites. The author, Tim Berners-Lee, pioneered the web at CERN (the European Organisation for Nuclear Research).
Telecommunication companies have found their systems straining under the pressure of so many users. Governments have not yet been able to implement effective regulation or censorship. The business sector has not been able to fully capitalise or control it through ownership, as they have other media forms (see media ownership, page 116).

The internet has grown from just a few academic users in the early 1990s to an audience expected to reach 2.8 billion by 2010, including 14.18 million in Australia (10 million classified as regular users).

**What is the internet?**

The internet refers to the hardware and equipment required to use and operate the vast connected network of websites and other electronic resources, as well as defining the communication media that the physical internet enables.

![Figure 14.2: The first web image, published in 1992, was of a rock group from CERN, Les Horribles Cernettes (The Horrible CERN Girls), who sing about high energy physics! According to their website the group are still loved by 20000 physicists worldwide.](image)

**The development of the internet**

The internet had its origins in a 1969 US Department of Defense computer network called ARPANET (Advanced Research Projects Network) that allowed contractors and universities undertaking military research to exchange information. It was deliberately constructed as a ‘decentralised’ network — that is, there was no central computer in control; instead, all the connected terminals contributed to its overall power and security. In the event that a military attack destroyed part of the network, the rest would continue functioning.

In the 1980s the Computer Science Research Network was added to the global network, giving researchers remote access to costly supercomputers housed at large US universities. Each one of the universities then added its own networks to the system, further increasing its power.

In the early 1990s commercial interests gained access to the system, and this opened the internet to the general public. The internet now runs on networks operated by major telecommunication, internet, computer and media companies as well as academic networks. No one organisation in any one country has overarching control.

**Who governs the internet?**

Technical control and management of the internet continues to rest with the US government and with institutions charged by the government. The Internet Corporation for Assigned Names and Numbers (or ICANN) is the agency that handles the day-to-day tasks related to maintaining and controlling the internet and internet traffic. It is not a regulator, however.

**How the internet works**

The internet is accessed through an internet service provider (ISP). Subscribers buy access using the ISP’s ‘gateway’. This gateway is usually an optical fibre cable link to the intercontinental telephone and data cables that run across the ocean floor.

Information is transmitted in digital form as tiny ‘packets’ of data. Text, image, video or audio files are broken up into small packets and transmitted bit by bit from one machine to another, where it is reassembled. Each packet represents only a tiny part of the huge amounts of information being sent. **Packet switching**, routing pieces of data simultaneously through multiple connections, overcame telephone system limitations, making the internet a reality.

While the World Wide Web (WWW) was developed by Tim Berners-Lee and CERN (the European Organisation for Nuclear Research) in 1991, it was the 1993 creation by Marc Andreesen of the Mosaic internet browser using simple-to-write HTML (hyper-text markup language) that spurred the internet’s popularity.

**A many-to-many medium**

The internet is the first mass media form to allow individual users to select the content they wish to view. It also allows each user to interact with other users and contribute content directly. While radio and television broadcasters communicate to audiences of millions, on the internet millions of people communicate with millions of other people. The internet is a ‘many-to-many’ medium.
There are two main ways of using the internet.

1. **As a viewer.** Users explore the internet, visiting 'sites', subscribing to content feeds or downloading content for later consumption. They can use the internet much like an interactive newspaper, book, video game console or television. Internet content may contain text, images, video, audio, interactivity or games. The internet also allows the user to access services such as banking or other online applications such as data storage and office suites including word processing and spreadsheets. Uses of the internet become broader and more innovative every year.

2. **As a broadcaster.** Users create their own content with information they wish to share with others around the world. Interactive group discussion through 'chat' networks, blogs or content-sharing sites can also allow users to broadcast their opinions, experience, talent or knowledge to people anywhere in the world. Many traditional media companies such as newspapers are allowing users to contribute content to their online editions in ways that they haven’t previously with their broadcast product. Many internet sites have been created to share user-generated content and build on its popularity.

![Diagram of internet communication](image)

**Figure 14.3 (left):** A partial map of the internet created by Matt Britt using data from the Opte Project. The decentralised nature of the network is apparent. Removing a couple of major computers will not stop all the other computers from being able to communicate. The map is colour coded: dark blue represents the US, Canada and .net sites; red is military, government and education; yellow is Japan, China, Taiwan, Australia and Germany; magenta is the UK, Italy, France and Poland; green is Brazil, South Korea and the Netherlands; white is 'unknown'.

**Figure 14.4 (below):** The internet communicates by sending tiny ‘packets’ of information from one machine to another. Each packet of information is virtually indistinguishable from its neighbours and is identified by only two elements. The first is the header, which contains the delivery destination and sender’s address. The second is the packet number, which the destination computer needs to put everything back together again.
Technology and society

1969–1980
The early days of the internet see room-size mainframe computers connected for military and limited university research use. Only 400 computers are linked.

1981–1990
A period of rapid expansion and academic utilisation. By 1989, 100 000 hosts [linked computers or ‘virtual’ computers] are connected.

1991–1999
The modern internet forms when it is opened to businesses.

1991–2000
The invention of the World Wide Web in 1991 and Mosaic in 1993 make the internet widely available.

2000–2003
The technology crash and subsequent rapid rebuilding. Illegal file sharing becomes an issue. Broadband access becomes common, changing the type of material online. People increasingly turn to the internet for information.

2004–present
The age of social networking, user-generated content and Web 2.0

Internet timeline

1965 — Email invented, allowing communication between users of the same time-sharing mainframe computer.


1971 — The @ sign first used in email addresses.


1979 — Usenet launched, allowing messages to be posted to public newsgroups.

1981 — The 400 computers on ARPANET switched to TCP/IP, allowing many networks to coexist, forming the modern internet. The word internet starts being used.

1983 — Sendmail — the first commercial email software

1984 — Number of internet hosts reaches 1000.

1985 — Whole Earth 'Lectronic Link (WELL), the first online community

1989 — Number of internet hosts reaches 100 000.

1990 — Archie — the first internet search application

1991 — AARNET (Australian Academic Research Network) launched — the first Australian link to the full internet.

1992 — Number of internet hosts reaches 1 000 000.

1993 — Marc Andreessen and Eric Bina launch Mosaic, the first popular web browser.

1994 — First online advertising in the form of banner ads

1995 — Amazon launched.

1996 — First online advertising in the form of banner ads

1997 — eBay launched.


1999 — Internet Explorer launched as part of Windows 95.

2000 — The searchable internet passes 1 billion pages.

2001 — Google launched.

2002 — Wikipedia launched.

2003 — MySpace launched.

2004 — The rise of social networking internet sites and participatory culture

2005 — Citizen journalists are first on the scene in the Asian tsunami, providing the first accounts and the most vivid imagery of the disaster.

2006 — Number of internet hosts passes 450 million.
The purpose of the internet

According to *The Digital Economy Factbook*, the most common uses of the internet are for email, accessing health information, researching products, reading news, shopping online, booking travel, conducting school research, job searching, instant messaging, online banking, blogging and reading blogs, downloading music and movies, searching for people, and online auctions.

Surveys have found that the most popular services and sites on the internet are search sites used to locate information on the web. The most popular websites in Australia are Google, Microsoft, Yahoo!, MSN, eBay, Telstra, News Corporation and Australian government sites.

Common uses for the internet may be summarised as follows.

- **Fulfilling information needs.** The range of information available on the internet is so vast as to defy description. The types of information being distributed range from news, personal opinions, discussions on a wide range of topics, online encyclopedias, corporate and product information, and educational, entertainment and cultural materials. Users also have customised ‘feeds’ of news headlines and other information ‘streamed’ straight to their computer or mobile devices.

- **Providing a global meeting place.** The internet provides the opportunity for cultural exchanges and friendships on a global scale. Every day people from almost every nation exchange email, ‘chat’ using instant messaging, write ‘blogs’ filled with opinions, thoughts or personal experiences, exchange media content, and visit virtual worlds where they meet others.

- **Meeting a need for entertainment.** Surveys have found the primary use of the internet to be for entertainment and the pursuit of hobbies. This includes internet surfing, listening to music or podcasts, watching video, exploring interests and hobbies, and downloading content such as MP3s.

- **Providing an up-to-date news and information service.** The internet is seen as the world’s largest library, providing the latest news from the world’s major news services, as well as links to almost every piece of research, data and information held in every library, educational, university or newspaper computer system.

- **Allowing users to become content providers.** The internet has been termed a ‘democratic’ medium, because it allows all users to contribute equally. Any user can create their own content, even if they have nothing interesting to say. As a consequence, it is a common lament that ‘90 per cent of everything on the internet is rubbish!’

- **Fulfilling commercial needs.** The internet has become a major retail source. The most purchased items are music, DVDs, books, travel, tickets, clothes and software. While many of these are inexpensive purchases, it has become common for people to buy expensive items such as cars, jewellery and even houses using the internet. Corporations use the internet to advertise and promote their products, build brand identity, and offer information, services, help and feedback to their customers. A common commercial use of the internet by consumers is the research of products and prices before they purchase them offline. Online auction sites such as eBay allow a user to purchase almost any product from other users or online auction stores.

- **Conducting business.** Many businesses now use the internet extensively in the workplace and offer their workforce, especially mobile workers, applications essential to their jobs. Most internet users conduct business on the web, even if it is simply using internet banking services.

- **Fulfilling emotional needs.** The internet has attracted a reputation as a meeting place, with many users spending hours each day building up social networks and making contacts. The internet also acts in a more subtle way to fulfil emotional needs. Users can now travel the world and converse with people from anywhere without leaving their chair, fulfilling desires for love, friendship, group identity and culture. For those unable to travel, such as the disabled, it offers an avenue to an active social life.

### Internet genres

The internet encompasses a wider range of genres than any other media form. Many genres share elements of others; many are new or are evolving as the medium continues to innovate. They include:

- search engines (for most users these represent the ‘front page’ of the internet)
- news and current affairs
- blogs (see page 418)
- wikis (see page 415)
- social networking (see page 409)
- reference and research (libraries, journals, archives, online books, dictionaries, encyclopedias, medical information)
- information- and service-oriented sites (government, banking and finance; travel and tourism; environmental; aid organisations and charities)
- online shopping and product information
- online auctions (e.g. eBay)
• entertainment and lifestyle
• music and video downloads and streaming (including internet radio and television)
• online gaming (including gambling)
• adult
• art and cultural sites
• support sites and communities
• science and technology (e.g. information technology, space, geology, biology)
• sports sites (news, information, clubs)
• consumer electronics (e.g. gadgets, home/car/portable entertainment devices)
• computing and software
• web applications (email programs, office programs such as word processors, mapping software, blogging/diary tools, offsite data backup, financial and banking tools, and corporate intranets and applications).

Activities

1. Discuss your most commonly used internet services or most accessed information and other websites. Would you categorise your use of the internet as being mainly for entertainment, educational or research purposes?

2. Compare the way information is presented in conventional media such as newspapers, books and magazines, and on the internet. What are the similarities and differences?

3. Organise a class debate on the topic that the internet will take over from television as the most influential media form.

4. Keep a log of the main purposes you have put the internet to over the past two weeks. Which uses have you tended to favour? Compare your consumption pattern with that of other students and compare your usage of the internet as opposed to other traditional media types.

The structure of internet communication

There are several different ways in which the internet can be used. The most common and popular of these is via the World Wide Web (WWW). Many people mistakenly believe the World Wide Web is synonymous with the internet. However, there are a number of other ways of using the internet, including email, chat, Usenet, entertainment downloads and file sharing.

World Wide Web (WWW)

The World Wide Web, or the web, is the most popular of all the internet applications. It is the driving force behind the popularity of the internet. The web is the ‘graphical interface’ of the internet. It allows the combining of text, pictures and animations in an interactive format. Many sites on the web are entirely animated.

The name World Wide Web is derived from the way in which information on the web is linked. The web consists of millions of internet sites, linked together in a dynamic hypertextual form (see page 30). The amount of information on the internet makes it the largest library in the world, spanning all countries, continents, cultures and languages.

Web 1.0

Web 1.0 is a term coined recently to describe the original types of websites, most of which were static web pages that rarely changed. In the original model of the internet, information was held on different sites that the user had to locate and visit manually. Older websites provided information in only one format, without customisation for individual users or requirements. In the late 1990s websites started to move towards customised information and providing services and online applications.

Web 2.0

‘An essential part of Web 2.0 is harnessing collective intelligence, turning the web into a kind of global brain.’

Tim O’Reilly, founder of publisher O’Reilly Media

The internet is a medium that is undergoing continual change and innovation. ‘Web 2.0’ doesn’t represent a new kind of internet; rather, it describes a second generation of internet-based services whose value is derived at the user level through customisation of information and content delivery methods, as well as collaboration and shared knowledge.

Web 2.0 includes social networking sites, video, photo and bookmark sharing sites, wikis, podcasts and blogs.

Mash-ups combine existing content and concepts in new forms. An important aspect of mash-ups is shared APIs (Application Programming Interfaces). Examples include interactive map objects, which can be customised and embedded in any website, and
YouTube video players, which can also be used on any site to play content from another.

Service-based applications (such as document editing software, email programs, photo management tools, calendars, online ‘home’ screens and interactive maps that operate within a web browser) are also classified as Web 2.0, and mark the start of the internet as an application platform.

Web 2.0 is used to describe websites that:
- serve customised information to users based on their preferences and profile
- encourage user-generated content and knowledge sharing, including reuse of existing materials
- offer new methods of content delivery direct to the user
- provide more organised and categorised content identified through tagging (see page 416), allowing deeper linked content
- allow rich interaction similar to traditional computer application software.

Web 2.0 also represents a richer user experience through more sophisticated interaction with the website or application.

### Table 14.1: Some Web 2.0 applications and their Web 1.0 predecessors

<table>
<thead>
<tr>
<th>Web 1.0</th>
<th>Web 2.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Britannica Online</td>
<td>Wikipedia</td>
</tr>
<tr>
<td>Personal websites</td>
<td>Blogs</td>
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<tr>
<td>Page views</td>
<td>Cost per click</td>
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<tr>
<td>Publishing</td>
<td>Participation</td>
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<tr>
<td>Content management systems</td>
<td>Wikis</td>
</tr>
<tr>
<td>Directories (taxonomy)</td>
<td>Tagging (‘folksonomy’)</td>
</tr>
<tr>
<td>Netscape</td>
<td>Google</td>
</tr>
</tbody>
</table>

### Web 3.0

Web 3.0, also known as the Semantic Web, describes a future model of internet content access and organisation. Many internet researchers believe that the internet will become a universal platform for content delivery — one that depends, not on websites holding unique information, but on the information itself, which can be accessed, used and reused, in part or in full, in whatever way the user requires. Descriptively marking up, or tagging, content is also an important aspect of the Semantic Web.

### Search engines

The main way information is located on the World Wide Web is through search services known as search engines. Search engines use banks of computers to catalogue keywords and phrases used on web pages, which they rank for relevance based on scientific or mathematical algorithms.

Any website can be registered or catalogued by these search engines. Placing relevant keywords (metatags) in hidden ‘head’ fields in the code of each internet page, and having a site containing well-written content in a text format, help to increase search engine ranking.

Most commercial sites pay specialist companies to maintain top ranking on search engines. Studies have found that most users give up after viewing the top 30 matches for a search. Using search engines to drive traffic to websites is called search engine marketing (SEM).

### Email

‘Email has revolutionised private and professional relations in most parts of the world. From the personal email sent to keep in touch with partners, children, friends and lovers, to photographs, cards, recipes and jokes, email has allowed us to share material instantaneously and often.’

Karen Brooks, senior lecturer, University of the Sunshine Coast

Electronic mail, or email, allows users to send and almost instantaneously receive messages from any other user in the world. An email message may also include ‘attached’ files such as pictures and text documents.

Email has become an invaluable business and personal communication form, allowing vast amounts of written communication to be inexpensively exchanged across the world in a matter of seconds.

Personal email use in the workplace costs hundreds of millions of dollars in lost productivity in Australia each year, however.

Critics believe that email has led to a decline in personal communication and in the quality of written language.

### Spam

Between 65 and 90 per cent of all email traffic is unsolicited junk mail, delivered to millions of users at a single stroke. This mail content is known as spam (for Simultaneously Posted Advertising Message). Most spam originates in the United States, China or Poland. Most is blocked by your internet provider before it reaches your mailbox. Spammers disguise the origin of the email through spoofing, or faking the ‘sender’ and ‘reply to’ information.

Email addresses are collected by stealth through scraping email addresses from chat rooms, postings
and websites. ‘Most people, by now, have left a digital footprint which can be mined,’ says research scientist Ollie Whitehouse. Email addresses are also guessed through dictionary attacks, which join randomly combined names to known domains (e.g. adama@gmail.com, adamb@gmail.com, adame@gmail.com). Email addresses are also harvested from online contests.

Spam offers substantial potential financial benefits (and often involves organised crime). A lot of spam is sent illegally from unwitting users’ home computers. Hackers send programs that hijack computers, linking together thousands of home computers in ‘zombie networks’ or botnets that are used to send the spam.

Australia has strict laws on spam, with fines of up to $10 million for offenders. Under the Spam Act 2003 it is illegal to send, or have sent, ‘unsolicited commercial electronic messages’ that have an Australian link. The Australian Communications and Media Authority (ACMA) is the Commonwealth Government body that enforces the act. It is also illegal to harvest email addresses from the internet or buy email addresses.

Other internet applications

Usenet and bulletin boards (BBS)

Usenet, created in 1979 and updated in 1986, is one of the earliest applications developed for the internet. Usenet is a system of public access bulletin boards hosted and duplicated on hundreds of thousands of servers worldwide without any governing body. There are now more than 100,000 different newsgroups, covering all interest areas in many languages. Tens of thousands of these groups are rarely if ever used.

Usenet is like a giant global email exchange. Users post messages to specific newsgroups, where they can be read and replied to by any other user, forming discussion threads.

Bulletin boards (BBS) operate in a similar way to Usenet, allowing postings of content based on a particular subject. Unlike Usenet, a bulletin board is based on a single server owned by an individual. Many are private and require a password for access.

Much of the interaction that once occurred in these internet forums has migrated to blogs or other internet-based forums.

Instant messaging and chat rooms

Instant messaging is real-time, usually text, communication between two or more individuals or ‘peers’ who have chosen to enable mutual communication by adding each other to their respective ‘contact list’. Instant messaging is usually enabled by a ‘client’ application installed on the user’s computer.

Instant messaging allows easy collaboration. Users are able to swap files and conduct video conversations using webcams. Most systems allow the user to set an ‘online status’ so their peers can see whether the user is available, busy or away from the computer.

ICQ (‘I seek you’), Internet Relay Chat (IRC) and chat rooms are the original methods by which internet users communicated in real time using text communication.

Chat rooms are topic based in a similar way to ICQ and IRC, but they are run by organisations, companies or individuals. They are often moderated and sometimes available only to subscribers.

Peer-to-peer file sharing

Rather than individual users downloading files from a single source, peer-to-peer (P2P) file sharing involves many-to-many connections. A file may be held on many computers and shared, with individual users downloading parts of the file from many different computers simultaneously. The more computers the file is on, the faster it will download. P2P transfer shares bandwidth, storage and processing costs. Instead of one user paying for storage space, computers and download bandwidth, the costs are shared by many users. If one computer fails, many others still have the file to share. This makes P2P transfer very robust and difficult to stop.

Anonymous peer-to-peer networks allow for legal or illegal distribution of material. Major copyright holders, such as the music recording industry, believe that P2P networks allow massive illegal trading of their property. Critics suggest that illegal material such as terrorism information or pornography can be traded with anonymity, and call for regulation. Supporters argue that the potential illegal use should not prevent the technology from being used.

The potential for cheap distribution has been explored by major content providers, such as movie distributors, who are considering peer-to-peer technology to allow commercial, paid downloads of copyright material (P2P-casting).

RSS and syndicated content

Really Simple Syndication, or RSS, directs content to a user based on ‘feeds’ the user subscribes to. By using RSS feeds, users can have news, blog entries and all manner of news- and opinion-related content constantly fed to them.

RSS feeds are particularly useful on websites where content is updated regularly. This saves the user from having to visit the same sites every day, bringing the content from many sites together and assembling it on the user’s computer or mobile device. RSS feeds are also being used commercially to notify users of sales.

A program known as a feed reader or feed aggregator can check a list of feeds on behalf of a user and display new articles.
**Activities**

1. Assign different groups in the class to find a particular piece of information using each of the internet media discussed opposite. Which were the most successful methods and why? Take into account the subject used, perhaps trying some others as well. Have a group or class discussion on the most effective way to find information on the internet. Compile a class list of methods.

2. Type a popular or current keyword in a search engine and follow a number of the successful ‘hits’ or matches. Where does most of the information originate (see the country code on the address)? Is it balanced, or is most of it from just one country? Try the same thing on a blog search engine.

3. Research better ways to use search engines to find specific information quickly by using advanced search options. Visit different search engines and document their advanced search techniques. Can similar methods be used across most of the search engines?

4. While teenagers in a study conducted by Alloy Media Marketing and Harris Interactive in 2006 counted between one and ten friends in real life, they averaged 75 friends in their online profiles, 52 on instant messenger lists, and 39 in email contacts, and had 38 friends’ phone numbers in their mobile. More than 36 per cent of teens have friends they know only through online contact. Compare this finding with other members of your class or in teams. Are you more or less likely to be close to a friend you know offline than to one you know only online?

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**The internet audience**

The internet provides a more diverse source of information than any medium ever has before, especially through targeting specific interest areas. Science fiction and technology author Bruce Sterling suggests the internet is already a personalised medium, because ‘everybody has a different internet’.

**Who uses the internet?**

The internet passed the one-billion-user mark in 2006, according to *The Digital Economy Fact Book*. It is expected to reach two billion regular users by 2011.

A Nielsen/NetRatings study showed that North America (the US and Canada), while accounting for just 5.1 per cent of the total world population, made up 21 per cent of all internet users. Oceania (including Australia) accounted for 0.5 per cent of the population but 1.7 per cent of internet users. Africa, however, accounted for 14.1 per cent of the world’s population but just 3 per cent of internet users.

In Australia almost 70 per cent of the population access the internet — about the same percentage as in the US and Canada.

Contrary to the Generation Y stereotypes, surveys show that the average age of internet users is between 20 and 44. The ratio of male to female users has equalised, although men spend more time online. While men are more active users of the internet, women are more likely to use the internet for personal communication, especially through email and instant messaging. Young people born since the advent of the
internet have been termed ‘digital natives’, having no knowledge of life before the internet, and taking technology for granted.

‘Digital natives are thinking, acting and reacting much differently from how we did, mainly because their childhoods are in large part shaped by technology,’ says Park Jung-hyun, a senior researcher at LG Economic Research Institute. Internet authors, including the editor of Australian Personal Computer, believe that the internet mirrors society better than any other medium. ‘The people who use the net are just the same people you see in the street.’

The average internet user spends 29 hours online each month, visiting an average 1500 pages on 69 websites. Studies have shown that internet users are now spending less time engaging in traditional media activities.

Average users are also wealthier than the national mean. Households on incomes of $100 000 or more are three times more likely to have internet access than those on incomes of less than $25 000. Remote communities are also less likely to be connected.

What are the effects of the internet?

‘Even if our kids aren’t playing blood-soaked computer games or plotting violence in the dark crannies of an online chat room, they are plunging into a whole world of influences and values and enticements that is, most of the time, hidden from our view.’

Daniel Okrent, *Time* magazine

Much media controversy has centred on the ready availability of violent and pornographic material on the internet, as well as illegal materials such as bomb-making recipes and crime manuals. The concern is not based solely on materials that can be found online, but also on the availability of these materials to minors.

The media have popularised the idea that the internet is filled with dangerous information that could persuade people to act in violent and irrational ways. Even though violent crime rates have been falling, especially in the US, sensational news stories lead to public confusion. After one teenage shooting spree in the US, 82 per cent of the 660 people surveyed believed the internet was to blame in some way.

Others are concerned by the rise of online gambling, worth tens of billions of dollars. While most legitimate gaming sites require proof of age, many smaller private operators are more than willing to accept bets from anonymous users who could be under age or accessing from countries where gambling is illegal. Online casinos are less likely than their offline equivalents to monitor gamblers for addiction or place bans on problem gamblers. A 2005 *eMarketer* survey found that US spending on gambling was 20 times the amount spent on music downloads.

Some child psychologists are warning that the cult of the internet is driving kids onto computers too early. Instead of helping advance children’s knowledge, computers are reducing their attention span and hampering language skills. Jane Healy, an educational psychologist from Colorado, claims, ‘They are not talking or expressing themselves. From a computer it’s coming at them in a series of stimuli formulated to make them respond quickly.’

Internet addiction disorder

‘Marriages are being disrupted, kids are getting into trouble, people are committing illegal acts, people are spending too much money. As someone who treats patients, I see it.’

David Greenfield, therapist and researcher
A number of reports over the past several years have found that internet and computer use can be addictive. Seven per cent of Australian teenagers aged 13 to 17 surveyed by Dr Mubarak Ali of Flinders University described themselves as ‘becoming addicted’ to the internet. Writing in the journal *Perspectives in Psychiatric Care*, Dr Diane M. Wieland stated that 5 to 10 per cent of users will experience internet addiction. Clinics have opened around the world to treat the problem.

The addictions range from ‘cybersex’ to gaming, online gambling to stock trading, and even compulsive checking of email, web surfing and social networking. Dr Wieland believes that the physical signs of addiction include disregard for health or appearance, sleep deprivation, decreased physical, occupational and social activity, dry eyes, carpal tunnel syndrome, and repetitive strain injuries of hands and fingers.

Other signs include the need to increase internet usage to achieve satisfaction; losing a relationship, career or educational opportunity because of excessive use; escaping personal problems or issues through the internet; concealing usage from family; and financial difficulties caused by internet use.

Dr Elias Aboujaoude, an assistant professor in Stanford University’s Psychiatry and Behavioural Sciences Department, uses the term *cyber-dependency*. He believes that while there are ‘red flags’ that indicate a real problem, ‘it takes more steps to say that there is something called internet addiction.’ Long hours spent on the internet, he suggests, could be an indication of an existing behavioural disorder.

### Activities

1. ‘TV viewers use their machines to lull themselves into a stupor, while PC users use their machines to become smarter and more productive, better able to exploit further computer advances,’ claims George Gilder in his book *Life after Television*. What do you think the author means by this statement? Do you believe the statement to be accurate? Based on your answer, and with class input, discuss what you believe to be the future of the medium. Will it be interactive or passive? Is this what you want from the medium and will it benefit you?

2. Discuss whether information found on the internet could force people to act in violent or irrational ways. Do you think the information online could encourage violence and hate or allow individuals to find validation for violent or hateful beliefs? Or does it force discussion and contemplation about ideas and beliefs because of the many diverse and opposing opinions voiced?

3. Conduct some research into the ‘internet addiction disorder’. From your findings, do you believe that this is a true disorder, or a symptom of already existing problems? Is a high usage of the internet ‘normal’, and are those using the term ‘disorder’ simply describing normal usage patterns? A survey of friends or classmates might help.

### Internet institutions and industry issues

The exceptionally rapid growth of the internet has allowed users, organisations and companies to take advantage of the lack of government control over content.

Traditional media forms are under the control of governing or regulatory bodies who decide what content is appropriate. Restrictions on numbers of mass media corporations also act to limit the type of content provided. The internet is the first mass media form to allow all users to participate without licensing controls or regulatory bodies. This means that internet content is mostly unregulated, uncensored and unedited.

### Ownership and control

The internet has offered ordinary citizens their best chance yet to participate in the media. But one of cyberculture’s leading authors and early supporters, Douglas Rushkoff, believes the internet has become a ‘corrupting’ e-commerce tool. ‘The internet has changed, becoming a marketing-driven medium, just like TV.’

‘The internet has now become so commercially driven that it has given the existing media giants tremendous advantages over other players. After all, they have the content that can be put on the internet at no additional cost. They can promote their internet offerings incessantly on their traditional media, and it’s easy for them to bring their standard customers and advertisers over from radio, TV, newspapers and magazines.’

**Robert McChesney, US media analyst**
Some investors are wary following the technology crash of 2001. Many of the most popular sites on the internet are free to use but cost their operators vast sums of money to operate. PC Magazine columnist John C. Dvorak asks, ‘What can these sites do to make money besides being bought out by a big company that can afford the never-ending losses in the hope of getting new customers for its other businesses?’

The internet is already dominated by media and technology giants. The biggest and most visited website organisations are Google, Yahoo! sites and Microsoft sites, including MSN.

**Search monopolies**

‘The implications of a tech company having such influence over cultural and societal development are certainly food for thought.’

Ella Morton, Associate Editor, ZDNet Australia

It is commonly said that ‘if you are not on Google you don’t exist’. The power held by the giant search companies is immense. The influence of Google has seen its brand enter dictionaries, with the word google substituting for ‘search’.

Media analyst Robert McChesney argues that the biggest mass media and telecommunication companies are working towards turning the internet into another branch of their empires by using joint ventures and company mergers as a way of reducing competition and risk. He says that this ‘puts an immense amount of political and social power into very few hands’.

‘One huge monolith controlling both content and the means of accessing that content can’t be healthy. At the very least, it’s likely to result in content that is homogenised and dumbed-down to the lowest common denominator. At worst, it opens the door to the squelching of free expression by overreaching corporate control.’

Ken Feinstein, technical editor, CNet Gamecenter

The internet continues to evolve, however. When a new site does become successful, existing media and internet companies normally buy it. MySpace and YouTube were bought by the internet giants Yahoo! and Google, the latter paying US$165 million for YouTube only a year after it was launched and at a time when it had never turned a profit and had no clear plan on how to do so!
Search companies have become the ‘guardians of global data’. Increasingly the primary, and often only, way we research information is to locate it using a search engine. The results returned are influenced by a number of factors:

1. The information found is filtered by the company's search algorithm, leading to a situation termed ‘Google’s truth’. So influential is the company's service that the results returned for any search query can become the meaning of the search terms, because alternative meanings not displayed in the Google search are discounted by the user. Search companies and corporate websites both engage in the competitive manipulation of page ranking, or the order in which results are returned. If your information ranks low, it won’t be seen.

2. Search companies have shown themselves willing to censor and restrict access to information — especially human rights, religious and political material — helping to support undemocratic and repressive governments. Yahoo! has even been involved in supplying the Chinese government with information used to jail rights activists.

Hackers and cybercriminals

‘A lot of people are stuck in the 1990s, with their image of a virus writer as a kid eating pizza in their bedroom. In fact they are now much more serious, and much nastier.’

Graham Cluley, security expert, Sophos

‘Information wants to be free’ is the catch-cry of hackers, crackers and phreakers. Hackers gain unauthorised access to computer systems. Crackers break the codes protecting software. Phreakers gain unauthorised use of phone systems. American attorney Gail Thackery says hacking, unlike street crime, leaves the victim unseen.

Hacking is a common problem for individuals, businesses and governments. FBI figures show that 90 per cent of internet users have experienced computer security problems. Research suggests that cybercrime is worth more than the international illegal drugs trade. Only 5 per cent of malicious programs are now written by bored teenagers. Sal Viveros, a security specialist with the anti-virus company McAfee, believes that ‘always on’ broadband provides hackers with widespread access and many more targets.

Financial gain derives from blackmail, extortion or industrial espionage (stealing a competitor’s trade secrets). Governments, too, are willing to turn to hacking. In 2004 hundreds of propulsion systems schematics, solar panels and fuel tank designs for NASA’s Mars Orbiter were stolen and transferred to computers within China. In its annual report about China’s military, the Pentagon stated that China views hacking as critical for ‘seizing the initiative’ and establishing ‘electromagnetic dominance’.

Several high-profile cases have potentially affected the growth of e-commerce. With the sheer number of hacker and credit card stories in the media, many users have become wary of supplying their credit card details for online transactions. One hacker managed to gain access to more than 40 million credit cards by accessing the payment processing company CardSystems Solutions in 2005, downloading the details of 200 000 cards including, numbers, names and verification codes.

Another common cybercrime is denial-of-service attacks (DoS), where hundreds of computers, often normal users’ machines infected by viruses, are used to bombard a single site with millions of requests, rendering the site unavailable to other users. There are about 6000 denial-of-service attacks every day.

Figure 14.8: The Maxus Credit Card Pipeline site was used to distribute 25 000 credit card numbers to several thousand internet users in retaliation for a failed extortion bid. This sort of high-profile hacker attack has affected the growth of online sales and e-commerce.
Spyware and computer viruses

'There is a 50 per cent chance your unprotected Windows PC will be compromised within 12 minutes of going online.'

Sophos security software company

Spyware is ‘parasitic’ software that hides on a computer’s hard drive, using the internet to communicate back to its owner. Spyware operations can range from reporting internet usage, recording typed passwords (keystroke logging), extracting email addresses for spam purposes, or searching the hard drive for personal and financial information that could be used fraudulently or unethically.

Spyware is normally downloaded when installing free software or when visiting other download websites, such as MP3 sharing sites or movie, software or pornography sites. In 2006 about 427 000 sites were found to be distributing spyware.

A computer virus is a self-replicating computer program written to automatically run tasks on a computer without the permission or knowledge of the user or to provide a ‘back door’ into a computer, allowing a hacker access. While some viruses are written to be destructive, deleting files or hijacking the computer for use in mass attacks (botnets), most are designed simply to be annoying — most importantly, by continuing to replicate themselves.

Viruses are deliberately created by programmers or others using virus creation software. They are normally written as pranks, to use in attacks on specific companies, for research projects, to distribute political messages, or for financial gain from identity theft or spamming. Some virus authors consider viruses to be an art form and their creation a hobby, and take pride in seeing how many computers they can infect.

Table 14.2: Bobbie Johnson, technology correspondent for The Guardian newspaper, created this chronological list of significant viruses.

<table>
<thead>
<tr>
<th>Year</th>
<th>Virus</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>1982</td>
<td>Elk Cloner</td>
<td>Elk spread on floppy disks that were used by the Apple II, a popular early home computer.</td>
</tr>
<tr>
<td>1986</td>
<td>Brain</td>
<td>A harmless but annoying virus that contained the names of its creators, Brain spread worldwide in just a few months, making it the first widespread PC virus.</td>
</tr>
<tr>
<td>1992</td>
<td>Michelangelo</td>
<td>One of the first viruses to get widespread media coverage, the reach of Michelangelo — at one point predicted to hit 5 million machines — turned out to be far more limited than anticipated.</td>
</tr>
<tr>
<td>1999</td>
<td>Melissa</td>
<td>Melissa took over email programs, causing the internet to struggle under the weight of messages being sent.</td>
</tr>
<tr>
<td>2000</td>
<td>Love Letter</td>
<td>Disguised as a message saying ‘I love you’, Love Letter is estimated to have caused more than US$10 billion worth of damage, making it one of the most destructive pieces of crimeware ever written.</td>
</tr>
<tr>
<td>2004</td>
<td>MyDoom</td>
<td>A clever mass mailing worm, MyDoom currently holds the record for being the fastest-growing piece of malicious code.</td>
</tr>
</tbody>
</table>

Figure 14.9: A variation of the virus called ransomware hijacks a user’s computer, threatening to delete files unless a ransom is paid. ‘Your computer caught our software while browsing illegal porn pages. All your documents, text files, databases in the folder My Documents were archived with long password.’

A study conducted by security company Panda Software found that 70 per cent of malicious software being distributed was linked to cybercrime.

Phishing and identity theft

‘Organised crime is here and they are very interested in phishing. They target home users who have become the weakest link.’

Ollie Whitehouse, research scientist

Phishing may be defined as creating fake websites masquerading as legitimate ones for fraudulent purposes. The term alludes to the idea of ‘fishing’ for gullible people. Phishing typically involves an email from a financial institution asking you to log on to their system for an important reason. The email directs you to a site that is an exact copy of the genuine website, even using a similar URL. Users are then persuaded to enter their account access details.
internet is the first medium in which the user is legally liable, not just the broadcaster or publisher. Simple actions can land any user in trouble. Students who uploaded a videotape left behind by another student at school to a video-sharing site were sued after the video ‘The Star Wars Kid’ unexpectedly became the most watched video (900 million plus viewings) in internet history.

**Defamation**

Defamation involves a public statement that could potentially harm a person’s or a company’s reputation, measurable in economic terms. Patrick Fair, of law firm Phillips Fox, believes defamation law is vital to society. ‘People of good standing should not be attacked for commercial or political benefit.’

‘It’s clear that global electronic communication via the internet is challenging or undermining the rationale of many aspects of the law of defamation,’ says lawyer Stephen O’Gorman. Unlike spoken conversations, almost all internet communication is archived and public. Defamation is of concern to internet users as much of this communication is abusive, aggressive, mocking or simply not well thought through before the ‘send’ button is pressed.

**Legal issues**

‘People don’t often think of themselves as publishing when they engage in situations like real-world or online conversations, or posting to newsgroups.’

*Stephen O’Gorman*, Australian lawyer

As technology feature writer Mitch Ratcliffe puts it, ‘A computer allows you to make more mistakes faster than any other invention in human history — with the possible exception of handguns and tequila.’ The internet is the first medium in which the user is legally liable, not just the broadcaster or publisher.

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Mike Godwin, council for the Electronic Frontiers Foundation, believes that defamation law should not apply to the internet, however. He proposes that the openness of the internet gives those people who have been defamed the opportunity to defend themselves.

Defamation cases involving the internet are not uncommon. An American court ordered a Louisiana woman to pay $15 million in compensation after she used an internet forum to accuse another woman of being a con artist. Australian law stipulates a $250,000 damages cap for defamation.

Defamation laws are unhindered by international boundaries. Melbourne gold-mining magnate Joe Gutnick sued American magazine Barron’s for comments regarding alleged tax evasion and money laundering. The American print version of the magazine was not under the jurisdiction of Australian laws. The online version, however, with just 1700 Australia subscribers, was subject to Australian law and the case was tried in an Australian court.

This has repercussions for all online publishing. Do we really want all information published online constrained by the countries with the strictest laws? Just because content sourced in Australia can be read in China, does that mean we should adhere to Chinese law on what can be published on politics and religion?

The right to a fair trial?
The global nature of the internet is an issue for legal proceedings and the right to a fair trial. The bigger the case, the more notable the crime or defendant, the more publicity it creates, and the harder it becomes to find a juror who has not been exposed to the case through the media.

With the huge media coverage of the Michael Jackson trial, internet users could examine the evidence, watch live re-enactments with look-alike actors, contribute to online guilty/not guilty polls and join in forums about the case. This level of media coverage and user involvement made it almost impossible to find unbiased jurors.

There have been many cases of news stories being blocked to users from entire countries. Under British law, media organisations can be punished for publishing material that judges feel might influence jurors and prevent suspects receiving a fair trial. As a result, it has been common for British users to be blocked from stories on sites such as the online New York Times. Smaller news sites do not block content, even though they too might potentially influence jurors.

Deep linking
Deep linking involves one site using a hypertext link to steer their viewers deep into another website to information relevant to their own content.

Experts on cyberspace law are divided on the legality of linking. Many think that anyone who creates a web page explicitly grants the community at large the right to use it. ‘The eventual goal of the web is for everything to be linked to everything else. If someone says, “You can’t link to my page,” well, they are missing the point of the web,’ says internet law expert Carl Oppedahl. According to Maureen A. O’Rourke, an associate professor of law at Boston University, ‘Site owners should recognise that internet users want swift access to relevant information without lengthy detours through other pages.’

However, Emily Madoff, an intellectual property lawyer, believes that ‘property owners who create the content should have a right to determine how surfers experience their websites. In particular if an owner’s home page or another page laden with ads is bypassed by a deep link.’ Most opposition to deep linking is based on this commercial assumption. By bypassing the front page, valuable branding and advertising potential is missed.

‘The World Wide Web’s killer application is the ability to move from one website to another via a hyperlink. Without linking there would be no Web. Some organisations want to control the way users experience their sites by dictating how they are linked to them.’

Dave Amis, journalist with Internet Freedom UK

Privacy and surveillance
New technology has made it easier for business and government to trace our every move and to gather, compile and cross-reference large amounts of information about us. New legal issues are raised on how collected information is used. For example, a company monitoring email found that an employee was being checked for cancer. It then used this information to deny them health cover.

Internet advertising networks have been accused of collecting unprecedented amounts of data and associating it with each unique visit to a website. According to a submission to the US Federal Trade Commission by the Center for Digital Democracy (CDD) and the US Public Interest Research Group, ‘Even if these companies don’t know our names, through online tracking and analysis they literally know every move we make.’

‘I’m not against advertising,’ says CDD executive director Jeff Chester, ‘but media companies have gone too far in allowing too much data to be collected.’
Cookies

Cookies have become an essential part of the internet experience. Cookies are small text files that are placed on your hard drive by websites and advertisers. They are usually used to track a visitor’s progress through a website, allowing the operator to evaluate which pages are most popular. They are also used extensively by online stores to track and hold purchases while customers continue to browse, and for storing preferences so website operators can customise their site for each user.

Cookies can be used in intrusive ways. Irene Graham, executive director of Electronic Frontiers Australia, says that having cookies turned on is a bit like being followed around by a shop assistant who writes down every item you look at.

Cookies are not normally used to expose personal details to a website operator. Cookies left by websites that a user chooses to visit are called first party cookies and are normally essential for using the site.

Third party cookies can have more sinister implications. These are left on your hard drive by organisations not associated with the website visited, such as an advertising company that places ads on the site. These cookies can be used to track your movements across the entire internet, allowing the advertiser to build a profile of your browsing habits and personal interests. If your profile is linked with your email address, then your data can be merged with existing consumer databases to build up a profile of your offline and online preferences. Most security software and firewall software allows third party cookie blocking.

When you visit a website a small piece of computer code is left on your computer. Every time you visit a new page on that site the cookie is updated. Later, when you return to the website, the information is extracted from the stored cookie. An updated cookie, still anonymous, is sent back to your hard drive. The website owner now knows you are a return visitor. If you lodge your email address or other personal information with the site, this is combined with the cookie, which is now no longer anonymous. The website operator can now link your browsing activity to your identity.

E-commerce

Electronic commerce, or e-commerce, involves buying, selling and marketing products or services over the internet or other electronic devices such as mobile phones. E-commerce is a major aspect of the internet. Jupiter Research predicts that by 2010 almost half of US retail sales will be made via the internet. The internet is the first medium in which selling directly to the consumer plays a significant role.

A 2006 study found 75 per cent of American households had bought online, 35 per cent spending more than US$250 in the previous three months. The most commonly purchased items are songs, CDs, DVDs, books, travel, magazines, electronics, tickets, games and software. These are products with a high value-to-weight ratio and are therefore easy to transport.

The number of expensive items sold is increasing. These include cars, houses and jewellery. Products that haven’t sold well include those with a significant smell, taste or touch component, and those that require customisation.

Currently market research techniques seek to classify ‘target markets’ comprising millions of consumers organised into easily manageable and understood groups. The processing power of computers allows marketers to keep a separate record for each online consumer. A consumer is identified on entering the online store, and the content is customised for them. They may be asked questions such as, ‘Are you looking for this?’ or ‘Do you want more of what you bought last time?’

Online sales of counterfeit products are booming. Sellers who are caught simply choose a new internet address and start again. The use of online auction sites makes the trafficking of counterfeit goods difficult to police.

Activities

1. Who controls content on the internet? Draw on the information you have just read and any personal internet experiences, or search the internet for information on a current news event.
   (a) Where did you find the most useful information?
   (b) Did you find any alternative views, and were they found on corporate, private or university sites?

2. Sheila Lennon believes ‘we empower each other by sharing information’. Empowerment is gained from the ‘trickling up’ of diverse information (from users) rather than the ‘raining down’ of limited information (from media corporations). How do you think this will alter the nature of global communication, the media and society? Base your answer on the question of ‘who controls the message’.
3. Are there any rules governing the types of materials you access on or post to the internet? Make a list of rules and responsibilities from the following sources.
   (a) Use the internet to locate government policy dealing with internet use.
   (b) Collect ISP contracts signed by any users in the class detailing rights and responsibilities of using their internet services.
4. Because the computers that transmit and store employee email belong to the company, most employers reserve the right to read them. But if an addressed letter is collected in the company's mailroom, it is illegal for the company to open it. Discuss whether you think this email monitoring practice is justified or intrusive. Provide arguments from both sides.

5. Find an important international news story syndicated by Reuters or Associated Press. Select a key portion of the text and use it for an internet search. How many other news sites does the story appear on, and in what countries? Do the news sites brand the story as their own or do they make it obvious that it is from elsewhere? What effect do you think syndicated news has on the diversity of opinion in our daily newspapers?
6. Do you believe the nature of the internet dictates that deep linking into other people’s sites is legal, or do you think that the owner of a site should be allowed to force users to enter only via the front page? How do you think this will affect the future of the internet and the goals of formatting free content? Discuss.

Web design

Before examining how to design a web page, it is useful to identify what a good website is. Jennifer Story, from Next Online, believes a good site must be created with a specific purpose in mind. ‘It is no longer enough to have a website for the sake of having one. The site must be attractive and innovative in its design, function in terms of its purpose, easy to navigate, frequently updated and fast to download.’ Without any information or entertainment value, users will not return to a site.

**Elements of a typical web page**

A typical web page includes the following elements:

- **Title.** All internet pages have titles that describe their content. A title should be brief and explicit. Simplify the title as much as possible. ‘My Homepage’ is more concise than ‘Welcome to my Homepage’.

- **Graphics.** Banners, logos, pictures, menus and other graphic elements give the site its identity. Each page should feature the same graphic use to create a site-wide unified design. Complex background images make the body text hard to read.

- **Advertising.** The most common form of advertising on computer-based media forms are banner ads, which are typically placed at the top of each page, in columns to the right of the content or within the content itself (see page 178).

- **Headlines.** Each section of a page normally has a headline, in the same way that newspaper or magazine articles do. Like those headlines, an internet headline should be brief and interesting, and clearly indicate the content that follows.

- **Content.** Body text communicates the bulk of written information. Computer-based media deliver information through a computer monitor, which unlike printed text is of low resolution. Small text can be hard to read on a computer screen, so larger font sizes are used. Text is typically accompanied by multimedia content.

- **Navigation system.** Too many menu options can be confusing and risk losing the viewer to a site with friendlier content access. There are two main types of navigation.
   1. Text-based navigation uses hyperlinked text. This is the most common and efficient menu type. Links can be visually styled to look like graphics. *Flyout* or *dropdown* menus are becoming popular on sites with many links.
   2. An illustrative menu consists of images with linked ‘hotspots’. These images containing hyperlinks are called *image maps*. They are often animated.

- **Information and contact details.** These can include the identity of the page’s creator, and a contact email address. An internet page may also feature a guestbook or feedback option, and a date showing the time the content was published.

**Creating an internet site**

**The development ‘lifecycle’**

Creating a website can be a simple process involving one person, or a huge undertaking involving hundreds of people in a range of disciplines. The one aspect common to all successful projects is careful planning. There are a number of stages that information
architects, business analysts, system architects, programmers and website designers should define.

• **Identify mission and goals.** Why do you want a website? Anyone planning a site needs to know their customers’ needs. They must research the products or services, and identify what elements are required on the site to best communicate them. Do they want information, interviews, interaction, multimedia or other elements? An important aspect of planning a website is to know the budget you have to work with!

• **Define the audience.** What kind of people are you trying to attract? What do they want to do on your site? Determining what aspects of the site will make visitors return is also important. Users are studied at length by user experience designers.

• **Create site maps.** The site map defines the information and page structure of a website. You must identify which content and resources will be available from the front page, and which resources will be accessed from deeper in the site (see language, page 34). A good internet site contains information broken into bite-size pieces, and linked by menus and submenus. The way content is structured on a website — that is, the information architecture — is crucial in making content useful and accessible.

• **Identify the technology to be used.** Is the site going to use HTML pages or will it be a fully animated extravaganza? Is the site going to feature dynamically generated, database-driven pages customisable for each user or will it be static?

• **Define business requirements.** Business analysts work with clients to determine requirements and document them in ‘use cases’, each outlining an individual function of the site. These requirements are referred to when constructing the page layouts and visual design.

• **Design page layouts.** Once the content and site structure are known, the information architect must design a layout structure for each page on the site. How is the page going to appear on screen? Where will the navigation links go and where will the heading and body text go? Simple low-fidelity wireframes are used to plan the information and navigation layout.

• **Create a visual design.** A range of inputs will affect the way the designer creates the visual design. The business requirements, low-fidelity wireframes, page layout, the client’s brand standards, audience profiles and the creative brief from the client will all contribute to the final design. Each page is rendered as a detailed high-fidelity mock-up showing the content and page elements.

• **Develop the site.** Site development may now begin. If the website is for a commercial client, a project plan for construction must be built and monitored. This plan identifies key functions of the site and marks deadlines for development stages.

• **Test the site.** Testing is an inexpensive way to check whether the website meets its goals before it is launched. Testing during planning and development reduces the chances of failure after the site is built.

### Navigation and usability

> ‘Web browsing user interfaces must improve enough that it is as easy to navigate the web as it is to leaf through the pages of a book.’

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Jakob Nielsen, authority on web usability

One of the most crucial keys to an internet site’s success is its navigation system. Users must feel in control of the experience while at the same time being led to the information the sites owners want them to see.

A good navigation model is intuitive and easily understood. Users should always know where a link will take them before they commit to it.

According to Jakob Nielsen, as a rule of thumb navigation links should take up no more than 20 per cent of the page, while the content should account for 50 to 80 per cent of the page.

Navigation controls the user’s experience of every website. In the offline world, customers buy a product first and experience its usability and usefulness after they have paid for it. In the online world, users experience first and buy second. If users don’t understand the experience, or can’t find the product or information they require, then they won’t buy it — and their competitors are just a click away!

Consistency in navigation is vital. Each page must feature exactly the same navigation system and graphics. A user must know at all times ‘where am I’, ‘where have I been’ and ‘where can I go’.

### Developing a website

This is the most technically complex part of the process. At a minimum, knowledge of the programming language HTML (hypertext mark-up language) and cascading style sheets (CSS) is needed. If complex elements like databases, interactive games, animation, secure financial transactions and feedback forms are needed, a skilled person or team will be required to create those parts of the site.
Writing for the internet

The style of writing that is appropriate for the online world is highly optimised and designed for quick scanning by readers. This means text that is constructed using short paragraphs, subheadings and lists. Usability experts Jakob Nielsen and John Morkes found that 79 per cent of all users scanned pages, while very few read word by word. Neilsen also recommends that 50 per cent less text should be written for an internet site than for a linear document. Any extra content should be linked to via hypertext.

The inverted pyramid

Nielsen found several surveys revealed that only 10 per cent of users actually scroll down a page, most preferring to read only the top part of a document, in the same way that many people read only the introduction to a newspaper or magazine article.

Print journalists have addressed this problem by writing in an inverted pyramid style (see page 487). Similarly, when writing the body text for an internet site, start the document with an introduction that summarises all the important information in one succinct sentence. Subsequent information should be organised in order of importance. Each page within a website should be written using this inverted pyramid approach.

Page length

Long pages of information should be avoided, says Nielsen, as many readers don’t bother scrolling down the page. The designer should therefore avoid putting too much information on one page. It is better to break it up into smaller sections linked by menus and submenus. A page twice the height of the computer screen is the optimum size for lengthy content.

Computer-based media deliver information via a computer monitor, which makes small text hard to read. Information on the web is usually presented in condensed or summarised form, using larger type than that found in traditional media such as newspapers. Studies have shown that reading from a computer screen is 25 per cent slower than reading from a printed page. High-resolution screens and ‘electronic paper’ will eventually close this gap.

Elements of a typical corporate page

A typical company home page will have a statement about the company, information on what they offer, pages on each of their products or services, information on new products, news or news releases, and contact details. They often also offer online ordering, a self-service or download section, help information and feedback options. Well-known companies don’t need to explain what they do. Some, such as Coca-Cola, barely mention what they actually produce, instead focusing on brand image, offering lifestyle and ‘cool’ experience rather than product information. Visit www.coke.com.au, and try to locate any product information at all!
Elements of a conventional user’s page

Typical user’s pages can vary quite substantially, but the average page usually contains information about the owner of the site; a diary or blog; their hobbies, likes and dislikes; photographs, personal artwork, music or literature; information that interests them; a feedback form to gauge opinion of the site; and links to friends or other sites and content they enjoy.

Many users take the opportunity to create a website that says something unique and entertaining. Some of the most popular internet sites have been produced by individual users or groups of users who have created works of humour or art that have gained cult status. Many users who create popular sites allow advertising on them to make money.

Advertising a site

Search engines have ‘robots’ that crawl the web, cataloguing content. Some search engines rank relevance of pages by how many other sites link to them.

The internet is so vast it is good to make your site known rather than wait for it to be found. A site can be submitted to search engines. The site link, title,
short description (25 words) and a number of keywords describing the content are required for this. Having well-written, concise site content that contains the keywords users are likely to search for is the best way to achieve high search ranking.

Other ways to advertise include informing others about it in appropriate forums, getting peers to link to it from their sites, and referring to it in offline communication.

Activities

1. Draw a site map of an existing internet site, using figure 14.11 as a model. Are the pages in a logical order? Has lengthy content been split into multiple small pages or left as one long page, and are the pages constructed in a logical or a confused way? How does the way the site is structured affect how easy it is to glean information from it?

2. Print out a number of internet pages and analyse them, identifying the different page elements. Note their purpose and state whether you believe they have used these elements effectively to achieve it. Does this make navigation of the product easy and informative?

3. On paper, design a simple personal web page detailing who you are, what your interests are and who your friends are. Include links to their web pages, lists of sites you enjoy visiting, a guestbook and photos of yourself.

4. Analyse a number of web pages, looking at the way the information is structured and presented on the screen. Choose a business, research it and create a company web page, integrating text and pictures, as well as audio and/or video. Think about how you can break the information into chunks, and how these chunks of information should be linked on their separate pages. This task can be prepared on paper or in HTML format. If you choose to work on paper, include illustrations, logos and button designs. You should also include simple page or paragraph references for the hypertext links, and a simple overview map.

PRODUCTION TASK

This task can be prepared on paper, or in an electronic format. You should include illustrations, logos and button designs. It should also include simple page or paragraph references for the hypertext links, and a simple overview map.

5. Design an internet site, demonstrating your familiarity with the features of internet site creation. Examples could include a tourist information, film, club or business site. Follow the layout conventions detailed in this section. To advertise your site, create a banner ad that promotes it for display on another site.

Internet advertising

‘Unlike the traditional media where the message is imposed upon the audience, web advertising must be relevant enough to entice the audience in.’

Adam Gosling, Ad News

‘Technology is giving us more and more opportunities to break through to clients,’ says David McCaughan from the international ad agency McCann Erickson. The internet offers advertisers a range of approaches to selling their products or services to the consumer.

With 80 per cent of advertisers using the internet to advertise in some way, internet advertising has become a significant industry. In their publication *The Changing Face of Advertising*, Parks Associates predict that by 2010, 10 per cent of all advertising spending will be online. The internet’s 50 most popular sites earn about 90 per cent of all online advertising revenue.

Advertising on the internet is a new field, and advertisers are yet to figure out how best to use it. Many companies are beginning to realise the potential for brand-building advertising on the internet. Instead of selling directly to consumers, companies are spending money on informing the consumer about them and building product appeal. Often they use collaborative advertising techniques to send you to a partnered online store from which the products are available. Rich LeFurgy, from the Internet Advertising Bureau, points out that consumers are unlikely to go to the Coke site to purchase cans of soft drink.
Rich media advertising

Rich media advertising plays on the strengths of the internet — multimedia, hypertext and interactivity — drawing on the engaging experience of a website in the advertisement. Rich media is common in all forms of internet advertising, especially banner ads and viral advertising.

Rich media often uses video ads, similar to their TV counterparts but offering interactivity, making the ad a richer user experience.

Consumer-generated advertising

‘We anticipated that there would be critical submissions. You do turn over your brand to the public, and we knew that we were going to get some bad with the good. But it’s part of playing in this space.’

Melisa Tezanos, spokesperson, Chevrolet, talking about the online Chevrolet Tahoe campaign that invited visitors to create their own ads for the SUV

‘By now, all brands should know control over their image isn’t entirely in their hands,’ says Tessa Wegert, a digital media strategist. Consumers can easily make their opinions known through blogs, social networking sites and forums. Rebecca Lieb, editor-in-chief of the ClickZ Network, warns that ‘the degree to which you control your brand, advertising, messaging, website, even your offline media is rapidly eroding’.

Many advertisers are embracing the change, with company-sponsored but user-generated advertising becoming common on the internet. Business Week has termed this ‘brand democratisation’, as it allows for consumer input into a company’s marketing efforts. While many of these messages are extremely successful in building a relationship between the consumer and the brand, some end up backfiring on the advertiser when the consumer turns on the company.

Most consumer-generated advertising campaigns will attract a degree of negative content. It is up to the marketer to develop strategies to protect the advertiser, ensuring the focus remains on the positive rather than the negative messages.

Types of internet advertising

Corporate and campaign websites

Company websites typically provide background information on the company, information on their products and services, consumer help and advice, and software updates.

Email marketing

Email marketing is a form of direct marketing using electronic mail instead of traditional mail or the telephone. Email marketing is less intrusive and more convenient than telephone marketing, but is also easier to ignore. Email marketing is a multibillion-dollar industry, popular because it is an inexpensive form of advertising that has a high return on investment. Results are also easy to track.

Emails are used:
• to build or enhance the relationship between client and customer, encouraging repeat business

Figure 14.13: Dairy Farmers used a campaign site to launch their Moove flavoured milk drink. Very different in style from their corporate website, the campaign site allows a brand to be built around a product or advertising campaign. This site was supported by other advertising.

In a study by market research firm Genex, 65 per cent of US internet users stated they would not buy from a poorly designed website, even if it was their favourite brand. Only 4 per cent of users surveyed would be persuaded to buy at a badly designed site because of discount prices. Worse for retailers is the finding that 30 per cent would stop buying from the offline version of a shop if the online version was a bad experience!

Campaign web pages are another form of internet advertising. These sites often offer a range of interactive options to woo consumers. Their branding and style are based on the parent company’s website but contain information restricted to the campaign. These web pages are normally used in combination with other online and offline advertising.
to acquire new customers, based on email addresses left with the company for more information, or ‘subscribe to our newsletter’ responses
• for special or exclusive offers that encourage ‘buy now’ behaviour.

Unscrupulous companies resort to spamming mass email addresses to push their message (see page 389).

Viral advertising
Viral advertising propagates through self-replication in a similar way to how viruses reproduce. It uses social networks to spread exponentially, reaching vast audiences very rapidly.

Viral advertising takes the form of entertainment, normally as funny video or animations, interactive advergames (see game advertising, page 442), images or text. The content is ‘found’ by one user and spread to their social network, each member of which spreads it further among their network of friends.

Matthew Smith of The Viral Factory believes people don’t mind if content is advertising — if it is entertaining, they will pass it on to friends.

Viral marketing is popular because it is easy to distribute and well targeted, and has a rapid response rate. It interests a large part of the target market at a low cost.

Banner ads
The most common way to advertise on the internet is to use banner ads. These are usually displayed at the top of each page (each page the ad displays on is counted as an ‘impression’). By clicking on the banner you are transferred to another internet site belonging to the advertiser (known as click-through). The number of click-throughs versus non-click-throughs (the click-through rate) is reported to the advertiser.

Placing an ad on a website with similar content (e.g. a CD ad on a music website) leads to higher click-through rates. Agencies such as DoubleClick specialise in placing banner ads and monitoring their performance.

Banners provide links to product and service information. They attract consumers through clever, mysterious or cryptic hooks, strong, bold headlines or statements, or animation.

It is critical that a banner ad campaign stand out. The number of users who click on banner ads has fallen dramatically. A very successful campaign will now have 1 per cent of users click on it (most are lucky to get 0.4 per cent). It is also crucial that the banner links to a campaign site or page dedicated to the advertisement, and not just to the company’s home page.

Many advertisers focus solely on the click-through rate. Studies point to the branding effect a successful banner ad may have. While not actually clicking on the ad, it may have made a positive impression on the viewer. View-through rates, measuring the number of users who act on the ad within 30 days of viewing, are about twice as high as the click-through rates.

Interstitials
Interstitial advertisements appear either before the next page of content is loaded or above the content. They interrupt the content in the same way a television or radio commercial does.

Popup and pop-under advertisements
Popup advertising involves opening a new window in front of the current one to display a static advertisement or a full website. A pop-under ad opens the window beneath the current browser window so users don’t see it until they close their active window. Anti-popup technology in web browsers is rendering these ads less effective.

Location-based advertising
Location-based advertising uses online maps to show the location of the company along with a short description of it and the products or services it offers. These ads normally link to the company website.

Search engine marketing (SEM)
Search engine marketing (SEM) involves increasing the visibility of a website in search engine result pages. A number of techniques are used.

1. Search engine optimisation involves improving the search ranking by carefully choosing relevant keywords for websites and improving the underlying code structure of the page to make those words more recognisable.

2. Pay-per-click advertising allows a company to buy its way to better ranking, guaranteeing placement on the first results page for paid keywords.

3. Sponsored search placement positions paid advertisements or sponsored search links next to the real search results. Google pays other sites to carry their paid search links based on related content (Google AdWords).

Product placement and sponsorships
Not all advertisers come clean with their audiences. Product placement on the internet may be more subtle than pictures or links within a page. Like product placement in movies, the references to the product may be contained within the text or photographs on the site. G. M. O’Connell, the founder of
advertising company Modern Media, explains: ‘You may be reading about car maintenance at Autosite, not realising all along you’re being sold to by Saturn through images of their product.’

A more explicit type of product placement is the sponsorship. In this approach a company sponsors an event or a website and brands the site and all advertising from the event or site with its own logo or corporate branding.

**Audience**

In the future the line between advertising and services may blur, suggests Modern Media’s G. M. O’Connell. ‘What we’ve been saying in my company is that advertising should be so good that people confuse it with the product and service.’

On the internet, user involvement in the advertising and the product is what is important. The internet allows the consumer to build a relationship with the product and other users of the product.

The internet is the first medium where the consumers choose which ads they wish to see. This means advertisements are seen by people who are actually interested in them. They can be effectively targeted, and can contain detailed product or service information. From the advertiser’s site, direct links can be made to reviews of the product or service, as well as more specific, detailed or technical information, dealer and distributor information, and information about other products or services offered by the company.

The biggest difference between advertising in traditional media and advertising on the internet is two-way communication. For Kathleen Flinn, editor of *Internet Underground* magazine, ‘Input from users will likely be a dramatic influence on the shaping of future campaigns, methods, and even the nature of advertising. Internet advertising does not have to be an ugly concept.’

**Behavioural targeting**

Directing ads to individual users based on their internet use is known as *behavioural targeting*. This method is becoming more common as web usage monitoring becomes more sophisticated.

Microsoft combines personal data supplied when a user signs up for a free Hotmail email service, with information derived from their internet searches. Chris Dobson, Microsoft’s global head of advertising sales, believes behavioural targeting avoids wasting people’s time with irrelevant ads. Google and Yahoo! do similar targeting based on personal information obtained from their free email services matched with search data.

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**Designing internet advertisements**

‘Quite simply, if an ad isn’t noticed it may as well not exist.’

**Nick Souter**, senior copywriter, Leo Burnett

Internet advertising is a new sphere. No form of advertising has ever been able to cater for such a mass of individuals before or target so specifically across cultures, languages or socioeconomic groups.

The internet is overflowing with advertising. Major sites often have multiple ads on each page. Of the many ads that a user sees while using the internet, only a few will stand out. Nick Souter believes it essential that an advertisement be quickly and easily understood. If the ‘simple proposition’ of the ad ‘is obscured by intrusive and irrelevant imagery and design elements, the message will be lost and the space wasted,’ he suggests.

**Banner design**

The most common way to target an audience on the internet is to use a banner ad. These ads link the potential audience to another site where detailed information about the product or service is held. Only a limited amount of information can be included on a banner ad, so it has to be simple yet comprehensive. Expandable rich media banner ads are able to offer more content, but first the user has to be attracted to the ad.

Often the most effective way to target the audience is also the simplest. Simple, uncluttered arrangements of text and images attract the eye, as do large, bold images or text. The content of the ad should be appealing, catchy, mysterious or unusual. The text is the most essential part of a banner ad. Common copywriting strategies include posing questions (‘Do you know how many people can fit into a mini?’), using cryptic messages (‘It’s more fun than a barrel of monkeys!’) and using directives (‘Click here’). Questions are effective because they initiate interaction with the user.

Other sites use animation or video to attract the eye. Often rolling the mouse over the ad will expand it, temporarily halting users while they read or watch video clips within the ad.

Banner ads come in many sizes and shapes. The basic ‘full size’ banner ad is $468 \times 60$ pixels on a computer screen, which translates to approximately $158.5 \times 20.5$ mm on paper. Other common forms are the tall, thin skyscraper ad ($120 \times 600$ pixels), the square button shape ($125 \times 125$ pixels), and the wide, short ‘leaderboard’ ad ($728 \times 90$ pixels). Any combination of multimedia elements can be used in a banner ad.
Properly positioning an ad can make or break a campaign. There is no use putting a skateboard ad on the website of a financial services company. The location on a page can also affect an ad’s success.Advertisers have found that banner ads get a higher click-through rate when placed close to items and links that users interact with, such as a browser scroll bar.

Eye-tracking studies conducted by the Nielsen/Norman Group, found that users have learned to ignore banner ads. Advertisers and websites are trying different placement positions and ad sizes and shapes as a way of tempting the user to view the ads.

Fig 14.14: Banner ads often draw the reader’s attention through movement. Rich media ads extend this by offering interactivity, allowing the user to explore the ad to learn more about the offer or product. Multiple ads from the same campaign are often placed on the same page for maximum impact.

**Activities**

1. How often do you read advertising on the internet, and what attracts you to advertising? Are you already interested in the product or service, or does a clever sales pitch drag you in? Make a list of good advertising you have seen on the internet. What makes it effective? Draw up a list of effective advertising techniques for internet advertising (e.g. links to reviews, interactive elements or clever slogans).

2. Do you find advertising on the internet to be generally effective and well placed? Is it more informative than advertising in traditional media, and do interactive elements provide more information about the product or service, or is it normally only for effect and image?

3. Using the guidelines on page 407, design a banner advertisement for a fictional company. Decide on what product you wish to sell, how your banner ad will capture the attention and interest of the user, and what information you will provide them with once they are at your advertising site. Storyboard your ad.

4. Compare a youth-oriented site such as a radio station or record company with a site associated with a political party. Identify the differences in style, and describe why the creators of each site used the different styles.

5. Study a number of popular websites that have advertising. Graph the types of companies that are advertising, what the most common products and services advertised are, and what format the ads use (banner, sponsorship, viral etc.).

**PRODUCTION TASK**

This task can be prepared on paper or in an electronic format. You should include illustrations, logos and button designs. Include simple page or paragraph references for the hypertext links, and a simple overview map.

6. Design an online advertising campaign for a major advertiser of your choice (pick a company that has a significant amount of existing offline advertising). Create a document for the client that outlines your approach, how you plan to target their consumers, the types of online advertising you would use, and an approach to using traditional advertising to drive traffic to your online ads. Storyboard one animated/interactive ad, outlining content areas and the type of content they contain.
Social networking and social media

‘Community is a powerful way to build content, a sense of belonging, emotional connections, and, ultimately, trust. Sure, you never know if that restaurant review you’re reading was posted by the head chef, the 15-year-old snotty brat next door, or your best friend who lives on the other side of town. But that’s OK. You can get a sense for the overall flavor (pun intended) from multiple reviews. Community in this manner makes knowledge itself more democratic, and that’s a revolution. It may very well be the essence of the internet revolution in general.’

Jeremy Lockhorn, director at interactive agency i-FRONTIER

Instant messaging, wireless internet and mobile phones have us constantly linked to our social peers. Social networking extends this by linking our media and interests to our peers, and encourages new social connections through shared content or interests.

Social media allow users to share opinions, insights, experiences and perspectives with one another through blogs, message boards, podcasts and wikis. Steve Rubel, a senior marketing strategist, believes social media and networking have forced traditional broadcast media to be more ‘conversational’ with their audience. Media theorist Mimi Ito writes, ‘The distinctions between personal communication and media distribution are blurring,’ because of increased user involvement in both generating and distributing content via friends.

What are social networks?

Social networks allow people to connect, interact, converse and join communities online. They are the successor to online communities. These sites satisfy a wide range of purposes including social and professional connections, product or service recommendations, hobbies, news, entertainment and dating. Many sites form a kind of social archive or record-keeping facility for millions of users who publicly document their lives in a multimedia format.

Social networks can be accessible to a limited community or open to the world at large. Social networking sites feature ‘bottom up’ creation and evolution. Instead of the goals of the site being dictated by the company that designed it (‘top down’), the content, structure and outcomes of the site are determined by the individuals within the site community.

But social networks are only as good as the people connected to the network, and they depend on their participation level. Members can create and expand social networks by adding other users as friends, or inviting those interested in their content or user profile to become friends through linking to their social network. Members can explore content through friends, and through their friends’ friends. Before long you can be connected to hundreds, thousands or even millions of people.

Social networks enable ‘social filtering’. Users, or groups of users, recommend or direct others to content, events or news stories of interest.

Figure 14.15: ‘For seizing the reins of the global media, for founding and framing the new digital democracy, for working for nothing and beating the pros at their own game, Time’s Person of the Year for 2006 is you.’ Time magazine named all social networking contributors as their ‘person of the year’ for 2006. To press home the point, the magazine featured a mirror on the cover to reflect the reader’s face.
Enabling technologies
A number of technologies have enabled widespread public participation in the media. These include:
- inexpensive personal computers
- digital cameras and video cameras
- camera phones that ensure we always carry a camera
- applications that allow editing and production of video and audio content
- blogging software, social networking and content sharing sites that allow people to upload content easily
- increases in internet bandwidth that allow richer content to be offered.

Types of social networks
An ever expanding and evolving range of social networking sites involves different cultures, interests, ethnicities, age groups, content sharing types and social relationship types. Most are open communities, but some are exclusive clubs that boast celebrities, business leaders or those voted ‘beautiful’ enough to belong. Types of sites include the following:

Social communities. These sites are considered to be ‘pure’ social networks. They exist simply to connect friends or people of similar interests or backgrounds. Many niche-interest social network sites are catered for in this category.

Content sharing sites. Content sharing sites encourage users to upload content to share with all users of the site, but especially those linked at a social level. These are among the most popular (and commercially valuable) social networking applications because they provide instant entertainment through user-uploaded video, audio, photos, art or writing.

Professional communities. Professional communities exist to connect professionals with work and one another, and to discuss industry issues. An early example, Linked In, matched professionals to jobs based on profile, location and social connections — proving that it can be who you know that gets you the best job!

Fan networks. Fan networks connect fans through shared admiration for an individual — typically a movie or music star — or types of movies, music, literature or art. Popularity is gained through recommendations. Rather than waiting for a studio or record company to promote them to a wider audience, unknown movie or music performers can become famous through fan networks.

Motivational sites. Motivational sites exist to provide users with the peer support they need to achieve a goal. Sharing difficult or rewarding experiences with other members is motivational. For example, one of the first sites, Peer Trainer, provided a ‘virtual environment for weight loss and fitness support’.

Shopping sites. Social networking shopping sites involve more than product or service review websites, including recommendations filtered through social networks with similar interests and purchasing habits.

News and sports sites. Sports sites group sports fans into communities and display sports news stories. They normally promote news content based on user recommendations, ordering the news stories by popularity and distributing them through social network channels.

Social bookmarking sites. Social bookmarking sites allow other users to view your internet bookmarks. Social bookmarking sites incorporate something that search engines can’t compete with — the human aspect. No trawling through search engine results; instead, relevant content is recommended by friends and like-minded individuals.

Blogs. Blogs, or weblogs, are websites where ordinary users post opinions and commentary, and write about their experiences, as they would in a diary or journal (see page 418). Blogs also act as a social archive for the authors.

Reunion sites. Some of the original social networking sites were reunion sites such as School Friends or Classmates. These sites put users back in contact with those with whom they have lost touch.

Dating sites. Social networking dating sites don’t require a third party to initiate connections. The social networking aspects of the site, including profiles and friend lists, are used to find others looking for love.

Online worlds and massively multiplayer online roleplaying games (MMOs). Persistent online worlds (see page 433) often use social networking features such as friending and community grouping.

‘Start pages’ can be used to aggregate the content from many of these social networks into a personal web home page for checking each time you boot up your computer.

Participatory culture
The rapid increase in new media technology encouraging users to generate their own content has created what Henry Jenkins, Director of the Comparative Media Studies program at MIT, has termed a participatory culture.
Jenkins believes this culture has the following characteristics:

- Low barriers to artistic expression and civic engagement
- Strong support for creating and sharing one’s creations
- Members who believe their contributions matter
- Members who feel some degree of social connection with one another

Jenkins suggests there are a number of skills needed to successfully engage in a participatory culture. These operational skills include the following:

- **Use and reuse media.** Participants need the ability to play, perform, simulate and reuse media content.
- **Follow flows of information.** Users need the ability to follow the flow of stories across multiple sites and media types.
- **Negotiate with others.** Social network members need the ability to network, distribute, negotiate and respect diverse opinions. They need to appreciate other perspectives and be able to collaborate successfully with others.
- **Evaluate sources.** Users need the ability to make judgements about the reliability and credibility of different information sources.

*Creative literacy*, a term coined by researcher Jean Burgess, is used to describe the possession of these participation skills. She describes creative literacy as ‘the ability to experiment with technology in order to create and manipulate content that serves social goals rather than merely retrieving and absorbing information’.

**Why do people participate?**

‘Most people who do it are not doing it to attract a mass audience,’ suggests J. D. Lasica, co-founder of Ourmedia.org. ‘They are doing it for themselves or family.’ Reasons for participation are outlined below.

**For attention or fame.** This can all be summed up, whether we like it or not, with one word: attention. We’re all starving for it, and all of these sites are just another way to get it,’ says Michael Block, a man who photographs himself riding plastic dinosaurs down Los Angeles freeways! ‘People enjoy attention,’ says Cade Metz of *PC Magazine*. ‘And if you grew up on reality TV and celebrity tabloids, you might enjoy throwing yourself out there, warts and all, for the world to see, just as much as you enjoy consuming the lives of others who do the same.’

**To connect and ‘hang out’.** Many online friendships are created from existing real-world friendships. ‘Most of what they’re doing is communicating with people they know, using the web to maintain existing relationships. It’s a really easy and convenient way to connect,’ says Susannah Stern, an assistant professor at the University of San Diego. Social networking sites can provide a sense of community and belonging. They are spaces not controlled by parents or teachers. Many offline places to hang out, such as shopping centres, are becoming out-of-bounds to teenagers.

**Self-disclosure and ritual.** ‘Our everyday culture definitely celebrates self-disclosure,’ says researcher Susannah Stern. Social networking sites provide an unparalleled opportunity for self-disclosure, opinion and communication with small groups of friends or the entire internet. Stern believes that ‘kids are picking up that self-disclosure is what we value in people’.

Instead of talking on the phone for hours as teenagers used to do, Stern suggests, they can now spend hours on social networking sites and instant messaging each other. They can undertake the rituals of forming friendship and social hierarchies, displaying the hierarchy for other friends or would-be friends to see.

**Building and exploring identity.** Social networks allow users to build and explore their identity — whether authentic or fictional. Most people, especially teenagers, are concerned with the way they believe people perceive them and the way they perceive themselves.

Susannah Stern believes that the dynamics of identity production are played out on social networking sites. ‘Profiles are digital bodies, public displays of identity where people can explore impression management. Comments that provide explicit reactions to online presence offer valuable feedback. The goal is to look cool and receive peer validation.’

**Collective intelligence**

*Collective intelligence*, writes Jean-Francois Noubel, an expert on the subject, ‘is the oldest human social organisation where individuals decide to mutualise their knowledge, know-how and experience in order to generate a higher individual and collective benefit than if they remained alone.’

Knowledge communities such as *wikis* capture and organise collective intelligence (also known as ‘the wisdom of crowds’). While wiki contributors may be knowledgeable, it is networking itself that brings power through organising knowledge and making it accessible. The whole intelligence collection ends up far more powerful than the sum of the individual knowledge.

Other social networking sites, especially those that are professional, industry or business based, allow ordinary users to pool their intelligence to solve complex issues and questions, and to build vast bodies of collected and organised knowledge.
Features of social networking sites

There is a huge range of social networking sites with a wide array of applications, but certain common elements are crucial to managing social networks.

Identity and profiles

‘You are what you write. On the web we are writing ourselves into existence.’

David Weinberger, author and technologist

Cooperation in social network environments is based largely on trust and reputation. Reputation is based on a verifiable online identity. A user’s identity is managed through their profile, which can be private or public.

In the real world an identity is negotiated through a number of factors. Our outer identity is based on a wide range of actions, beliefs and appearances. Offline identity is shaped by factors that are difficult to control. These include race, social class, occupation and level of education. Factors we can control include how we dress, wear our hair and speak, as well as the adoption of socio-cultural patterns and behaviours identified with the type of person we want to be. We also have an inner identity — our concept of self.

Online identity has aspects of both our real-world persona and our concept of self. In an online identity, users will often exaggerate aspects of self they take pride in or believe are missing from their real-world identity. An online profile contains information about the user — typically a photo, along with a list of interests and linked friends. The goal is to look cool and receive positive feedback from peers.

Identity is also derived from the social connections we make. Researchers Judith Donath and Danah Boyd argue that display of social connections reveals identifying information. ‘While the bulk of one’s Profile is completely within the participant’s control — the demographics, photos, self-description, tastes — what photos Friends choose to use as their primary image and what they write as comments is less controlled.’

On some sites users can represent themselves visually by choosing an avatar, a fictional visual depiction of themselves.

Building and managing an online profile and identity is time-consuming. Even so, many users have multiple online identities. A need for multiple identities can arise as a consequence of a negative reputation gained through the actions of the user or of an advertiser or spammer hijacking and misusing an identity. False identities are used for political, business or commercial advantage, when the user does not want their true identity known. On online auction sites, sellers sometimes use a false identity to bid on their own items in an effort to increase bids.

The main reason for multiple online identities, however, is that they are often not transferable between different websites. Open ID projects aim to centralise profile ownership to prevent the need to create and manage multiple profiles.

‘Friending’ and relationships within social networks

Social networks are constructed in a way that requires users to indicate their relationships, or friendships, with others using the site. The process of finding and linking new ‘friends’, who are often complete strangers, is known as friending.

The practice of finding friends online is not a simple one, suggests researcher Danah Boyd. ‘Each choice has the potential to complicate relationships with friends, colleagues, schoolmates, and lovers.’ These online decisions can affect the user’s offline life. ‘Social network sites are not digital spaces disconnected from other social venues,’ warns Boyd. In particular, the process of removing a friend ‘signals a shift in relationship status that is often not easily articulated in everyday life’.

Popularity is the currency of social sites, and the number of friends for some can be an obvious measure of this. MySpace president Tom Anderson has more than 80 million friends!

Friending can be competitive, as influence can be gained through the number of friends a user has. As a result, many links are forged simply to gain popularity, especially for attention seekers. Most users are concerned only with those they consider friends, people they know or think are interesting or ‘cool’. But a link to a friend does not necessarily imply a relationship, or even an interest in getting to know the person. People of interest are inundated with friending requests.

Reasons for friending include the following:

• Collecting friends allows a user to connect to more people and their profiles, connect with more diverse interest groups, and access and share more content.

• Friending extends existing real-world friendships.

• Friending indicates that the user is a fan of a performer, band, actor, movie, content type or product.

• A friend with a cool profile makes the user look cool too.

• Friending provides a way to bookmark other people’s content for later exploration.
Issues

Social networking shares common issues with the internet as a whole, but also raises a range of issues specific to the ways in which social networks are used and structured.

Privacy

‘Millions of people share some of their most personal details with total strangers on the internet via sites such as MySpace, Friendster and Facebook. The dangers this can pose to children are well publicised, but it also has powerful if less well known implications for us all. The sheer volume of personal information that people are publishing online — and the fact that some of it could remain visible permanently — is changing the nature of personal privacy. Is this a good thing, or will the ‘MySpace generation’ live to regret it?’

Alison George, New Scientist magazine

People are sharing personal details online, as well as information about other people they know. The Attention Company, a group of futurists and consultants, argues that this culture has long been a normal part of life. For most of recorded history people have lived in small villages or communities where everyone’s secrets were known. It is only when we became anonymous in our own homes that personal information became secret.

Users of social networking sites commonly reveal personal information, including political opinions, sexual orientation, drug use, and their innermost thoughts and feelings. Yet revealing personal information on the internet can damage your reputation for years into the future. The practice of ‘googling’ job applicants has become normal. ‘There is no real-world parallel,’ says internet entrepreneur Fred Stutzman. ‘You don’t go walking round the mall telling people whether you are straight or gay.’

Some of the most private information, such as names and telephone numbers, is published not by the owner of a social networking site, but by friends posting comments or through others’ writing online diaries. It isn’t yet legally clear whether people who keep online diaries are obligated to protect the privacy of the people they interact with offline.

For Marc Rotenberg, director of the Electronic Privacy Information Center, ‘Anybody who wants to reveal their own private life has a right to do that. It’s a different question when you reveal someone else’s private life.’ Rotenberg believes that just because it is called a diary doesn’t make it one. ‘It’s not sitting in a nice, leather-bound book under a pillow. It’s online where a million people can find it.’

Many users do not realise that online postings are permanent. ‘Once something appears on the internet, it’s almost impossible to remove,’ writes Steve Kerrison from technology news site Hexus.

Harassment and deception

‘Every day I logged in and discovered more and more cruel spoofs, harassing videos, death and rape threats, incredibly nasty comments and God knows what else. I can’t take it anymore. YouTube ‘popularity’ is hell unless you’re a saint with nothing to hide, or you have indestructible confidence.’

Emmalina, 18-year-old Tasmanian ex-YouTube star

Corporate information (% agree)

- Praise of your organisation (72%)
- Events or activities in your organisation that are already public knowledge (71%)
- Opinions about the performance of your organisation (39%)
- Opinions about your competitors (33%)
- Events or activities in your organisation that are not yet public knowledge (16%)
- Trade secrets (8%)

More willing to share with others

Personal information (% agree)

- Educational background (66%)
- Job title/function (63%)
- Your name (54%)
- City of residence (53%)
- Photograph (53%)
- Place of employment (42%)
- Conversation with people you manage (12%)
- Conversation with your boss (11%)
- Personal net worth, assets and/or debts (10%)

Less willing to share with others

Figure 14.16: The Attention Company graphed user responses to appropriate material to share on the internet.
Becoming popular on a social networking site is tantamount to finding movie celebrity, and exposes a user to the same criticism and pressures that a celebrity faces. Emmalina, a Tasmanian YouTube star, withdrew all the content from her site after she was harassed and her computer was hacked into and photos downloaded. Emmalina regularly attracted audiences of 300,000, becoming one of the most viewed YouTube users, but, she claims, along the way people forgot she was a ‘real, normal young girl with a life, feelings and a right to privacy’.

Social networking can also be used for deceptive purposes, such as faking content or passing advertising off as user-generated content (e.g. do a web search on LonelyGirl15). The National Center for Missing & Exploited Children in the US reports thousands of incidents of adults using the social networks to target children online in order to engage in sexual activity.

Copyright

Record company Universal contends that much of the media posted by users of social networking sites is not user-generated at all, but is actually stolen from copyright owners. This includes movie clips from television or movies, music videos, lip synching to copyright songs, or videos using copyright music in their soundtracks.

Copyright holders, however, are uploading their own content to the same sites to publicise new movies or music releases or to promote television shows. Record companies build websites to promote their acts. Video sharing sites feature movie trailers and clips of television shows.

Generally, copyrighted material is found only if other users report it, although some sites do employ people to look, or they scan keywords or tags linked to the content. Some content sharing sites use audio and video ‘signature’ software that automatically scans uploaded materials for image and audio signatures (like a map of the content), similar to the signatures of commercial releases.

Uploading footage of events such as rock concerts risks a hefty fine. After one U2 concert in Sydney more than 200 illegal clips were uploaded onto YouTube.

Ownership

All sites have different ownership contracts that you ‘sign’ when you register. If you upload to a video sharing site a video that becomes a hit, do you get paid for it if a television network plays it, or is it considered public domain? If the content on your social networking site becomes popular, are you entitled to move the content to another site where you would receive advertising revenue for it? Do you have the right to reproduce your work in other formats? There is no common solution to the issue. Each user must monitor the content ownership conditions of the site they upload to. There is always the risk that the site may change its content ownership rules. What might be uploaded as your own content today could become the property of the site if the legal contract is updated or amended. These contracts often state that they are liable to change ‘without notice’.

Content

There are hundreds of new social networking sites being launched — every one of them trying to be the next YouTube or MySpace. This creates an insatiable appetite for new content. It often seems as though anything will do, but although some content is genuinely entertaining or reflective of world events, other content clearly is not.

Figure 14.17: ‘Riverbend’, an anonymous young female blogger in Baghdad, had her blog posting converted into a multi-award-winning book titled Baghdad Burning. This blog is an example of the type of compelling content ordinary people can create. Offering eyewitness accounts of the everyday reality of life in occupied Iraq and an analysis of the politics affecting her life, the blog covered topics including home raids, relatives ‘disappearing’ into prison, children being kidnapped by money-hungry militias, and the deaths of those known to her — stories not covered in the mainstream western media.
There are many critics of the content uploaded by typical users. Jasper Gerard, a columnist for The Observer, writes, 'Vodcasts and blogs are to the noughties what graffiti was to the seventies: mindless scrawls reading: “I woz ere.” It says: “I’m a moron, but worship me anyway.” MySpace should refer to the large vacant area of green belt between the ears. We are bogged down in blogland … everyone has a right to write; but a right to be heard still has to be earned.'

Much of the content uploaded to entertainment-based social networking sites is of amateur quality, while much of the most watched content is professional material recorded from commercial sources. David Poltrack, chief research officer at CBS, comments, ‘You have to go through a lot of crap on YouTube to get anything good!’ For sites such as YouTube to supplant television content, consistently excellent video needs to be uploaded. Critics of the current amateur content point to blogs as examples of quality content being produced by ordinary users.

**Concerns over the nature of material uploaded and promoted**

‘Clearly, people are getting hurt making these videos … there’s blood. It’s true that kids do these stupid things (anyway), but could you ask for a better template for doing stupid things?’

*Jon Sorenson, spokesman for the New York State Consumer Protection Board*

Many people are concerned by the type of material being uploaded. Stupid tricks, real-life violence, accidents caught on film, and faked or staged content is all too common. Would-be ‘stars’ seriously hurt themselves producing videos with the aim of getting noticed. Some sites even offer cash prizes for the ‘best stunts’. Many user-contributed videos have been seen as encouraging violent, sexist, dangerous and illegal behaviour.

Pete Cashmore, from social networking blog Mashable, has concerns about liability. Are sites liable, he asks, if a guy gets badly bitten while spreading himself with peanut butter and letting dogs lick it off?

Uploaded videos of schoolyard fights and bullying are increasingly common. Even cases of extreme assault and rape have been uploaded or shared through social networks. The clips represented the worst aspects of bullying. It is premeditated, organised, intentional, choreographed even, and that’s what distinguishes it from common schoolyard bullying,’ says Annabel Taylor, Family Help Trust chairwoman.

Many also have concerns about social networking sites contributing to a culture of voyeurism in which every private, hidden or undesirable aspect of life becomes mass entertainment.

**Advertising**

Word-of-mouth advertising is a powerful way for retailers and manufacturers to reach an audience, and allows smaller manufacturers to compete with larger companies through efficient and targeted, recommendation-based promotion. But some advertisers use word-of-mouth advertising in dishonest ways, paying users or bloggers to write positive reviews of their products (‘pay per post’), while not informing the reader that the comments are paid advertisements.

‘Organisations are realising that a mass market that passively accepts ideas no longer exists and that markets are now conversations,’ says Queensland University of Technology interaction design researcher Joanne Jacobs. ‘Consumers no longer trust one-way information put out by companies. They don’t believe PR rhetoric. What they do trust is information from each other — we all prefer to use goods and services recommended by our peers.’

**Wikis**

A wiki is a website that allows users to add, remove, edit and update content, building a collaborative body of knowledge from the ground up. (The word is derived from the Hawaiian wiki wiki, meaning ‘quick and informal.’) Anyone with a computer can add, change or append information on a wiki, although contentious entries, such as those relating to political or controversial figures, are often ‘locked’ or have a delay imposed before publishing to allow a check to be made. The wiki format has made it easy to add and edit content straight on the page. A wiki is flexible, allowing users to dictate the structure of knowledge organisation.

Wikipedia, the original and largest wiki, is the most detailed collection of information in history, containing millions of user-created, encyclopedia-style entries in many languages. Wikipedia has a core community of contributors and administrators, some of whom volunteer more than 30 hours a week for checking and correcting entries.

Articles or items within a wiki are not static or simply updated occasionally like a traditional encyclopedia. Instead, articles can be continually added to and edited by other users. Unlike a traditional encyclopedia, Wikipedia can include any articles on any topic, and these are not restricted in length. While an
article may be only a couple paragraphs long in an encyclopedia, its wiki equivalent can run to several pages and feature multimedia elements. Too much content, however, can act to slow down the user's understanding of a subject.

**Wikis and information reliability**

‘Never the one to be embarrassed by life’s peculiarities, Larry King has often been said to have a bit of a flatulence habit while on air at CNN, which isn’t curbed by having guests in the studio. A favourite moment of his, and an often repeated story, involved an interview conducted with former President Jimmy Carter who, after some length of time in studio, chided Larry and asked him to please stop, or he’d have to end the interview. Larry, ever present in the moment, adeptly steered the conversation to global warming and the effects of bovine emissions on the ozone.’

A prank Wikipedia article on flatulence that remained active for four months

User-generated content can have ‘truth’ and bias issues. The main cause is its lack of authority. In printed or commercial publications, publishers and editors ensure that information is reliable. Incorrect information can remain online until it is noticed and challenged by a user, as there is no formal review process. When Cardinal Ratzinger was sworn in as Pope Benedict XVI, his picture was temporarily replaced with one of the evil emperor from Star Wars.

Political misuse of wikis has also been a problem. Political candidates and their supporters have been caught changing their own entries, removing politically damaging information and references to unfulfilled promises.

Because wiki content is generated by users, the subject matter covered is biased towards what is popular. According to Dale Hoiberg, editor-in-chief of Encyclopaedia Britannica, ‘People write of things they’re interested in, and so many subjects don’t get covered; and news events get covered in great detail. The entry on Hurricane Frances is more than five times the length of that on Chinese art, and the entry on [the British soap opera] “Coronation Street” is twice as long as the article on [the former British Prime Minister] Tony Blair.’

Articles on technology and science are written by experts in the field, and can be incomprehensible to those without specific knowledge.

**Tagging or ‘folksonomy’**

Folksonomy, author-initiated tagging of content, involves deploying user-defined keywords to ensure better cataloguing of web content. When content is uploaded, the user tags it with multiple descriptive tags. Each tag provides information about related content and links to similar content using the same tag.

Figure 14.18: The most popular tags on the photo-sharing site Flickr. This visual mapping of tags is known as a tag cloud. The tags are normally sorted alphabetically, with the size of the word reflecting its popularity. A tag cloud allows users to combine their tags on one page, showing what topics they use most frequently.

A book in a library can be filed under one category only. ‘Tagging allows for the kind of multiple, overlapping associations that the brain itself uses, rather than rigid categories,’ says Tim O’Reilly, founder of publisher O’Reilly Media. ‘In the canonical example, a Flickr photo of a puppy might be tagged both “puppy” and “cute” — allowing for retrieval along natural axes generated by user activity.’

Geo-tagging is applying geographic tags to content so that users can explore information through maps, and content can be understood by geographic location in addition to normal tagging.

**Podcasting and vodcasting**


A podcast is an audio file designed to download and be listened to at the convenience of the consumer. Regular listeners subscribe to podcasts via an RSS feed (see page 390), which alerts them to newly released content. There is a huge range of subject matter covering all areas of interest, in many languages, although podcasts are usually personal or restricted to a single subject.
Podcasts are tagged with details about their content, author, genre and date through ID3 tags within the audio file (known as metadata). Enhanced podcasts can feature slideshows and web links, and can be navigated by chapter.

**Types of podcasts**
There are four main types of podcasts.

- **Personal.** This type of podcast offers one person's views on various subjects, from news events to their favourite music. They are normally produced by a single individual.
- **Group.** This style of program is normally created by a team of like-minded individuals around a single subject (e.g. anime) or a single program style (e.g. news and current events programs).
- **Commercial.** Commercial content from television and radio stations is used to promote offline material. This can be content repeated from normal broadcast schedules or new material. Some businesses use podcasts to communicate with clients.
- **Educational.** Podcasts are used by educational facilities for distributing lectures and lecture material. Conferences often allow registered attendees to download speeches for later replay. Distance education also makes use of the podcast format.

**Vodcasting**

Vodcasting combines the acronym ‘vod’ (video on demand) with ‘casting’, shortened from ‘broadcasting’.

It is similar to a podcast but uses video in addition to audio.

A vodcast is not the same as a video blog (see page 418). Video blogs combine textual and still image content with video clips in a web page. A vodcast uses video and audio in a single video file downloaded to a computer or mobile device for later viewing.

Computer science academics Hermann Maurer and Josef Kolbitsch believe that the next logical step for vodcasting and video blogging will be the creation and distribution of television content. ‘Topics that are inappropriate for the mass of users served by broadcast media, as well as news that is possibly not relevant enough for the majority of consumers, can be addressed by the new services.’

![Figure 14.19: The Australian Broadcasting Commission was an early adopter of the vodcast format, releasing television shows such as The Chaser to video straight after the show had been broadcast.](image)

**Activities**

1. Write a short report on ‘friends’ on social networking sites. This could be done by surveying classmates to gain points of view and stories on the following subtopics.
   - How many friends is enough? Can you have too many or too few? What is an ideal number before it becomes difficult to handle?
   - How important is it to be on other people’s friends list?
   - Do people treat friending as a competition?

2. Select some examples of both vodcasts and video blogs. How does the chosen format suit the material that is presented? Make a list of the strengths and weaknesses of vodcasts and video blogs.

3. Conduct a class survey into podcast usage. Find out how many people listen to them, what are the chosen types and where they are consumed. Report on your findings in the form of a table with percentages. Convert this into a visual display as a graph.

4. Would you be in favour of a school decision to ban the use of wikis in students’ assignments on the grounds that they are unreliable? Defend your position based on an investigation you conduct into information reliability.

**PRODUCTION TASK**

5. Create a podcast for your school. It could be a news report for parents, or it could cover events at the school from a student perspective. Use multiple parts, including music, news and sports sections. Also consider the inclusion of advertising.

**WRITTEN TASK**

6. Provide an analysis of a range of social media sites with a common interest. Investigate the most popular content in a given week and propose some reasons for this. Report on the similarities in content among different sites. If possible, track content as it appears on one site and then another. Compare the content with its treatment in other sources, such as news sites.
Blogs, or weblogs, are websites where ordinary users post opinions and commentary, and write about their experiences, as they might in a diary or journal. Postings appear in reverse chronological order.

A blog normally presents its content in the form of text and images, providing links to other related blogs, or blogs belonging to friends (the blog roll). Other forms of blogs include picture (photoblog), video (vlog), audio, mobile blogs (moblog) and spam or fake blogs designed for boosting search engine rankings of a website (splog).

Blog postings are frequent, typically added once a day. Blogs are usually produced by one author or a small group of authors. Unlike other social networking sites, blogs cannot be freely contributed to, although users can leave comments.

The first weblog was a site created by World Wide Web creator Tim Berners-Lee and took the form of a regularly updated list of interesting web links. It was not until 1998–99 that communities of bloggers started to emerge. Blogging has become a huge internet genre. In 2006 alone, 100 000 new blogs were launched each day — more than two every second.

A typical blog entry consists of a title or headline, date and time of publishing, the permalink or URL of the article for later retrieval, the main content of the post and normally a comments mechanism allowing readers to respond. A ‘trackback’ facility allows a reader to navigate back to an article, site or other blog referred to or referenced in the blog entry. Blogs often use RSS feeds (page 390) to distribute their content.

Most bloggers use web-based applications. These allow users to blog from any internet-connected computer, eliminating the need for technical development skills. Anyone with a computer and a desire to communicate has easy and inexpensive access to a potential mass audience.

Blogs provide an alternate source of content and opinion. While almost all blogs are read by only a few people, some have considerable influence in areas including politics, technology and business. These influential bloggers are known as the bloggerati.

Blogs are a form of social networking, each blogger linking to other blogs they find informative or entertaining, or simply those belonging to friends. These links are a powerful means of becoming influential. David Sifry, founder of the blog search engine Technorati, suggests that ‘by looking at the number of people who are linking to you, we can actually start to gauge pretty accurately the level of influence or authority that you have in the blogosphere’.

Types of blogs

Researchers Josef Kolbitsch and Hermann Maurer have defined two types of blogs:

- **Diaries or personal journals.** Diaries or personal journals keep friends and social contacts informed about the work and leisure life of their author, as well as providing an outlet for their thoughts and opinions on articles, current events or products. Some people use these styles of blogs for political advocacy or social justice causes, or for citizen journalism (see page 420). This style represents 70 per cent of all blogs.

- **Filters.** Filters are lists of links to external sites, usually news or academic articles that include comments about the content of the linked site. These blogs usually cover one particular topic, such as computer software or the war in Iraq.

Content and issues

Blog entries frequently cite a current event such as a law recently passed, a news story, or the release of a new product. Individuals write comments and their opinion on the event in their blog. Hence, blogs are usually opinionated and reflect the author’s views on
certain topics,' write Kolbitsch and Maurer. In the recent Iraq and Lebanon conflicts, bloggers from both sides offered opinions and ‘live-blog’ experiences not published in the mass media.

Politicians use blogs to connect to their constituents, while mainstream journalists post material not published by their employer.

Mainstream news organisations are often reluctant to present certain kinds of material or cover some topics for risk of offending small but vocal groups within their mass audience. Blogs do not have that restriction. Many traditional media outlets encourage their staff to use newspaper blogs. This expands and personalises the content the media outlet provides. Newspaper blogs often encourage readers to add their own content, involving them in content generation.

Some critics have accused bloggers of ignoring copyright and failing to present issues in a credible and unbiased way. Employees have been sacked for using their blogs to reveal proprietary or confidential information about their workplaces, or defaming colleagues or bosses.

Figure 14.21: Two blogs that presented the personal accounts and opinions of bloggers from either side of the 2006 Israel/Lebanon conflict
Blogs are also important for minority language and cultural groups, as they allow for the sharing of experiences and knowledge, and provide social connection. Blogs allow publishing to an audience deemed too small to justify the costs of traditional publishing.

‘At a time when most news agencies are closing foreign desks and tightening budgets for global coverage, blogging provides a glimpse into the lives of others available nowhere else,’ writes Wired magazine reporter Quinn Norton.

The volunteer group Global Voices translates selected Iranian, Chinese, Spanish, Portuguese, French and Russian social activism blogs into English, dramatically increasing the audiences for these blogs. Taiwanese blogger Cheng Kuo Wei and a volunteer team translate English blog posts into Chinese. Global Voices has been active in publicising foreign blogs that have a political impact. They have revealed videos of police brutality in Malaysia, campaigned for the release of imprisoned Egyptian bloggers and fought political censorship of blogs. They strive to ‘amplify, curate and aggregate the global conversation online’ so that voices everywhere will be heard.

The status of a blog is tracked by the number of links made to it — the more links, the higher its relevance. Advertisers are exploiting the system by placing paid postings on thousands of blog sites linking to their own blog promoting their products and services. They use this method to ensure their own blogs are placed at the top of search results lists.

Activities

1. Find blogs written by those considered to be among the ‘bloggerati’ (influential experts) in the field of social media and blogs. What makes the bloggers you consider bloggerati the leaders in their field? Using the features of good blogs outlined in this chapter, list the factors you believe make your chosen bloggers stand out from the rest?
2. Explore the most popular 20 blogs on a blog link site such as Technorati. What is the most popular type of blog — diary style or filter? Is this what you expected? Why do you believe one is more popular than the other? List your reasons. What is it that makes these ‘top’ blogs better than others?
3. Find ways that minorities are using blogs to promote their culture and cultural ties. Using your research findings, write a guide for other minority groups, explaining how best to use blogs for social connection and promotion of traditions.

Citizen journalism

‘Tomorrow’s news reporting and production will be more of a conversation, or a seminar. The lines will blur between producers and consumers, changing the role of both in ways we’re only beginning to grasp now. The communication network itself will be a medium for everyone’s voice, not just the few who can afford to buy multimillion-dollar printing presses, launch satellites, or win the government’s permission to squat on the public’s airwaves.’

Dan Gillmor, author of We Are the Media

New media technologies have allowed average users an active role in the collecting, reporting, analysing and disseminating of news and information. Media futurists have predicted that 50 per cent of news will be produced by citizens by 2021.

Citizen journalism is a term that encompasses a range of individual and social involvement in media creation, reporting and filtering. It has the following features:

- User reporters. Typical users or amateur reporters report directly on the news or analyse its content and meaning. They do this through blogs and video blogs, through user-generated news sites or
through submitting their content to mainstream news organisations.

- **Mobile technology.** The convergence of mobile technologies and cameras means an average citizen carrying a camera is now more likely to be first on the scene of a news story than a professional crew. Often the user is actually involved in the event. Even when not directly reporting the news, amateurs are able to submit footage for use in news reporting.

- **Social filtering.** Social filtering of news allows users to highlight a news story they consider important and upload the story, or a link to it, to social network news sites. Others can vote for or against display of the story.

**Common Sense; Addressed to the Inhabitants of America,** on the following interesting subjects. I. Of the Origin and Design of Government in general; with concise Remarks on the English Constitution. II. Of Monarchy and Hereditary Succession. III. Thoughts on the present State of American Affairs. IV. Of the present Ability of America, with some miscellaneous Reflections.

*Man knows no Matter five creasing heaven, Or think upon choice and common good again.*

*Thomson*

*Philadelphia; Printed, and Sold, by R. Bell, in Third Street. MDCCLXXVI.*

**Influence of citizen journalism**

Photos and videos of the 2004 South Asian tsunami, the 2005 London bombings and Hurricane Katrina in New Orleans have demonstrated the influence ordinary people can have on news reporting, especially now many of us carry a camera wherever we go. These events marked a change in the way media content is gathered and viewed. Because of its ‘on the spot’ quality, citizen journalism can often be more immediate, passionate and illuminating than professional reporting.

The first amateur footage with a sensational media impact was Dallas resident Abraham Zapruder’s 8 mm film record of President Kennedy’s assassination in a 1963 motorcade through the city. The momentous significance of this footage proved that anyone could capture history. Today such a public event would be recorded by hundreds, even thousands of spectators with cameras, all connected to the internet. Mainstream news coverage would have to compete with the mass of user-captured material. ‘In a world of ubiquitous media tools, which is almost here, someone will be on the spot every time,’ says citizen media author Dan Gillmor.

Figure 14.23: Citizen journalism is not a new concept. It originated in the 1760s with pamphlet or ‘broadside’ publications. The most famous example is Thomas Paine’s *Common Sense* of 1776 in which Paine denounced British rule in the American colonies. Through its popularity it helped incite the American Revolution.

Figure 14.24: An image taken on a mobile phone by Alexander Chadwick as he escaped from an underground tunnel at Kings Cross Station after the 2005 London bombings. The next day this photo was used on the front page of *The New York Times.*

‘Journalists once had the exclusive province of taking people to places they’d never been. But now a mother in Baghdad with a videophone can let you see a roadside bombing, or a patron in a nightclub can show you a racist rant by a famous comedian. These blogs and videos bring events to the rest of us in ways that are often more immediate and authentic than traditional media. These new techniques, I believe, will only enhance what we do as journalists and challenge us to do it in even more innovative ways.’

Richard Stengel, managing editor, *Time* magazine
Many news organisations already invite their audience to contribute eyewitness reports and imagery, but media outlets continue to wrestle with issues of quality control, hoaxes and manipulated imagery. Financial compensation for content owners is another difficult issue, as media organisations seek to avoid fuelling a ‘feeding frenzy’ of uncontrolled and intrusive amateur news collection.

Issues

Amateur journalism

‘There is already a lot of quality amateur journalism being created by our users,’ explains Scott Moore, head of news and information at Yahoo Media Group. ‘Yahoo needed a more efficient process for soliciting and publishing user-contributed photos and video.’ Yahoo! and Reuters pioneered organised user contribution of news footage through their You Witness program.

‘The world is full of millions and millions of people who want to do our job for us, and publish stories on their own. Production editors no longer have staffs of 50 — they have a staff of 50,000. The problem is, nobody knows what is good among all that.’

Jim Chisholm, World Association of Newspapers strategy adviser

Mainstream journalists are worried about issues of quality control, bias and accuracy. The assumption that everyone can be a journalist, they claim, devalues the skill and experience of professional journalists and editors. James Farmer, a journalist at The Age, asks, ‘when was the last time you encountered a “citizen doctor”, valued a report by a “citizen researcher”, took off in a plane flown by a “citizen pilot” or saw justice meted out by “citizen policemen”? ’ Farmer believes that while there are exceptions, the quality of citizen journalism to date ‘ain’t great’. Nonetheless he believes citizen-contributed content that can be used, analysed and recompiled by professional journalists and editors represents the power of citizen journalism.

Some critics are worried about the ease with which manipulated images can be distributed through citizen media channels. Journalists are bound by professional ethics, while average users may not fully understand the consequences of their actions (see digital imaging, page 83).

Bloggers and independent journalists

Increasingly bloggers are using video for political and social activism. Events such as the Iraq war allow those caught in the conflict to give voice to their own opinions and experience. As consumers of this content, we see a firsthand view of the conflict, and have access to uncensored reporting and imagery.
Locals also have access to dangerous environments that western journalists are unable or unwilling to enter.

Instead of the dry statistics and dubious 'facts' that are often broadcast in traditional media, bloggers and independent journalists provide a human perspective to the loss and terror that is experienced by ordinary people under military occupation. Mainstream media are limited when faced with the harsh reality of war and its devastation, claims new media expert Robin Good. ‘As citizen journalism, political bloggers and independent journalists move to fill the gap, we are slowly being brought closer to an image of the reality of people’s lives in Iraq.’

‘The video bloggers can be extremely useful; bloggers in general can be, if you know how to use them. They are eyes and ears on the ground in a place where there are very few eyes and ears for the western media,’ says Tom Fenton, former foreign correspondent for CBS News.

Most of the graphic footage shot by independent video journalists ends up being censored in our western broadcast media. ‘Shots are carefully selected, and much of the reality of the situation is left on the cutting room floor,’ admits Good. On the internet, for those who want to find it, the violence is graphically exposed, revealing the horrifying reality of war that we rarely see on television or in the newspapers.

‘I’ve believed for many years now that journalism, particularly television journalism, by its failure to show the real horror of war, has become a lethal weapon supporting governments that want to go to war.’

Robert Fisk, Middle East correspondent, The Independent, UK

‘The top-down, heavily filtered mass media are starting to show their frailty, and the power and influence of the small blogger reporting from the streets and independent local video producer are becoming increasingly important,’ states Good.

Some mainstream journalists, such as Channel 4’s Jon Snow, warn that as a result of bloggers, fledging journalists and new media, we end up with a ‘scattergun effect’ in our exposure to an event. He argues that ‘we have a little bit of knowledge about bits and pieces. What there is very little of ... is any real analysis or interpretation of events that we can relate to.’

Socially networked news

News editors have traditionally acted as ‘gatekeepers’ of news content, ruling out stories they deem to be ‘un-newsworthy’. By contrast, the term gatewatching has been coined by researcher Axel Bruns to describe the way socially filtered news sites operate. Community participation ‘rules in’ news stories rather than one person ruling them out. Gatewatching involves everyday users monitoring news websites and pointing out stories they believe are worthy of community attention.

Socially networked news

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Figure 14.26: Two types of socially networked news sites. Newsvine uses news feeds in combination with paid user-contributed articles, while Digg uses links to articles annotated with the submitting user’s own comments.
Social news sites enable millions of users around the world to participate in the online publishing process. This has been termed ‘collaborative online news production’.

There are two types of socially networked news sites:

- **Linked sites.** These sites feature comment from the user who submitted the article and a link to the news story on another site. The site community has the ability to vote for the story — the more votes, the more popular the story, and the better its position on the website. A story with few votes is likely to be lost under the weight of the more popular ones.

- **Stand-alone sites.** This type of site uses commercial news feeds, often in addition to user-contributed materials and feature articles. The sites host the news and don’t link to other sites. The site community is still able to vote for the story to increase its relevance and rank.

### Activities

1. Make a three-way comparison between the news content on (1) an evening television news bulletin; (2) a newspaper, from the front page to the op-ed pages (see page 477); (3) a socially networked news site. Your comparison should cover the following areas of investigation and conclude with an evaluation of your findings:
   - Balance of ‘human interest’ news and ‘hard’ news (for definitions see page 321)
   - Balance of disaster and other event stories with political, social or economic stories
   - Balance of local, regional, national and international news
   - Evidence of actual ‘investigative’ journalism
   - Depth of content.

2. Prepare a timeline of the period since the year 2000, recording events where citizen journalism played a key role in providing the imagery or the information. Analyse the timeline you’ve created and comment on any trends. The following areas of investigation may help with your analysis:
   - Proportion of citizen journalism that is image based versus information based
   - Role that luck plays in citizen journalism
   - Trend increases in citizen journalism over time, or at certain times.

3. Follow a news blog for one week and provide a short report on your impressions.

### WRITTEN TASK

4. Report on a news story into which citizen journalism has had a significant input. Comment on the impact of the citizen component and explain some of the issues concerning reliability that the component raises. In what way does the inclusion of citizen journalism add to or detract from the credibility of the host news organisation?