



# TELECOMMUNICATIONS GLOSSARY

This glossary attempts to inform teachers about technical terms they may encounter relative to computing. However, terms come, change, and sometimes become obsolete. For updates on terms in this glossary or for those that may not appear in it, search an online resource such as [www.webopedia.com](http://www.webopedia.com).

**Application** — Program(s) designed for end users.

**Archive** — A single file containing a group of files compressed together.

**Arpanet** — (Advanced Research Projects Agency Network of the U.S. Department of Defense) Progenitor of the global Internet.

**Bandwidth** — The capacity of the transmission medium, usually expressed in bits per second for digital devices. Think of bandwidth as a pipe and data flowing through it as water. The bigger the pipe, the more water will go through it and at faster rates. More bandwidth, then, lets data transmit faster and in greater quantities. Data transmission on fiber optic cable, for instance, is faster than it is on Ethernet coaxial cable. The bandwidth of the optical fiber used in the CSUNET (California State University Network) connecting 22 campuses is in the gigabit or billions per second range. Ethernet coaxial cable is in the megabit or millions per second range.

**Baud** — Unit of measure of data transmission, usually the same as bits per second (bps).

**BBS (Bulletin Board System)** — A computer that is set up as a “host” to be accessed by other computers where you can play games, find information on a certain topic, and exchange messages. In its heyday in the 80s and 90s, it foreshadowed much of what the World Wide Web and other aspects of the Internet have become.

**Blog(s) (Short for web log)** — Website containing frequent postings that function to focus attention on a particular subject (food, politics, news, religion, or

opinion on whatever). Some blogs are online diaries. Many are personal journals. Some blogs (such as news blogs) contain web feeds with summaries of other blogs! Blogs can be hosted on a blog hosting service or run with blog software via a regular Internet service provider (ISP). Blogs are gaining in popularity and are having a growing influence on public opinion.

**Bookmarks** — A feature that allows you to create a list of favorite websites. This software remembers websites saved and the browser provides a short-cut to access them. (Also related to bookmarking is [portaportal.com](http://portaportal.com), for example, a useful site where you can store and organize bookmarks for others’ use (such as students) for free.

**Boolean Logic** — Refers to the logical relationship among search terms. Used in search engines.

**Browser** — Software that allows you to navigate the Internet. Browsers can be graphical or nongraphical, e.g., Internet Explorer, Safari, Firefox, Mozilla, Lynx.

**Byte (abbreviation for binary term)** — An electronic unit of storage capable of holding a single character. One character that is made up of 8 binary numbers each being called a bit (‘Bit’ is short for binary digit) (8 bits=1 byte). Large amounts of memory are indicated by kilobytes, megabytes, and gigabytes.

**Capture** — To download only certain sections of a file and not an entire file. A screen captures takes a picture of the computer screen and saves it for your use.

**Client** — Usually an application that runs on your personal computer and depends on a server to perform certain operations. An example is an e-mail client that enables you to send and receive mail.

**Database** — A collection of information or a repository of data that can be accessed in an organized fashion or searched. An example, a mailing list entered into a database software program can be accessed to list the

addresses alphabetically or by state; also, you can find any name by searching by keyword.

**Digital Television (DTV)** — A standard that is quickly replacing analog television. With DT, broadcasters like WVPT can offer higher quality video and sound and also utilize DTV's multicasting and interactive capabilities. (DTV is not to be confused with High-Definition Television (HDTV), a type of DTV.) DTV refers to the actual signal being transmitted digitally (instead of as an analog signal). DTV uses circuitry in which data carrying signals are restricted to either of two voltage levels. The digital signal is subject to less outside interference, so clearer, crisper images in standard and high definition pictures along with six channel CD quality sound is emitted. The digital signal can also be compressed, allowing more information using the same amount of broadcast bandwidth as an analog signal.

**Domain Name** — The official name of the server for a World Wide website; it is also part of a URL such as <http://www.yourcompany.com>

**Download** — To retrieve text, graphics, or a software program from another computer and "bring it down" to your computer where it can be saved and used anytime. (Upload is the opposite, sending info to another computer)

**Email** — Electronic mail may be sent to anyone who has an Internet account/address. Many different types of communication and collaborative projects may take place through this tool. Individuals may also subscribe to listservs that automatically send messages and information to individual email boxes.

**FAQ (Frequently Asked Questions)** — A list of information explaining background about anything online.

**Fiber Optics** — Advanced transmission system using "wires" made of glass to carry digitized information as pulses of light. Fiber optics transmits messages at high speeds and have more capacity for sending information (including high quality video and sound) than any other wire. As the nation is wired with fiber optic cable, Americans will have more channels and more interactive, or two-way, transmissions.

**Freeware** — Computer programs that you can download from the Internet for free.

**FTP (File Transfer Protocol)** — The Internet standard protocol for transferring files from one computer to another (called uploading and downloading).

**GIF (Graphical Interchange Format)** — Pronounces jiff or giff (hard g). A bit-mapped type of file for a graphical image used on the Web. Gifs are limited to 256 colors, so it's a good format for saving scanned illustrations and line drawings and graphics with solid 'flat' colors' (and NOT than color photos). GIFs can have transparent parts. GIFs can be compressed without data loss and so keep file sizes smaller. Can be animated.

**Gigabyte** — 1 billion bytes

**Home Page** — Technically the very first page of your World Wide website; can be used interchangeably with website to refer to the entire Web presentation.

**HTML (Hypertext Markup Language)** — The special programming language used to place tags in the text on web pages for styles that control the appearance of the pages.

**HTTP (Hypertext Transfer Protocol)** — The standard protocol used for transferring hypertext between computers on the World Wide Web. AS one example, most pages start with http:// as part of their address. This sends a command to the Web server to fetch and transmit a Web page.

**Hyperlinked** — Clickable text or graphical images linked to a webpage. It provides an intuitive and easy-to use interface for navigating the Internet.

**Hypertext** — A type of document that contains links to other documents. When reading a hypertext document, you can quickly jump to linked documents and then jump back whenever you want.

**Internet** — A decentralized network of millions computers worldwide connected via data lines that all “speak the same language” by using the same protocol and that you can tap into via your home computer with the use of a modem and an online service or Internet Service Provider (ISP). Not synonymous with the World Wide Web, which is a subset of the Internet.

**Internet Explorer** - Microsoft’s Web browser. (It supports languages such as Java, JavaScript, and ActiveX.)

**Internet Service Provider (ISP)** — A business or organization that has set themselves up with an Internet node (computer fully dedicated to the Internet 24 hours a day) and offers you access through them to the Internet for a fee.

**iPod** — Apple’s small, portable media player. Users can transfer songs, video, and photos via a computer, iTunes, and iPod software. Educational uses of iPods are starting to be explored.

**Java** — A network programming language created by Sun Microsystems. Java supplies animation and interaction between user and browser using the World Wide Web.

**Java Applets** — Small programs that are embedded in HTML code that bring interaction and animation to a web page. Netscape Navigator 2.0 or higher, or Internet Explorer are needed to view web pages embedded with JavaScript.

**JPEG/JPG (stands for Joint Photographic Experts Group, a committee that came up with this standard for image files)** — An image file format supported on the Web. This format allows for 16 million colors and so is best suited for photos and images with shading and highlights. This format has a lossy (loses some data) compression scheme resulting in less clarity and sharpness. Consequently, don’t save an image as a jpg if it has line drawings, lettering, and simple flat, solid colors or it may get have jagged edges. Cannot have transparent parts to the image.

**Kilobytes** — 1 thousand bytes.

**LAN (Local Area Network)** — A computer network within a small area or within a common environment as one within a building or one connecting offices on separate floors.

**Lynx** — A non-graphical Internet browser.

**Megabyte** — 1 million bytes. Abbreviated M or Mb for data and MBps for data transfer rates on a per second basis.

**Modem** — A device that translates data between two computers through a phone line so that they can communicate.

**Network** — A group of machines connected together so they can transmit information to one another.

**Newsgroups** — Public information areas which are available on the Internet. Unlike e-mail, which is considered private communication, the newsgroups provide a public forum on thousands of topics.

**Node** — A computer that is connected to a network, sometimes called a host.

**Online** — When a user is connected to a network, they are described as being online.

**Online Service** — A business that sells you special software and an account to access their computer system where they have a variety of information and activities for you that are exclusive or proprietary to their system (America Online, etc.). These servers have web browsers built in to them.

**PNG (Portable Network Graphics** — (Pronounced ping) One of three standard formats for saving graphics for use on the Web. It produces a sharp, clear image on saving. PNG isn’t supported by all browsers as yet. PNG format is an improvement for the GIF format, as the same image can be compressed more than the GIF while keeping all of its data (like the GIF). PNG, like the GIF, allows transparent areas, but it allows even more control of transparency (opacity) levels than a GIF. This format does not support animation.

**Podcast** — A digital recording of a radio broadcast or similar program made available to a subscribed user for downloading to a personal audio player or other portable multimedia device such as an MP3 player or iPod for off-line listening. (See the iTunes Podcast Directory online for automatic updates.)

**PPP (Point to Point Protocol)** — This is a protocol that allows your computer to connect to the Internet by sending TCP/IP packets to a server that puts them on the Internet. It's more stable than the older SLIP protocol. It has error checking.

**Protocols** — A formal description of message formats and the rules two computers must follow to exchange those messages. Protocols can describe low-level details of machine to machine interfaces (e.g., the order in which bits and bytes are sent across a wire), or high-level exchanges between allocation programs (e.g., the way in which two programs transfer a file across the Internet). A protocol is to a computer what language is to humans.

**Search Engine** — A program that is a database of web pages on the World Wide Web. These vast databases narrow a search, making a search easier and quicker. At this writing Google is widely used and highly acclaimed. Different search engines have different uses. For example, Yahoo is an educational search engine. Dogpile will search four search engines at the same time. Infoseek is a research search engine. However, these can change. See [www.searchenginewatch.com](http://www.searchenginewatch.com) to keep updated on the best search engines, to learn about spiders, and much more.

**Server** — This is a computer or network device that manages network resources such as multiple printers, network traffic, databases. Can be the place where Web pages are stored and managed. A server functions like an Internet node in that it is dedicated to the Internet 24 hours a day and it makes data available to the public or serves data.

**Shareware** — Computer programs that you can download from the Internet. If you decide to keep it, send payment to the program. There is usually a 30 day trial period <<http://www.shareware.com>>

**SLIP (Serial Line Internet Protocol)** — This allows your computer to interface with the Internet. It is older and less-flexible than PPP.

**T1 Line** — A very fast, dedicated phone line that transmits at 1.5 Mbps (Megabits per second). Popular with Internet Service Providers who are connected to the 'main' network connections comprising the Internet.

**Tags** — HTML commands used when creating a Web page.

**TCP/IP International Networks (Transfer (some say Transmission) Control Protocol/Internet Protocol)** — Software on your computer which allows communication between your computer and the Internet Service Provider as a host for you Internet connection. Uses several protocols (such as SLIP, PPP, etc.) to connect to the Internet.

**Telnet** — A network protocol that allows you to connect directly from one computer to another. Telnet is an extremely useful tool to use as long as you have access to the destination computer's "address" and the appropriate login and password. Many public telnet sites allow guest access. A common way to remotely control web servers.

**Text File** — A file with plain text, usually identified by a .txt extension in the filename. Can be opened and edited through simple word processors such as Notepad and WordPad.

**Upload** — To send a file from your computer to another computer or server on the Internet.

**UNIX** — Pronounced yoo-niks, this operating system developed by Bell Labs in the early 70s has become a leading operating system for business workstations. Also, a lot of ISPs use UNIX servers.

**URL (Uniform Resource Locator)** — Web address which starts with <http://> followed first by the domain name, then the folder where the data is kept on the server, then the actual file you are viewing such as: <http://www.wnet.org/wnetschool>

**USENET** — A worldwide bulletin board system accessed via the Internet and many other online services. Used by millions of people every day. Contains over 14000 forums (newsgroups) at this writing covering every imaginable interest area.

**VLOG** — (short for video log) A type of blog (short for web log) that uses video for its primary content. The video (usually with supporting text, etc.) is linked within a 'video post' on the website.

**WAN (Wide Area Network)** — A computer network established by connecting two or more local area networks, usually encompassing a larger geographical area than that served by the LAN.

**Web Browser** — Graphical interface software on your computer such Internet Explorer or Safari, among others that interprets HTML code and presents the information to you. It can embed images, download sounds and video -your "window" to the Web!

**WebQuest** — An instructional tool that promotes higher order thinking skills while students actively navigate the Web with a specific 'focus task' and goal.

**WIKI** — (Term was taken from the native language of Hawaii meaning fast or quick) A type of website that allows anyone visiting to easily add, remove, as well as edit its content freely. Well-suited for collaborative writing. A unique example of an attempt to keep encyclopedia terms current via a wiki is wikipedia at <http://en.wikipedia.org/wiki/wiki>.

**WWW (World Wide Web)** — A system of Internet servers supporting documents formatted in HTML (a mark-up language code). Not all Internet servers are part of the WWW. Those that are make up the interactive, multimedia portion of the Internet that features graphics, audio, video, and text files and sites accessed through embedded hypertext links and graphics hotspots which allow you to jump between Web pages when clicked.

**Yahoo** — A popular Web directory that is searchable by keyword. Located at <http://www.yahoo.com>.