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'FAST Internet'

July 2004

The Internet

The Internet and email have become part of everyday life at home and work…

We will be looking at a few key areas relevant to efficient Internet and email connectivity.

- **Overview**
- **The history of the Internet**
- **The Structure of the Internet at present**
- **Selecting an Internet Service Provider**

Overview

From 2400BPSthrough to 14,400, 28k, 33K, 56K, 256K ADSL, 512K and SDSL, 1MB wireless, 1.5MB and satellite and beyond, right up to 10GB/second on International OC192 links, the Internet and the speed at which we can communicate is a critical bottleneck in the computer system arrangements of both home and office networks. Today, with the cost of a second telephone line, the dial out costs of the entire families whims to check online activity and the cost of a monthly dial-up Internet account, it is often and in most cases more cost effective to procure a broadband Internet service; typically either cable, ADSL or even satellite if you are in a remote area.

As Australian users, Optus cable generally seems to win the performance tests, followed by Telstra Bigpond cable (both fibre optic solutions) and then the DSL, (Digital Subscriber Line) digital copper telephone line arrangements. Price wise there now seems to be negligible difference. My advice is to check if you have or can get cable TV in your area (A call to Optus and Telstra about cable will verify this or to Austar if in the country). Otherwise aim to research ADSL and satellite options. ISDN has also proved a popular high-speed link in the past. Fast Internet is not an option. Your life and time are of more value than the extra $15 a month to get this fixed!!!

The History of the Internet

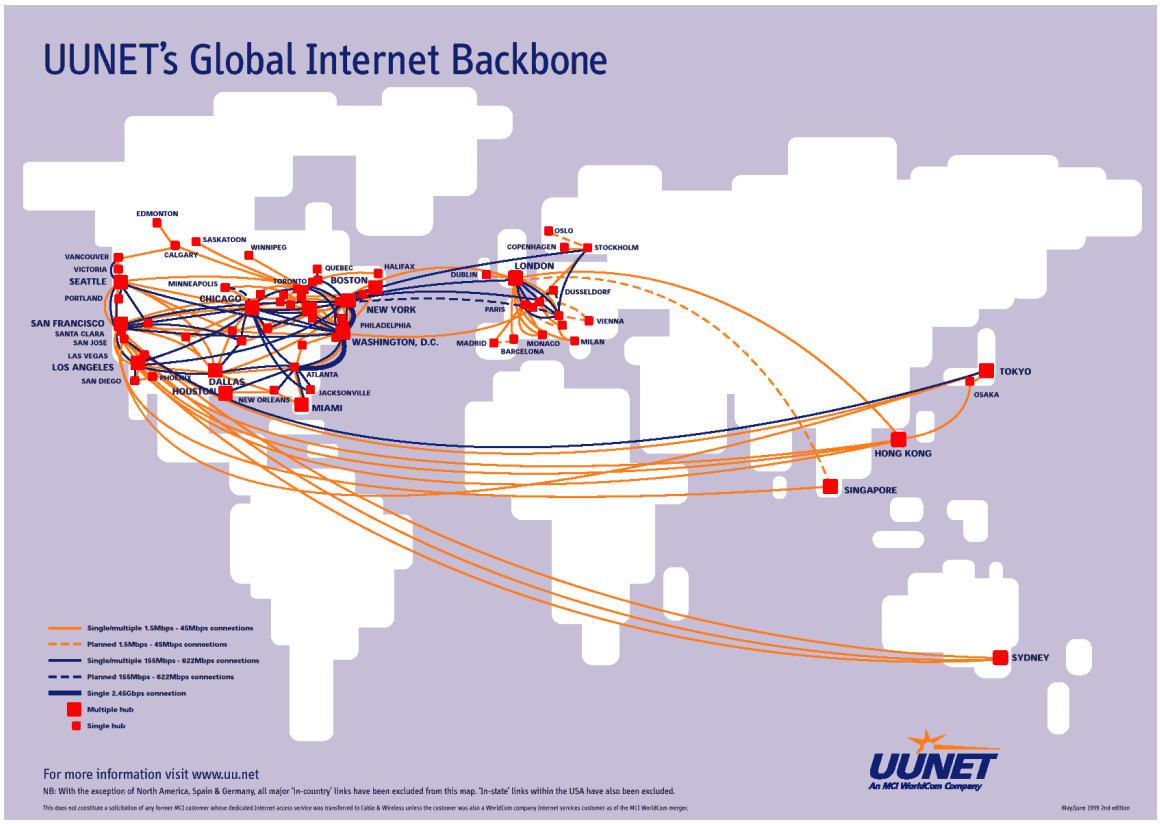
It's a great story.
Please visit these sites if interested…
http://www.isoc.org/internet/history/
http://www.zakon.org/robert/internet/timeline/
http://www.let.leidenuniv.nl/history/ivh/frame_theorie.html

The Structure of the Internet at Present

You'll notice from the below maps, that each major link brings different countries together with fast international links and these extremely fast links pave the way for the future of an Internet that is potentially real-time in the download speeds.

Major Internet Backbone:

27.9% - UUNET/WorldCom/MCI
10.0% - AT&T
6.5% - Sprint
6.3% - Genuity (level 3)
4.1% - PSINet (cogent)
3.5% - Cable & Wireless
2.8% - XO Communications
2.6% - Verio
1.5% - Qwest
1.3% - Global Crossing



Mapnet is a tool for visualizing the infrastructure of multiple international backbone providers simultaneously: http://www.caida.org/tools/visualization/mapnet/

Connections to backbone:
Fibre
DS3s (45MBps)
OC3s (155Mbps)
OC12s (622MBps)
OC48 (2.5Gbps)
OC192 (10Gbps)

Selecting an Internet Service Provider

While there are 1000's of choices when it comes to broadband, the most important thing to work out is not what's going to be the cheapest monthly access plan, but rather which is the right plan for you.

Some ISP's charge suspiciously cheap monthly access rates and only give you a download limit of 1-200MB! And once you are over the limit they will charge you for every megabyte downloaded. I have seen several $400 monthly Internet access bills and some shocked customers with $1500-$2500 monthly bills caused by a teenager using Kazaa for example.

So decide how much you plan to use the Internet.

- A light user or single person using the computer (under a gigabyte)
- A medium user or a family with children using a computer (1 to 4 gigabytes)
- Or a heavy user (4 to unlimited gigabytes)

And then look at the plans within your range

Broadband choice is a good place to find the plan for you. http://bc.whirlpool.net.au/bc-plan.cfm

Then workout the speed you would like and find a plan that suits your budget.

Speeds range from 256KbPs to 1500KbPs.

Generally I prefer cable to ADSL as it is faster in most situations but if cable is not available in your area ADSL is also great.

Choosing a modem is very important. If possible use an Ethernet modem and not a USB modem, as they are very inflexible and do not allow you to connect other computers to the same Internet connection with a router. You should also look for a modem or router with a built in firewall and possibly other Ethernet ports for future flexibility.

Netgear is our preferred choice for routers and modems as they have an excellent range and excellent quality, plus 24/7 technical support, which is useful enough, but especially if your Internet service cannot support networks, which I often find clients have been told. Try www.netgear.com.au .

Also, check that your ISP can stop email viruses from being passed on to you and that they can stop spam emails from being sent to you!

Happy surfing with your fast Internet connection.

Kind regards,

Mike Bloomfield