THE INTERNET

Most people think the Internet is the same as the World Wide Web. In fact the Internet existed before the World Wide Web (www) and includes email, newsgroups, chat groups etc.

What is the Internet?

The Internet was actually conceived in the 1960s. This was the Cold War era when Americans and the citizens of the then named USSR lived in fear of a nuclear war. The question was raised as to what would happen to crucial official or research information stored in computers if a bomb hit. Any central computer place would be a target for such a missile.

Pentagon's Advanced Research Projects Agency decided to fund a large ambitious project using the best high-speed supercomputers at a time when computer technology was still in its relative infancy. The idea was the ability to transfer the information to other computers with the messages divided into "packets" or sections with each packet separately addressed.

The technique became more sophisticated and became a standard known as TCP/IP. This means the conversion of messages into streams of packets at the source then reassembling them back into messages at the destination. IP (Internet Protocol) handles the addressing.

As the Cold War tensions eased, academics realised the opportunity existed for universities to link up to share other information. No-one owned this Internet and no-one still does. So anarchy ruled, the necessary software was in the public domain and the basic technology was decentralized so anyone was free to join up. And soon, it seemed everyone wanted to be part of it.

What is the Web?

The Web is a system for accessing information on the Internet This environment includes text, images, audio and video.

The information held on the Web is stored in 'pages'. Everyone can make their own pages to make up a website. To use the Web, you simply need to know how to use a browser. It has made the Internet easy and popular to use.

Many websites contain links to other websites, this is known as a hyperlink. This is what moves the Web from passive technology (like your television) to being interactive. This is where you can loose yourself, you may jump on the Net to check out a certain website, but the banner ads and links on the website can catch your interest and you can go on an amazing journey that you didn't expect.

To get to this website you probably typed in the web address www.netguide.co.au. This is known as a URL. You also would have used something like Internet Explorer or Netscape as the place where you typed the address. These are known as browsers.

To find out other sites of your particular interest on the Net you can visit a search engine. Some examples of these are [Yahoo](#), [hotbot](#), [Altavista](#), [Excite](#), [AccessNZ](#), [Ask Jeeves](#), [Lycos](#), [Looksmart](#).

Saving your favourite Web sites

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Once you find a site that you want to keep hold of you can bookmark it. This will enable you to visit the site whenever you want without having to type in the web address every time.

Bookmarking in IE

- Go to the website you wish to bookmark
- Look toward the top of your screen. You will see a Menu bar across the top. One of the Menu Items says 'Favorites', select this and click on the option 'Add to Favorites'
- A dialog box will appear titled 'Add Favorite I.E. has already filed the web address for you
- In the box titled 'Name' I.E. will also have placed the name of the site. If you want to simplify this name, simply change the name in this box
- Click on the 'OK' button and the website has been added to your favorites

Any time you want to revisit this site simply click on the 'Favorites' in the menu bar, scroll down to the name of the site and click on it.

Bookmarking in Netscape

- Go to the website you wish to bookmark
- Look toward the top of your screen. You will see a Menu bar across the top. One of the Menu Items says 'Communicator', click on this then scroll down to the option titled 'Bookmarks'
- There is an arrow to the right of this name, move your mouse to the right and another drop down menu appears
- Click on the option titled 'Add Bookmark' That's all you need to do, Netscape will save the website
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Next time you want to visit the website Click on the 'Communicator' menu item, move your mouse down to the option which says 'Bookmarks' and select the website from the drop down list which appears.

Control of the WWW

There is no one who owns the Internet It works by a large collaboration of collectives. Many institutions and companies donate their resources to hold up some area of the Internet Governments are now starting to exert influence through various legislation's. Other types of companies that take part in holding up the Internet include telephone companies, backbone ISP's, satellite companies and cable companies.

There are also a handful of organizations which influence how the Net operates. These include:

- **WC3** the World Wide Web consortium, this group sets the standards for HTML and other specifics

- **IAB** the Internet Architecture Board, this group defines the architecture of the Internet such as the backbone and networks which are attached

- **ISOC** the Internet Society, a supervisory organization which is made up of corporations, non profit organizations, various government agencies and important individuals from the Internet community. This society is responsible for the Internet policies and practices

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- **IANA** the Internet Assigned numbers authority, this group is responsible for the assigning of IP addresses

- **InterNIC** Internet Network Information Center, this group is responsible for the world wide assignment of domain names

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The Web address you stick into your browser breaks down to a large series of numbers which are different from any other Web address. However, for the explanation of a web address, we'll stick to the names. Take the Web address (also known as URL - Universal Resource Locator) http://www.netguide.co.au

- **http** this stands for hypertext transfer protocol. This is the protocol used to connect to web pages on the web. The reason you must have it, is because there are other protocols and by typing this in at the beginning it specifies what you want. For example ftp:// is used to transfer files. Usually your browser automatically puts in this part of the address for you

- **://** this informs your browser that the next words will actually be the URL

- **www** says you want to access the world wide web netguide this is known as the domain name. It is a unique name which must be registered with a company specialised in registering domain names such as Domainz

- **co** specifies that a company owns this IP address. It indicates the purpose of the sponsors of the site. Other types include ac for an educational facility, govt for a government organization, com for commercial sites in the US, org for organizations that don't fit into other categories. Net - network administrative organizations, Mil - military sites

- **au** says the website resides in New Zealand. Every country in the world has to have their country name attached at the end of a URL with the exception of the United States of America, they feel since the Internet was their invention, they shouldn't have to have this added on

Why is the Web so slow?

Part of the reason why is because of the Internet's inability to handle the transfer of the enormous amount of data requested of it daily. Each day as more people get hooked up to the Internet, more pressure is put on the Internet

Everyone who uses the Internet shares the Bandwidth (the data carrying capacity of a network). What takes up a lot of Bandwidth are websites which are loaded down with graphics and multimedia elements (animation, graphics, video, audio), and email especially with large attachments, (the biggest attachment I've received was 56Mb from a promotions company showing a clipping from their latest film - by the time the server finished its hissy fit we were all frayed and not too happy about seeing the film)
.
There are many reasons why the Web goes slowly sometimes and faster at others. The explanation above gives the most common reason, we have a limited Bandwidth and the more

people on the Internet at any one time, the slower it goes. Test this out by trying to access CNN at the opening hours of business in America.

How safe am I on the Internet?

Your about as safe as being in a riot. However depending on how you look after yourself depends on whether you get hacked or not. When you are on the Net think about threats to your security and threats to your privacy.

Security

Don't have your credit card details or passwords to your Eftpos cards on your computer.
Watch what you download. If you are going to download something check the integrity of the website first - is it from a company you know? Does the website give contact details - including names, addresses and contact phone numbers which work?

Once you've downloaded, virus check the downloaded files before going anywhere near them.
Keep your virus software up to date, there are thousands of virus' being created daily, the best way to protect yourself is to purchase a virus protection program which has online updates which you can access to update your virus list weekly.

When you have finished your session on the Internet, disconnect it completely, if you connect through an external modem, pull the plug out of the modem once finished, for all you know a hacker could have got into your computer whilst you were using it and found out your passwords. By disconnecting completely he/she can't go back in and have a good look around whilst your out.

If you have an internal modem, either pull the phone line connection attached to your computer out of the wall or turn the power off at the socket.

Email

This is getting much harder to secure, to start with don't open an attachment from anyone you receive an email from but don't know, get your virus program to check it out first.

Lately we have experienced the first email virus able to be sent without requiring it to be part of an attachment. So it's even more important to make sure your virus protection program is up to date and able to keep on-top of these attachments.

Also, look for tell tale signs, if someone always sends personal information in their emails and suddenly you get a one liner saying 'check out these links' or such like, start the alarm bells ringing, call up the sender and check it's all okay. If not, delete the file before opening. I received a similar one the recently from someone who always sticks strictly to business, getting that one liner started the alarm bells ringing and yes it did turn out to be a virus (whew!).

Privacy

Cookies are information collectors which stick to you like glue when you visit some websites. They can send back information about you to the owner of the website such as your name, email address, ISP's name, the last site you visited, computer information from your operating system to the browser you're using.

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Some cookies are helpful to you, such as [Hotmail](#) which, once you have signed up, every time you visit the site you get a lovely 'hello' and your name, they know you from the information you have previously given them so head you straight into what you like in fashion.

Other sites aren't so cosy. To be safe you are able to disable cookies whenever you are surfing unknown sites. This will stop any sinister emails turning up in your inbox. One more thing, whenever you are requested for personal information such as your home address - think twice before giving it.

Uses of the Internet

- **Email** for communication

- **Chatgroups** to find people of similar interests

- **Listserve** for access to email based discussion groups

- **Usenet** which posts news articles Telnet which allows your computer to log onto a remote computer

- **FTP** to transfer files

- **www** to jump onto the world wide web

- **Gopher** - this allows access of Internet documents through menu based text plus other Internet tools

Medium Difficulty

The Internet (Net) is a world wide connection of computers which carries data and exchanges information between computers on demand. It does this through two main protocols TCP - transmission control protocol, and IP - Internet protocol. These are basically standards to enable the Internet to work.

Every computer in the world that connects to the Internet uses these protocols to send and receive data from the next computer in the network. The TCP breaks down your data into small packets of data which has address labels on them and the IP works out how to get the data from point A to point B.

It does this by sending the packets through a series of routers. The packets of data may travel different routes to get to their destination. Once it has reached it's destination the TCP checks that each packet has not corrupted en route, works out the order the packets should be in and puts them together again.

This information was taken from the NetGuide website at:
www.netguide.com.au/useful_stuff/tutorials