

A Brief History of the WWW

1960s

- Cold War looming, USSR launched Sputnik, US wanted system of communication for military and scientific research development.
- Research began with *DARPA* (Defense Advanced Research Projects Agency) into development of interconnected computer system which would withstand a nuclear attack.
- Foundations of the Internet developed by *DARPA* with “packet-switching networks” in which transmitted data is broken up into small packets of information, sent to its destination and reassembled.
- Early Internet utilizing a standard protocol (called NCP, Network Control Protocol, used from 1969-1982) established for military defense called *ARPANET* (Adv. Research Projects Agency Network).

1970s

- *FTP* (File Transfer Protocol) and *TELNET* protocols established for file transfer and information posting, respectively.
- Ethernet developed as a means to connect a wider arena of computers onto a network.
- *Bulletin Board* system for discussion and newsgroups, *USENET*, was developed.
- All of main universities in US were connected to the network and used it for transmitting experimental data and educational resources. In 1973, first international connection made to the University College of London in England.
- Transmission protocols changed from NCP to TCP/IP architecture (Transmission Control Protocol/Internet Protocol).
- Introduction of PC spurred great interest in created a wider network of computer systems.

1980s

- National Science Foundation funded *NSFNet* as a cross-country 56 Kbps (Kilobits per second) backbone for the Internet. They maintained sponsorship for nearly a decade, setting rules for its non-commercial government and research uses.
- “*Archie*” was the first searchable database index for FTP sites. This software would periodically reach out to all known openly available FTP sites, list their files and build a searchable index of the software.

1990s

- “*Gopher*” created at U of Minnesota (it was the name of their mascot) as first user-friendly interface as a simple menu system to access files and information on campus. The success of this menu system was phenomenal and within a few years was being utilized by others on the Internet.

- Actually, the year was 1989, Tim Berners-Lee and others at the European Laboratory for Particle Physics (CERN) proposed a new protocol for information distribution. This protocol, which became known as the WWW (World Wide Web) in 1991, was based on “hypertext” – a system of embedding links in text to link to other text.
- Development of the graphical browser “MOSAIC” by Marc Andressen (later he became the brains behind Netscape Corp). This became the most successful graphical type of browser until Microsoft’s Internet Explorer.
- W3C (World Wide Web Consortium, www.w3.org) formed to promote and develop standards for the Web.
- Commercial use offered by Delphi in July 1992. *Prodigy*, *Compuserve*, and AOL followed after the National Science Foundation ended its sponsorship of the Internet backbone.
- As technology improved and network communications have become faster, the web is regarded as an indispensable tool for education, business and entertainment.

What is the Internet?

The Internet today is a large-scale network of millions of computers that allows continuous communications across the globe. The various components of the Internet are:

- The World Wide Web (the web, WWW)
- Browser interface (I.E., Netscape, Mozilla, Safari, Opera)
- Electronic Mail (e-mail)
- Search Engines (Google, Dogpile, Altavista)
- File Transfer Protocol (FTP)
- Instant Messaging (IM)
- Internet Relay chat (chat rooms)
- USENET (news service)