



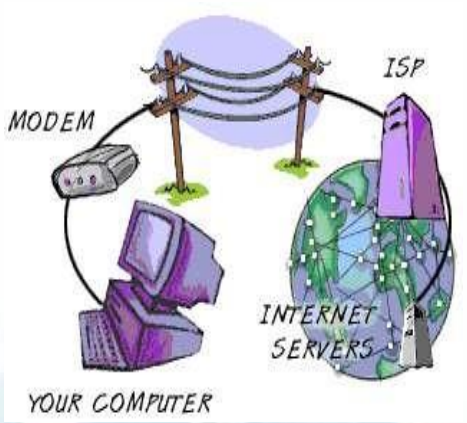
Chapter
5

INTERNET



What is the INTERNET?

- Internet links millions of computers all over the world. It allows your computer to get information stored on other computers far away. Computers connect to the Internet through telephone and cable systems.
- The largest network of networks in the world.
- Uses TCP/IP protocols and packet switching
- Runs on any communications substrate





THE HISTORY

- The Internet grew out of an experiment in the 1960s by the U.S. Department of Defense. The DoD wanted to create a computer network that would continue to function in the event of a disaster, such as a nuclear war. That network was ARPANET, (Advanced Research Projects Agency Network) which linked U.S. scientific and academic researchers. It was the forerunner of today's Internet.
- 1968 - DARPA (Defense Advanced Research Projects Agency) contracts with BBN (Bolt, Beranek & Newman) to create ARPAnet
- 1974 - TCP specification by Vint Cerf



CREATION OF THE INTERNET

- The creation of the Internet solved the following challenges:
  - Basically inventing digital networking as we know it
  - Survivability of an infrastructure to send / receive high- speed electronic messages
  - Reliability of computer messaging

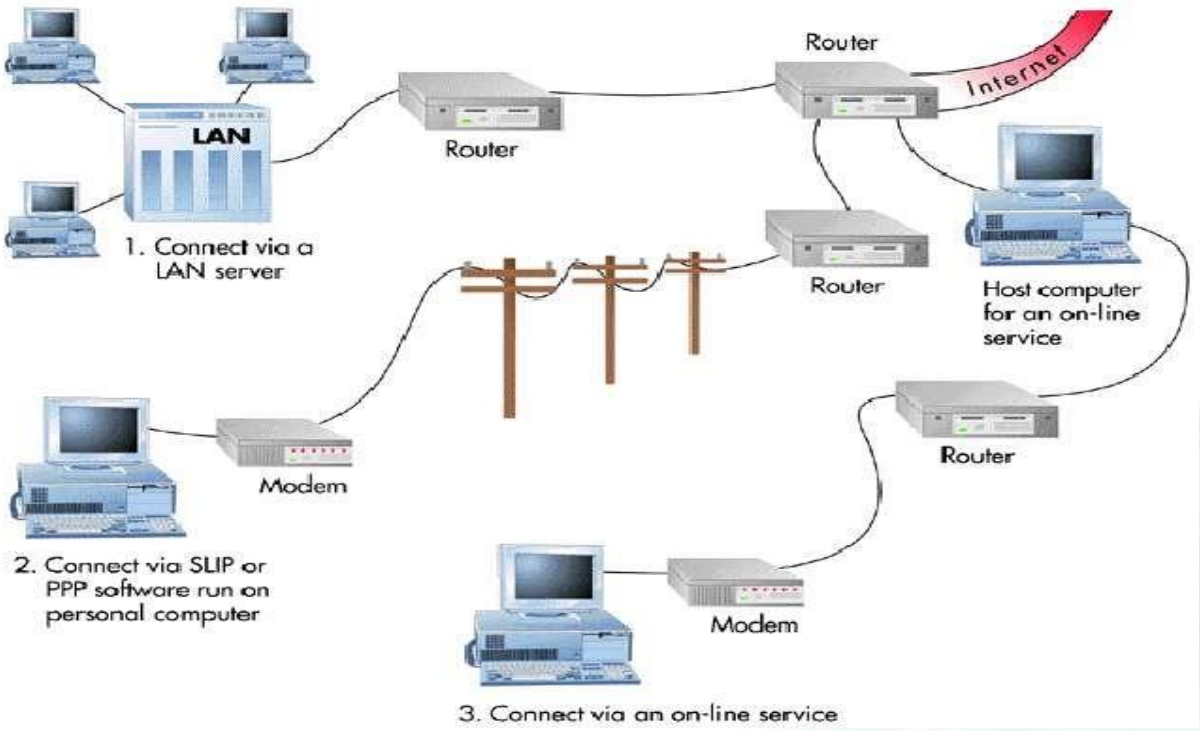




HOW THE INTERNET WORKS

- Transport control protocol (TCP)
  - A protocol that operates at the transport layer and is used in combination with IP by most Internet applications
- Backbone
  - An Internet high-speed, long distance communications links (like a bus; wire that connects nodes)
- Uniform resource locator (URL)
  - An assigned address on the Internet for each computer
  - E.g., http://www.yorku.ca/

Three Ways to Access the Internet





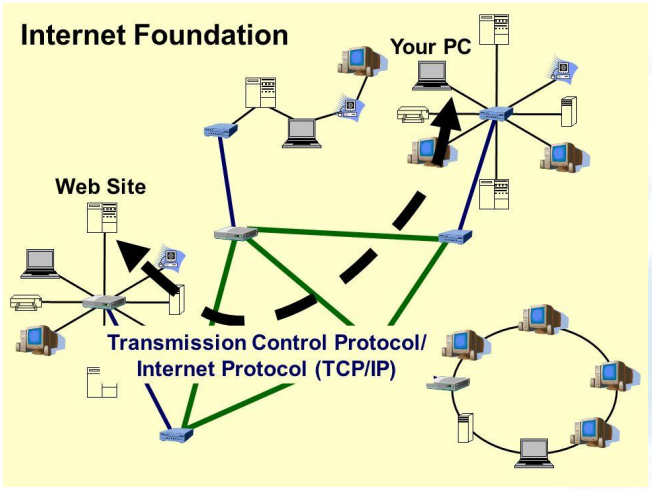
ACCESS TO THE INTERNET

- LAN servers
  - Local servers can provide access to the Internet through normal connections (e.g., Ethernet)
- Serial line internet protocol (SLIP) and Point-to-point protocol (PPP)
  - Communications protocol software that transmits packets over telephone lines, allowing dial-up access to the Internet
- Connection via an on-line service
  - Examples are America Online and Microsoft Network.
    These services usually require sign-up procedures



NET STRUCTURE

- The Web physically consists of your personal computer, web browser software, a connection to an Internet service provider, computers called servers that host digital data, and routers and switches to direct the flow of information.





WEB BROWSER

- A web browser is the software program you use to access the World Wide Web, the graphical portion of the Internet.

- The first browser, called NCSA Mosaic, was developed at the National Center for Supercomputing Applications in the early 1990s. The easy-to- use point-and-click interface helped popularize the Web. Microsoft Internet Explorer and Netscape Navigator are the two most popular ones.





WEB ADDRESSES

World Wide Web is a network of electronic files stored on millions of computers all around the world. Hypertext links these resources together. Uniform Resource Locators or URLs are the addresses used to locate the files. Every URL is unique and identifies one specific file.

example:

The home page of Cybernetics International College.

http://www.cybernetics.edu.my



WEB ADDRESSES





DOMAIN NAMES

- Every computer that hosts data on the Internet has a unique numerical address. For example, the numerical address for the White House is 198.137.240.100. But since few people want to remember long strings of numbers, the Domain Name System (DNS) was invented.

- DNS, a critical part of the Internet's technical infrastructure, correlates a numerical address to a word. To access the White House website, you could type its number into the address box of your web browser. But most people prefer to use "www.whitehouse.gov." In this case, the domain name is whitehouse.gov.



DOMAIN AFFILIATIONS

Domain	Affiliations
Arts	cultural and entertainment activities
Com	business organizations
Edu	educational sites
firm	businesses and firms
gov	government sites
info	information service providers
mil	military sites
nom	individuals
net	networking organizations
org	organizations
rec	recreational activities
store	businesses offering goods for purchase
web	entities related to World Wide Web activities
net	networking organizations



INTERNET : BASIC SERVICES

- Electronic Mail (E-Mail) –

Allow user to send a mail (message) to another internet user in any part of the world in a near-real-time manner .

- File Transfer Protocol (FTP) –

Allow user to move a file from one computer to another on the internet.

- Telnet –

Allow a user to log into another computer somewhere on the internet .



ELECTRONIC MAIL

E-Mail is a rapid and productive communication tool because :

- It is faster than Paper Mail .
- Unlike telephone, The persons communicating with each other need not to be available at the same time.
- Unlike Fax documents , Email documents can be stored in a computer and be easily edited editing programs.





FILE TRANSFER PROTOCOL

- Moving a file from a remote computer to ones own computer is known as Downloading.
- Moving a file from ones own computer to a remote computer is known as Uploading.
- Anonymous FTP site in a computer allows a user to log in with the username of anonymous and password that is user's E-mail Address.
- Anonymous FTP sites are called publically accessible sites because they can be accessed by any user on internet.



TELNET

Some common uses of telnet service are -:

- Using the computing power of the remote computer.
- Using a software on the remote computer.
- Accessing remote computers database or achieve.
- Logging into ones own computer from another computer.







THANK
YOU

INTERNET