

## The Internet

- **Protocol** - is the special set of rules that end points in a telecommunication connection use when they communicate.
- **LAN**-local area network. A local area network (LAN) is a group of computers and associated devices that share a common communications line or wireless link. Typically, connected devices share the resources of a single processor or server within a small geographic area (for example, within an office building). Usually, the server has applications and data storage that are shared in common by multiple computer users. A local area network may serve as few as two or three users (for example, in a home network) or as many as thousands of users.
- **Ethernet** is the most widely-installed local area network technology
- **WAN** - A wide area network is a geographically dispersed telecommunications network. The term distinguishes a broader telecommunication structure from a local area network (LAN). A WAN is a group of LANs loosely connected via gateways.
- **A Gateway** helps to translate and allow communication across LANs that have different protocols.
- **Packet Switching** - Packet-switched describes the type of network in which relatively small units of data called packets are routed through a network based on the destination address contained within each packet. Breaking communication down into packets allows the same data path to be shared among many users in the network. This type of communication between sender and receiver is known as *connectionless* (rather than *dedicated*). Most traffic over the Internet uses packet switching and the Internet is basically a connectionless network.
- robust network
- **ARPANET**- was the network that became the basis for the Internet. Based on a concept first published in 1967, ARPANET was developed under the direction of the U.S. Advanced Research Projects Agency (ARPA). In 1969, the idea became a modest reality with the interconnection of four university computers. The initial purpose was to communicate with and share computer resources among mainly scientific users at the connected institutions. Funded by the Dept. of Defense Goal was to develop a robust distributed network with no central place. Concerned about a nuclear attack from the Soviet Union Slowly developed into the Internet
- **Domain Name System** The domain name system (DNS) is the way that Internet domain names are located and translated into Internet Protocol addresses. A domain name is a meaningful and easy-to-remember "handle" for an Internet address.  
Short for *Domain Name System* (or *Service* or *Server*), an Internet service that translates *domain names* into IP addresses. Because domain names are alphabetic, they're easier to remember. The Internet however, is really based on IP addresses. Every time you use a domain name, therefore, a DNS service must translate the name into the corresponding IP address. For example, the domain name *www.example.com* might translate to *198.105.232.4*.

The DNS system is, in fact, its own network. If one DNS server doesn't know how to translate a particular domain name, it asks another one, and so on, until the correct IP address is returned.

- **TCP** (transmission control protocol)/**IP** (internet protocol) is the basic communication language or protocol of the Internet. It can also be used as a

communications protocol in a private network (either an intranet or an extranet). When you are set up with direct access to the Internet, your computer is provided with a copy of the TCP/IP program just as every other computer that you may send messages to or get information from also has a copy of TCP/IP. email, mailing lists

- **IP Address** The machine “name” required by TCP/IP protocol for every computer on the network. Four groups of number separated by a period. Used by routers just as an address is used by the postal (snail) mail carrier.
- **Routers** A device that forwards data packets along networks. A router is connected to at least two networks, commonly two LANs or WANs or a LAN and its ISP’s network. Routers are located at gateways, the places where two or more networks connect.

## The Web

- **World Wide Web** A system of Internet servers that support specially formatted documents. The documents are formatted in a markup language called HTML (*HyperText Markup Language*) that supports links to other documents, as well as graphics, audio, and video files. This means you can jump from one document to another simply by clicking on hot spots. Not all Internet servers are part of the World Wide Web.

There are several applications called Web browsers that make it easy to access the World Wide Web; Two of the most popular being Netscape Navigator and Microsoft's Internet Explorer.

The *Internet* is a massive network of networks, a networking infrastructure. It connects millions of computers together globally, forming a network in which any computer can communicate with any other computer as long as they are both connected to the Internet. Information that travels over the Internet does so via a variety of languages known as protocols.

**The World Wide Web**, or simply *Web*, is a way of accessing information over the medium of the Internet. It is an information-sharing model that is built on top of the Internet. The Web uses the HTTP protocol, only one of the languages spoken over the Internet, to transmit data. Web services, which use HTTP to allow applications to communicate in order to exchange business logic, use the Web to share information. The Web also utilizes browsers, such as Internet Explorer or Netscape, to access Web documents called Web pages that are linked to each other via hyperlinks. Web documents also contain graphics, sounds, text and video.

***World Wide Web is not synonymous with the Internet.***

- **Web page** Every Web page is identified by a unique URL (Uniform Resource Locator).
- **Browser-** A browser is an application program that provides a way to look at and interact with all the information on the World Wide Web. The word "browser" seems to have originated prior to the Web as a generic term for user interfaces that let you browse (navigate through and read) text files online. Technically, a Web browser is a client program that uses HTTP (Hypertext Transfer Protocol) to make requests of Web servers throughout the Internet on behalf of the browser user. The first Web browser with a graphical user interface was Mosaic, which

appeared in 1993. Many of the user interface features in Mosaic went into Netscape Navigator. Microsoft followed with its Internet Explorer (IE).

- browser cache
- **Web server** - A Web server is a program that, using the client/server model and the World Wide Web's Hypertext Transfer Protocol (HTTP), serves the files that form Web pages to Web users (whose computers contain HTTP clients that forward their requests). Every computer on the Internet that contains a Web site must have a Web server program. Two leading Web servers are Apache, the most widely-installed Web server, and Microsoft's Internet Information Server (IIS). Other Web servers include Novell's Web Server for users of its NetWare operating system and IBM's family of Lotus Domino servers, primarily for IBM
- **FTP**- Web servers often come as part of a larger package of Internet- and intranet-related programs for serving e-mail, downloading requests for File Transfer Protocol (FTP) files, and building and publishing Web pages.
- **URL - Uniform Resource Locator** - the global address of documents and other resources on the World Wide Web. The first part of the address indicates what protocol to use, and the second part specifies the IP address or the domain name where the resource is located.
- **HTTP, http://** Short for *HyperText Transfer Protocol*, the underlying protocol used by the World Wide Web. HTTP defines how messages are formatted and transmitted, and what actions Web servers and browsers should take in response to various commands. For example, when you enter a URL in your browser, this actually sends an HTTP command to the Web server directing it to fetch and transmit the requested Web page.

## Web pages and HTML

- HTML tags: *HyperText Markup Language*, the authoring language used to create documents on the World Wide Web  
*Markup*- refers to symbols that indicate how the text or image should be displayed in a browser.

The correct structure for an HTML document starts with

<HTML>

<HEAD>(enter here what document is about)

<TITLE> (page title)

<BODY> and ends with

</BODY></HTML>.

All the information you'd like to include in your Web page fits in between the <BODY> and </BODY> tags.