

Glossary of Internet Terminology

Address (Address as it is used on the Internet): An E-mail address is a designation to indicate the electronic mailbox of an individual or system on a network. Generally, an e-mail address consists of a specific username, handle or ID number and a DNS registered host system name. These two items are separated by a @ symbol. For example: the e-mail address for this company is name@some-domain-name.com.

ADSL: ADSL stands for Asymmetrical Digital Subscriber Line. An ADSL Internet connection provides an always-on, high speed connection to the Internet using a standard copper telephone line. With ADSL you are able to use the Internet & phone at the same time. It's labeled Asymmetrical because your download speed is different to your upload speed - both of which are very fast.

A Web address, otherwise called a URL: An IP Address is used to locate a specific computer (server) on the Internet. Each computer (server) has a unique IP address. An IP Address is a set of four numbers, each between 0 and 255, separated by periods; for example 127.0.0.1. Often these numbers are substituted with names that are easier to remember. For example, the IP address 205.216.146.10 has the domain name of www.yahoo.com. A service called Domain Name Services (DNS) keeps track of the names associated with an IP address, so when you try to access a computer using its name, DNS automatically directs you to the computer with the associated IP address.

Anonymous FTP: A form of file transfer protocol offering public access to selected directories and files. The term is derived from the use of the term "anonymous" as a common username for all clients. Anonymous ftp sites constitute public archives on the Internet.

Authentication: In computer security, authentication (Greek: *αυθεντικός*, from 'authentēs'='author') is the process by which a computer, computer program, or another user attempts to confirm that the computer, computer program, or user from whom the second party has received some communication is, or is not, the claimed first party. A blind credential, in contrast, does not establish identity at all, but only a narrow right or status of the user or program. In a Web of trust "authentication" is a way to ensure users are who they say they are--that the user who attempts to perform functions in a system is in fact the user who is authorized to do so.

Autoresponder: Best thought of as an automatic e-Mail response, it is a bot that has become an essential Internet tool for netcentric businesses. An Autoresponder sends "canned" e-Mail messages instantly to people who request information. It can be as simple as sending one message to anyone who writes to a specific e-Mail address, or it can be as sophisticated as offering fifty different response messages, each one sent based on the text of the received e-Mail message.

AVI (Audio Video Interleaved): A Microsoft Corporation multimedia video format. It uses waveform audio and digital video frames (bitmaps) to compress animation.

Back Slash (the opposite of Forward Slash): The back slash is the name of the "\" character on the computer keyboard. It is commonly located below the "|" mark on the same key. Back slashes are primarily used to represent a path, such as "c:\Windows".

Bandwidth: The capacity of a cable, wire(s) or a fiber optic network to carry information. The higher the bandwidth, the more information can be transmitted at greater speeds. The bandwidth is the amount of

data that can be transmitted in a fixed amount of time. Bandwidth is usually expressed in bits per second (bps) or bytes per second.

Bit: A bit (BINARY digiT) is the smallest unit of information that a computer can have, and it can hold the value of only 0 or 1.

Bits and Bytes:

- *Bit* stands for binary digit: 0 or 1
- A *byte* is made up of 8 bits
- It takes *1 byte* to store *one ASCII* character *ASCII* stands for the American Standard Code for Information Interchange.
- The combination of bits (which makes up one byte) below represents the letters below:
 - **A** = 0100 0001
 - **B** = 0100 0010
 - **C** = 0100 0011
- **K** stands for kilo and = 1024 (2 to the tenth power).
- **M** stands for mega. MB, a megabyte is about a million bytes (1024x1024).
- **G** stands for giga. GB, a gigabyte is about a billion bytes (1024x1024x1024).
- **T** stands for tera. TB, a terabyte is about a trillion!
- **RAM** is usually measured in MBs.
- Hard disk spaces is usually measured in gigabytes.

Bitmap: A representation, consisting of rows and columns of dots, of a graphics image in computer memory. The value of each dot (whether it is filled in or not) is stored in one or more bits of data. For simple monochrome images, one bit is sufficient to represent each dot, but for colors and shades of gray, each dot requires more than one bit of data.

Blog: A blog is a website in which journal entries are posted instantly on a regular basis and generally displayed in reverse chronological order. The term is a shortened form of weblog or web log. Authoring a blog, maintaining a blog or adding an article to an existing blog is called "blogging". Individual articles on a blog are called "blog posts," "posts," or "entries". A person who posts these entries is called a "blogger". A blog may include any commentary or reporting on the chosen subject of the blogger and may also include hypertext, images (and links to video, audio and other files).

Blue Screen of Death: A famous fatal-error message that occurs in Windows operating systems. It is a blue screen that interrupts your computer's normal boot up, indicating a fatal error in your operating system. If you're a PC user and your screen turns blue instead of loading the Windows program, hit any key and see about getting it fixed.

Bookmark: A way of storing your favorite sites on the Internet. Browsers like Netscape or Internet Explorer let you to categorize your bookmarks into folders.

Boolean Logic: A type of logic (using AND, OR, NOT operators, for example) used by search engines to find information on the Internet and in electronic databases. (For example, to find computer viruses instead of human viruses, you might try the keywords "computers and viruses").

Boot (Up or Reboot): As a verb, it means to start a computer or turn it on. You will also hear the term "boot up," which means the same thing, as in, "Are you booted up?" A "reboot" is the process of shutting

down a computer and then restarting it. Rebooting tends to clear out bugs that can hamper smooth computing.

Bot (Internet Bot or Robot): A type of computer program to do automate tasks.

Broadband: Broadband is a generic term for high-speed Internet services. The most common broadband technology for residential use is ADSL Broadband.

Browser: Software that allows you to access/view pages of information and navigate the Internet. This "browsing" includes graphics, audio, video and animation type files. It allows you to create bookmarks and to move and forward through Internet content. Common browsers include Microsoft Internet Explorer, Mozilla Firefox, and Apple Safari

Byte: A byte is made up of 8 bits (a Bit stands for a binary digit: 0 or 1). It takes 1 byte to store one ASCII character. ASCII stands for the *American Standard Code for Information Interchange*.

Cable Modem: A device that allows a computer to connect to a cable television system and connect to a computer network - cable modems work at speeds approaching Ethernet connections a wide-spread way to connect to the Internet.

CGI (Common Gateway Interface): The WWW's specification allowing browsers to communicate with, send information to, and request information from Web servers. CGI is not a single protocol or language, but a generic label for all interaction that can occur between a Web server and a client browser involving forms, queries and other information exchange techniques. CGIs allow Web pages to become dynamic displays of information instead of static documents. Using a CGI you can give viewers of your Web site access to utilities and programs that will make your site both unique and useful.

Chat: A real-time, synchronous, text-based communication via computer.

Client: Software that resides on a computer that allows you to interface with the Internet.

Client/Server: A computer paradigm describing a particular relationship between two interconnected computers. In the client/server model, a client, generally a desktop computer, requests services from a server, generally a larger computer containing programs and files of use to many clients on a network. The client runs a graphical front- end application displaying input and output; the server performs shared data or storage-intensive processing tasks in response to client requests. Client browsers read documents accessed from Web servers.

Co-location: Co-location is the provision of servers or server space for a customer's use on the service provider's premises. For example, a customer with a web or email server could place their computer server inside the Netspace data centre. The alternative to co-location is to have the equipment and located at the customer's premises.

Cookie: Information (in this case URLs, Web addresses) created by a Web server and stored on a user's computer. This information lets Web sites the user visits to keep track of a user's browsing patterns and preferences. People can set up their browsers to accept or not accept cookies.

Crash: When your computer or a network suddenly stops working, it has crashed. The result is generally a frozen keyboard, a frozen mouse, or a frozen screen (meaning that nothing moves or responds to input).

In most cases, you have to reboot to get the thing started again (all the while hoping you saved the latest version of your work).

Cyberspace: The word coined by science fiction novelist William Gibson that defines the sphere of computer communication technology.

Cybersquatting: The practice of purchasing a domain name that contains a well-known trademark or commercial name (for example, `generalelectric.com`). The intent is not to develop it into a Web site but rather to sell it to the rightful owner for a big profit. This practice is being contested in various legal battles, and for the most part, the company wins, not the cybersquatter.

Data: In general, data is information: factual information, such as text, numbers, sounds, and images—anything that can be processed on a computer. Data also represents concepts and sensations that are suitable for communication, interpretation, or processing. As futurist Marshall McLuhan said, "The electric light is pure information," meaning that everything perceptible is data. The word "data" is plural, and the singular form is "datum." However, data is often taken to be singular (as it is in this dictionary).

Data Backup: It is important and necessary to backup your files regularly! This means you must copy files from your computer to a storage medium (such as a disk or CD-ROM) as a precaution against something happening to your computer and causing the loss of data. "To backup," as a verb, is the process of storing your data; a "backup," as a noun, is the process of "backing up" or the media you chose to store your backed up files.

Data Packet (a.k.a. datagrams): The name for a unit of data sent across a network. Information is sent over the Internet (and many other networks) in packets.

Data Recovery: To recover data is to salvage data that's been corrupted or erroneously erased. Data recovery is also to salvage data stored on damaged media, such as a hard drive, disks or CD-ROMs. In either event, data corruption is the actual deterioration of computer data (a.k.a. your information) as a result of some external agent. Computer-based problems, such as viruses, can infect files and render them useless or harmful to other data. Hardware or software incompatibility and environmental hazards (such as power outages) can also render data unreadable. There are a number of software products that can help recover data damaged by a disk crash or virus. There are also companies that specialize in data recovery. Unfortunately not all data is recoverable, but data recovery specialists can often restore a surprisingly high percentage of the data on damaged media.

Defrag: To optimize your hard drive, usually with a program that "cleans it up" and makes it run as smoothly as possible. Slang usage implies some much needed R&R, as in, "I'm not going out tonight. I just want to have a quiet drink at home and defrag."

Development (As in a Website): The developing of a Web Site, including the planning, flowcharting, design and scanning of graphic images to the writing and editing of the text, HTML, and Java programming, testing, and finally installation.

Dial Up Internet: Dial up Internet access is where you dial a phone number to connect to the Internet. It's slower than broadband, and you can't make telephone calls at the same time, but it is still a very popular way of connecting to the Internet from home.

Digit: A single character in a numbering system. In decimal, digits are 0 through 9. In binary, digits are 0 and 1. The 0s and 1s equate to "on and off" functions. Digitization allows for perfect copying. When text, music, voice and video are digitized, they can be electronically manipulated, preserved and regenerated without degradation of quality at high speed. Each copy of a computer file is exactly the same as the original.

DNS: Stands for Domain Name System, an Internet protocol that translates computer names into numeric Internet Addresses. Every time you're on the Net using e-mail, ftp, or Telnet, you're also using DNS. Without DNS, Netsurfers would have to remember long series of numbers (like 128.56.78.342) to get to a specific site on the Net.

Domain: A unique name that identifies an Internet site and a computer on the Internet. A domain name is the part of the Uniform Resource Locator (URL) that tells a domain name server where to forward a request for a Web page. Ours is: <http://www.CommerceConnections.com>

Dot-Com: (also dotcom or redundantly dot.com) companies were the collection of start-up companies selling products or services using or somehow related to the Internet. They proliferated in the late 1990s dot-com boom, a speculative frenzy of investment in Internet and Internet-related technical stocks and enterprises. The name derives from the fact that many of them have the ".com" internet top-level domain suffix built into their company name.

Download Speed: Broadband plans are expressed in terms of download and upload speeds. The higher the speed the less time it takes you to view a web page or download a file. Typically residential broadband is up to 10 times faster than dial up Internet which is great for downloading movies and music.

DPI (dots per inch): The way the resolution of display and printing is measured.

DSLAM: A Digital Subscriber Line Access Multiplexer is a network device that receives signals from multiple DSL connections and puts the signals on a high-speed backbone line using multiplexing techniques. Depending on the product, DSLAM multiplexers connect DSL lines with some combination of asynchronous transfer mode (ATM), frame relay, or IP networks. DSLAM enables a phone company to offer business or home users the fastest phone line technology (DSL) with the fastest backbone network technology (ATM).

DSL (Digital Subscriber Line): DSL is a technology for supplying high bandwidth information to homes and businesses over ordinary copper telephone lines. Different variations of DSL include ADSL (Asymmetric DSL), HDSL (High-speed DSL) & SDSL (Symmetric DSL).

e-Commerce or Electronic Commerce: Electronic Commerce (EC) is a term used to describe business activities that are conducted electronically, without the need for paper. EC combines data exchange, communications, and security services, and has been used for years for such things as direct deposit and ATM transactions. The surge of interest in the Internet greatly expands the possibilities of electronic commerce. Ideally, EC will be used not only for the exchange of hard data, but for eliminating time and location restrictions and providing a forum for the exchange of ideas and opinions as well.

e-Mail: Electronic Mail, or any messages that are transmitted over computer networks. e-Mail is like sending someone a regular letter, only there's no postage and it's delivered by computer.

e-Mail Spoofing: A technique commonly used for spam e-Mail and phishing to hide the origin of an e-Mail message. This involves changing certain properties of the e-Mail, such as the *From*, *Return-Path* and *Reply-To* fields (Which can be found in the message header) to make the e-Mail appear to be from someone other than the actual sender. As many spammers now use special software to create random sender addresses, even if the user finds the origin of the e-Mail it is unlikely that the e-Mail address will be active.

The technique is now used ubiquitously by mass-mailing worms, as a means of concealing the origin of the propagation. On infection, worms *ILOVEYOU*, *KLEZ* and *Sober* will often perform searches for e-Mail addresses within a Microsoft Outlook address book or similar device and use those addresses in the *From* fields of e-Mails that they send, so that these e-Mails appear to be sent by a third party.

Encryption: Encryption is a means of protecting information from unauthorized viewing or use. This is particularly important during transmission of data, or when it is stored on a transportable medium; at such times data is particularly vulnerable. Encryption systems can benefit the ordinary WWW user; when you need to send a really private e-mail messages, or to order an item online including credit card information, you need an encryption system.

Most encryption systems are based on a one or two key system, without which the information cannot be decoded. A system that uses one key is called a private key system; such a system requires that both the sender and recipient have the same secret private key. A public key system of encryption uses two keys, the public key can be given out to anyone, but the private key is secret. A message sent by a public key system can be encrypted using either the public or the private key, once received, this message can then be decrypted by using the other key.

Ethernet: A method for directly connecting a computer to a network in the same physical location - much faster connection than SLIP or PPP.

Excess Usage: If you choose an excess usage plan, you will only be charged excess usage if you use the Internet beyond your allocated download allowance.

FIFO (First In First Out): An acronym. It actually refers to a data structure used by programmers. Also known as a stack.

Firewall: A firewall isn't as exciting as the flaming pyrotechnics show the name suggests. A firewall is either a software program or hardware device which protects your computer from unauthorized access when it's online. It blocks out computer hackers and Internet worms (a special kind of virus which spreads between unprotected computers over the Internet). It's important to have a firewall, and some common ones include ZoneAlarm and Norton's Internet Security. Windows XP comes with a built-in firewall (but you need to turn it on).

Flash: Animation software used to develop interactive graphics for Web sites as well as desktop presentations and games (Windows and Mac) by the company Macromedia. Flash on the Web is displayed by a browser plug-in. Non-Web presentations are run by a Flash player, included on a floppy or CD-ROM. Flash can be used to create vector-based graphics in one or more timelines that provide a sequential path for actions.

Forward Slash (the opposite of Back Slash): The forward slash is the name of the "/" character on the computer keyboard. On a QWERTY keyboard, it is commonly located below the "?" mark on the same

key. Forward slashes are used to describe a network address, a URL, and other kinds of Internet addresses.

FTP: File Transfer Protocol is the method of transferring computer files (text and graphics) over the Internet. An incredibly useful tool to locate and access vast amounts of information on distant computers all over the world

Geek (Propeller-Heads): A term used to describe people who are really into computers. To put it bluntly, they are what many of us would call nerds. Propeller-head is specifically used by computer folks to describe a sub-group within their population. It is, therefore, a part of the computer industry's jargon.

Gigabyte (GB): A gigabyte is a unit of information or computer storage equal to one thousand megabytes or one million kilobytes.

GIF: Graphic Interface Format is a popular graphics file format used on the World Wide Web. GIF was developed by CompuServe to compress bitmap files transmitted over their network. GIFs are the common graphical type used in WWW pages. GIFs are limited to 256 colors (8-bit). On the WWW, GIFs are used to display graphics. Most graphical browsers are designed to view both GIFs and JPEG graphics, but GIFs are the most popular. One special feature of GIFs is the ability to define a color as transparent. Transparent GIFs allow the background of the page to show areas of the image, allowing for spectacular special effects and layouts.

Gopher: An Internet component that arranges information in a list of topics for easy access. Makes access to information, it's search and retrieval very easy. The key to finding information on the Internet

GUI: GUI (pronounced "gooey") stands for Graphic User Interface. GUI is a generic name for any computer interface which used graphics, windows and a pointing device such as a mouse as its primary means of environment control. Common examples of GUI interfaces are the Macintosh and Windows environments. The Internet can be accessed with GUIs, such as graphical Web browsers and other Internet service clients such as FTP, Gopher or e-mail. GUI Internet clients hide the complex UNIX commands and other non-graphical information and commands which the Internet is based on.

Hacker: A computer enthusiast who enjoys learning everything about a computer system and, through clever programming, pushes the system to its highest possible level of performance. Often confused with crackers, these hobbyists are skilled programmers with the reputation of having a mischievous bent for breaking into secured systems. In one sense, a hacker is a person who enjoys programming rather than just theorizing about it. In another sense, the term "hacker" tends to connote membership within a global community defined by computer networks; it implies that the person subscribes to some version of the hacker ethic. Hacking has been going on since computers were invented, and sometimes there have been extremely damaging consequences. A variety of old-time hackers have now "gone commercial" and taken hacking to the business level (they are now referred to as "ethical hackers").

For example, they use their hacking skills to develop penetration tools, and then they go out and analyze a customer's networks for security vulnerabilities, in order to report the findings back to the customer. Hacker wannabes take note: It is better to be described as a hacker by others than to describe oneself that way. Most hackers consider themselves something of an elite (a meritocracy based on ability), although new members are said to be gladly welcome.

Hit or Hits: The request for and delivery of a file (such as a Web page) on a server. Each element of a requested page (including graphics, multimedia, and the HTML file itself) is counted as an individual hit.

So, if a Web page contains five graphics, then accessing that page will generate six hits. Hits were originally used to determine the amount of traffic a Web site received, but since businesses eventually needed to isolate the exact number of times a Web page was requested (in order to charge for ad banners), the method of counting hits was tossed aside. Instead, businesses count the actual HTML page requests. There was also a time when, in an effort to say that such-and-such Web site got more hits, programmers and designers were told to add as many elements as possible, to make the number of hits look higher. In actuality, all this trick did was slow down the download speed of the pages.

Therefore, a page impression is today's preferred counting method for traffic measurement (instead of hits) because it only counts documents, not individual files. A single HTML page is counted as one page impression. As of December of 2000, Yahoo! was receiving more than 1 billion page views per day!

"Hit," as a verb, can mean "press down," as in, "Hit any key." < Preferably not too hard! ;-)

Home Page: The first page of a Web site that welcomes users and provides those users with an access point to additional pages and/or functionality.

Host: A computer serving as an entry point on a network. As such, an Internet host is defined by a unique IP domain address (although different ports on the same physical computer can constitute separate hosts). Internet service providers are hosts. Many hosts support multiple users, if not hundreds of users within an organization, on a local network or on a commercial server .

Hosting: Hosting refers to the housing of a web site, email or a domain.

Hotlink: A method of writing and displaying text that allows you to select a highlighted text or an image in order to navigate a Web site. Hotlinks take you to related pages or other Web sites on the Internet. Hotlinks are also known as "Hypertext", "Hyperlinks" and simply "Links".

HTML: Hyper Text Markup Language is the markup language used on the World Wide Web that browsers are able to understand and interpret. HTML is a way of representing text, establishing links to other resources and allowing this information to be displayed together.

HTTP: Hyper Text Transfer Protocol is the protocol used by a Web server to communicate over the TCP/IP protocol of the Internet. HTTP allows the transfer of HTML documents and other resources between the Web server and the browser client.

Hyperlink: A link is a reference in a hypertext document to another document or other resource. As such it is similar to a citation in literature. However, combined with a data network and suitable access protocol, it can be used to fetch the resource referenced. This can then be saved, viewed, or displayed as part of the referencing document. Hyperlinks are part of the foundation of the World Wide Web created by Tim Berners-Lee. There are a number of ways to format and present hyperlinks on a web page. The embedded link, a link that occurs within a sentence is one of the more common formats.

IANA (Internet Assigned Numbers Authority): An organization that oversees IP address allocation, DNS root zone management, and other Internet protocol assignments. It is presently operated by ICANN. Prior to the establishment of ICANN, the IANA was administered primarily by Jon Postel at the Information Sciences Institute at the University of Southern California, under a contract USC/ISI had with the United States Department of Defense, until ICANN was formed to assume the responsibility.

ICANN: An organization that oversees IP address allocation, DNS root zone management, and other Internet protocol assignments.

Information Superhighway (or Infobahn): This is the popular designation for the Internet and the broader matrix of telecommunications and computer networks. The term has come to refer to what some take to be an inevitable convergence into a single entity of commercial online services, local bulletin boards, cable television, cellular telephone, consumer electronics, and the entertainment and publishing industries. The term is ultimately more evocative than descriptive of any actual phenomenon or entity.

Instant Message: The act of instantly communicating between two or more people over a network such as the Internet. Instant messaging requires the use of a client program that hooks up an instant messaging service and differs from e-Mail in that conversations are then able to happen in realtime.

Interlaced: A graphics formatting technique that causes an image to gradually appear on your screen instead of appearing all at once. The image appears blurry at first and is replaced by successive waves of bit streams that gradually fill in the missing lines until the image fully appears in full resolution. This gradually rendering of the image is helpful for Web users who have slow modems and connections, since this technique allows the viewer to see enough of the image to decide whether or not to continue loading it. For fast connections, there is no discernible difference.

Internet Speed: Your Internet speed is the rate at which you can transfer data. The faster your Internet speed, the faster you can browse the web and download files. It's measured in kilo-bits per second, usually referred to as kbps or sometimes just k. A regular dial up modem has a speed of 56k, while residential Broadband ADSL usually ranges in speeds from 256k and 512k, right up to a super fast 1500k and even higher for business grade broadband.

Intranet: A private Internet-like network setup by an organization for use by its employees and/or business partners, customers, or general users. A Company usually enables its Local Area Network (LAN) with Internet Tools such as a Web Browser and Web Servers to create an Intranet.

IP Address (Internet Protocol): IP address is the numeric identification number that refers to a specific machine on the Internet. Every machine that is on the Internet has a unique number, which correlates to its domain name.

IRC: Internet Relay Chatter (Chat Rooms) where you can chat electronically over the Internet with other people from around the world. (Also, ICQ and a myriad of Instant Messaging services).

ISP: An Internet Service Provider provides its customers with a local access telephone number to the World Wide Web through both dial up local telephone lines and dedicated high speed data circuits such as DSL. ISP's can be local, regional, or national in scope and there are *vast* differences in their service capabilities.

Java: Java adds and enhances Web pages programmable functions such as interactive elements, animation, video, audio, and continual update windows with things like weather, stock reports, etc. Java works by creating a "virtual computer" inside your P.C., regardless of the operating system, which can run any Java program or Applet that comes in over the Internet.

JavaScript: A Web scripting language developed by Netscape. It was developed independently of the full JAVA language and is an "open" language, free for anyone to use and adapt.

JPEG (Joint Photographic Experts Group): This is a graphical file type which can store 24-bit color information and take advantage of lossy compression. JPEGs are being used more for WWW graphics, due to the recent CompuServe lawsuit regarding their GIF format. JPEG files use the extension .jpg or .jpeg.

Kbps (Kilobits per second): This is a measurement of electronic data transfer. A Kilobit is 1,000 bits per second. Kbps is the unit used to rate transfers over the Internet, specifically FTP and Web transfers.

Keyword: A keyword is a focal or significant word in a document used in content-based search utilities. Most Internet search engines use some type of keyword to locate information and URLs.

Kilobit (kbit or KB): A kilobit is a unit of information storage equal to 1,000 bits.

Kilobyte (KB): A kilobyte is a unit of information or computer storage equal to 1000 bytes.

LAN (Local Area Network): A LAN connects computers in a small area, usually within the confines of a room or a building. The computers at your business are probably connected to a LAN so that they can share an Internet connection, printers and files. With a LAN, a company can provide easy access to other computers or peripherals. Since the distance between computers in a LAN is so short, the networks are usually high-speed, even though they may use low-cost media to connect, such as twisted pair wiring.

Layout Element: An HTML tag used to define the physical appearance of characters in a Web document. Character highlights such as bold (), underline (<U>) and italics (<I>) are all layout elements. Layout elements are also called physical tags.

LCD (Liquid Crystal Display): The screen used on flat panel monitors, digital watches, PDAs, pagers, cell phones, and so on. It makes use of liquid crystals to display information.

Legacy System: An old or outdated computer system that remains in use even after more modern technology has been installed, usually because a company has invested considerable time and money into it and it still holds valuable data. A legacy system may also be an entrenched data management platform that contains proprietary, custom-designed software. Fortunately, new software products are designed to work with legacy systems (or at least to import data from them). A typical legacy system is a database management system (DBMS) running on mainframes or minicomputers (versus new technology solutions, which continue to move to PC-based systems).

LIFO (Last In First Out): An acronym. It actually refers to a data structure used by programmers. Also known as a stack.

Link: A link (short for hyperlink) is an HTML markup element which links a document with another resource on the Internet.

Listserv: See "Mailing List" definition below.

Log: A file that keeps a record of the activity on a Website or server. For example, a file that contains the information on how many hits or impressions a Web page is receiving is known as a traffic log.

Login: A noun or a verb.

- Noun: The account name used to gain access to a computer system. Not a secret (contrast with *Password*).
- Verb: the act of connecting to a computer system by giving your credentials (usually your "username" and "password")

Mailbox: Your mailbox (e-Mail) is where e-Mail sent to you is stored waiting for you to collect it. You can check your e-Mail using an e-Mail client such as Outlook Express, or you can log onto your ISP's home page and check your e-Mail messages there.

Mail Server: A machine which handles e-mail functions for a computer attached to the Internet. At many ISPs, the domain name of the mail server is created by adding "mail." to the ISP's domain name.

Mailing List: A forum for discussion of a specific topic. Individuals (whether subscribers or not) e-Mail messages to a central server. The server redistributes the messages to all subscribers via e-mail. The day to day operations of a mailing list are handled by a listserver or mailserver program. Listserver programs include Listserv, Majordomo and ListProcessor. Mailing lists users must distinguish between the address of the mailing list itself and the address of the server. The former is usually of the form group@address and the latter of the form listserv@address.

Majordomo: A program similar to listserv that is responsible for automatically managing Internet mailing lists. It was created to minimize the work of the list owner (the person who maintains a mailing list, making sure all the addresses are current, etc.). The word "majordomo" comes from Latin and means "master of the house".

Markup: The term used to describe the formal syntax code used in text-based programming languages. In HTML the markup consists of tags that are set off by less than and greater than signs. For example, the markup tag for a line break in HTML is "
". For a complete list of HTML markup tags, please see the topic section, HTML markup tags.

Markup Language: A way of describing how a text will appear. Thus printers use markup to show where different typefaces will be used and to indicate how a page will be formatted. In the WWW, markup languages enable users from a variety of platforms, to read formatted text. The standard markup language used is HTML (Hypertext Markup Language), a derivative of SGML (Standard Generalized Markup Language).

MBPS (Megabits per second): A unit which specifies information transfer rates. MBPS stands for megabits per second. A megabit per second is an information transfer rate of one million bits per second. It describes the information-carrying capacity of a communication channel or pathway between computer hardware devices or software. For example, it can be used to characterize how quickly a particular parallel interface, a modem or a network card transmits data to another piece of hardware like another computer. An Ethernet card transfers data at a rate of 10 MBPS. For modems, another unit of information transfer rate is baud, which refers to symbols per second and can mean anything from one to sixteen bits per second. Bits, bytes or characters per second as units of transfer speed are more precise, because they do not depend on additional information for a complete specification. The unit megabit on its own commonly refers to the storage capacity of a memory chip.

Megabyte (MB): A megabyte is a unit of information or computer storage equal to one million bytes or one thousand kilobytes.

Metalinguage: "Meta" is a Greek prefix meaning "situated behind or beyond". Metalinguage is, therefore, a "language beyond language". ML and Scheme are two languages used by computer programmers.

Meta Tag: An HTML tag that contains information about a Web page. Some search engines, such as AltaVista, use spiders that index Web pages based on meta tags. So, in theory, an HTML or Web page author can control how a site is indexed by search engines and how and when it will be called up during a user's search. Within the meta tag, a keyword tag defines the primary keywords of a Web page. The meta tag can also specify an HTTP or URL address for the page to jump to after a certain amount of time (this is known as client pull). So, a Web page author can control the amount of time a Web page is up on the screen, as well as where the browser will go next.

Modem: A modem is a communications device which allows your computer to connect to the Internet. The word modem is shorthand for modulator/demodulator, which means it converts analog signals into digital signals and vice-versa.

MPEG (Short for: Moving Picture Experts Group):

- **MPEG-1:** Format for compressing video with audio for playback from storage media with low data transfer rates such as CD-ROMs or over the network at VHS quality.
- **MPEG-2:** Format for compressing video with audio at broadcast quality resolution for playback in higher data transfer rate environments. Usually used for real-time encoding in the professional market, satellite digital television (DirecTV, USSB) and for DVDs and other types of video CDs.
- **MPEG Layer 3 or MP3:** Format for compressing audio only defined in both MPEG-1 and MPEG-2. Commonly used for digital music played on personal computers (MP3 songs) but also targeted at applications such as digital phones and new hardware MP3 players intended as Discman or car CD player replacements.

Multimedia: The Web's integration of audio, video, graphics and text.

Navigation: The art of moving among the information services on the Internet. Navigation is most often associated with using a browser to locate information on the WWW. In order to navigate the Internet, you must start somewhere. One common point of origin is a search engine. From there it is very easy to locate other destinations and jump to them. There is no single starting point for the Internet; instead, each person has to choose where to begin by either typing in a known URL, grabbing a link from a Hot List or using the default home page of a browser. Learning to navigate, not just jump from place to place randomly, is a skill that takes time to acquire. Knowing how to locate specific pieces of information or places quickly will increase the benefits of having Internet access.

Navigation Bar: A graphic or set of graphics which act as control buttons to move among the pages of a Web site. Often an image map is used as a navigation bar so that one image can be used to handle all the possible options. A navigation bar can be anything from a simple image of buttons to complex animated VRML graphics.

Netizen: Refers generally to users of the Internet, bulletin boards, online services, Usenet newsgroups, and e-mail networks. The term suggests participation in a social and intellectual community with implications of the need for civic responsibility, such as the need to examine the FAQ before posting on a

newsgroup, not posting to more than one newsgroup at a time, and avoiding using anonymous FTP during high-use business hours.

Netiquette: A pun on "etiquette" refers to proper behavior on a network. In general, it is a peer group effort to remind users to respect the rights of others in a medium that can be impersonal and subject to abuse. Its main focus is on acceptable behavior on newsgroup and mailing list postings.

Newsgroup: An Internet "site" centered around a specific topic or course. Some newsreader software can "thread" discussion so there can be various topics centered around a central theme. An advantage over e-Mail is that the messages are archived and don't reside in your e-mail account, taking up your memory, unless you set up a "sent mail" or "carbon copy" option. The messages can often be threaded according to a particular discussion.

On Demand: Refers to stored content that users can access whenever they want, as opposed to live or one-time-only broadcast events.

Open Thread: A post on a blog or frequently updated website where readers may comment and discuss any topic that they choose. Usually more useful on popular blogs with large amounts of traffic, open threads are often used when the author of the blog has no subject matter to post on or there is a lull in posting. Open threads are also used to break up the monotony of posts on the main pages of blogs - comments may build up on content oriented posts therefore authors use the open threads so page load times wont be slowed down.

Opt In (a.k.a. permission-based): The act of explicitly requesting an e-mail distribution. For example, when you sign up to receive an e-Mail newsletter, you are "opting" to receive it. "Double opt-in" means that a user has requested a subscription and then confirmed it by responding to an autoresponder's follow-up message. Web sites and other online entities must provide a way for users to opt-out-that's what separates legitimate e-mail from spam.

Opt Out: When a user requests to be removed from any kind of online program. For example, if you no longer want to receive an e-Mail newsletter, you have the ability to opt-out. Note that there is a difference between opting out and unsubscribing. You may only unsubscribe to something you have previously subscribed to, but you may opt-out of something you have never even joined in the first place. For example, if you fill out an online form to register or sign up for something, you may see a "yes" automatically checked in a radio button to indicate that you wish to receive something. Unless you manually uncheck the yes, you will be added to some kind of marketing list. Opt-out also refers to a type of service that assumes inclusion unless informed otherwise.

Page: A block of information, such as a document or a file, on the World Wide Web. Pages are written in HTML and can contain graphics, audio, and video.

Password: A form of secret authentication data that is used to control access to a resource. The password is kept secret from those not allowed access, and those wishing to gain access are tested on whether or not they know the password and are granted or denied access accordingly.

The use of passwords goes back to ancient times. Sentries guarding a location would challenge for a password. They would only allow a person in if they knew the password. In modern times, passwords are used to control access to protected computer operating systems, mobile phones, cable TV decoders, automated teller machines (ATMs), etc. A typical computer user may require passwords for many

purposes; logging in to computer accounts, retrieving e-Mail from servers, accessing files, databases, networks, web sites, and even reading the morning newspaper online.

Despite the name, there is no need for passwords to be actual words; indeed passwords which are not actual words are harder to guess (a desirable property). Note that *password* is often used to describe what would be more accurately called a pass phrase. Passcode is sometimes taken to imply that the information used is purely numeric, such as the personal identification number (PIN) commonly used for ATM access. Passwords are generally short enough to be memorized.

Phishing: In computing, *phishing* is a form of Social engineering, characterized by attempts to fraudulently acquire sensitive information, such as passwords and credit card details, by masquerading as a trustworthy person or business in an apparently official electronic communication, such as an e-Mail or instant message. The term *phishing* arises from the use of increasingly sophisticated lures to “fish” for users’ financial information and passwords. With the growing number of reported phishing incidents, additional methods of protection are needed. Attempts include legislation, user training, and technical measures.

PHP (Hypertext Preprocessor): Open source, server-side HTML scripting language used to create dynamic Web pages. PHP is embedded within tags, so the author can move between HTML and PHP instead of using large amounts of code. Because PHP is executed on the server, the viewer cannot see the code. PHP can perform the same tasks as a CGI program can do and is compatible with many different kinds of databases.

Pixel: (Also known as pel) is an acronym for PICTURE ELEMENT. Your screen is divided into millions of pixels, which are actually dots of light. A pixel is the smallest unit on your computer screen or in your computer's memory that forms an image.

If a pixel contains only two colors (such as black and white), it can be encoded by a "bit" of information. A bit (BINARY digiT) is the smallest unit of information that a computer can have, and it can hold the value of only 0 or 1. On a monochrome screen (one that can display only one color against a light or dark background), a pixel varies only in brightness. On a color monitor, however, each pixel has not only brightness, but also color, created by combinations of red, green, and blue (RGB).

POP Mail: Post Office Protocol is a system on the Internet utilized to get E-mail. A mail server is used to get the mail before it is downloaded to your computer.

POP: Point of Presence is an Internet server strategically and geographically located within an Internet Service Provider's network configuration. The more POPs within a providers network, the more reliable the service.

Portal: A Web site "gateway" that provides multiple services, which could include Web searching capability, news, free e-Mail, discussion groups, online shopping, references and other services. A more recent trend is to use the same term for sites that offer services to customers of particular industries, such as a Web-based bank "portal," on which customers can access their checking, savings and investment accounts.

PPP: Point to Point Protocol is a scheme for connecting two computers over a phone line or a network link functioning as a phone line.

Propeller-Heads (Geeks): A term used to describe people who are really into computers. To put it bluntly, they are what many of us would call nerds. Propeller-head is specifically used by computer folks to describe a sub-group within their population. It is, therefore, a part of the computer industry's jargon.

Protocol: An agreed-upon method by which computers communicate with each other in a network. The Internet and WWW operate using a series of protocols to specify different types of data transfer.

Proxy: A proxy server keeps a cache of information about pages on the Internet. If you use it, it helps to make browsing the web faster because it stores copies of web pages in a place that's closer to you. Most large organizations will use a proxy server to save on Internet access.

Pull: The ability to request information on demand, such as data from another program or computer. The opposite of pull is push, where data is sent without request. The terms "push" and "pull" are used frequently to describe data sent over the Internet. The World Wide Web is based on pull technologies in that a page isn't delivered until a browser requests it. Other examples of pull technologies include PQAs built for wireless devices, Blackberry (a browser-enabled wireless service), and data-ready cell phones and palmtops.

Push: In client/server applications, it is to send data to a client without the client requesting it. The World Wide Web is based on a "pull" technology where the client browser must request a Web page before it is sent. Broadcast media, on the other hand, are "push technologies" because they send information out regardless of whether anyone is tuned in. Increasingly, companies are using the Internet to deliver information push-style. Other examples of push technologies are e-mail, a portal (on a handheld device that supports a microbrowser), paging networks (again Blackberry because it serves more than one function), and file transfer. The most widely used push technology is e-mail, it is a push technology because you receive mail whether you ask for it or not, that is, the sender pushes the message to the receiver.

In programming, "push" is to place a data item onto a stack. In this case, the opposite of push is "pop" which means to remove an object from a stack.

Radio Button: A type of input device used in Web form documents. A radio button marks a series of selections only one of which can be selected. When you choose one of the items, the empty circle (radio button) corresponding to that item is filled in.

RAM (Random Access Memory) and ROM (Read Only Memory): RAM is one of the two basic types of computer memory. It is considered to be the computer's main memory, because it is directly accessible by the CPU (Central Processing Unit).

The two types of computer memory built from semiconductor integrated circuits (IC) and located on the motherboard are RAM (Random Access Memory) and ROM (Read-Only Memory). As noted above, RAM is a computer's main memory. When a computer is first started, the RAM is responsible for supplying the CPU with memory for initializing the computer's systems. In fact, any activity which is accomplished spontaneously (such as striking the keys of a keyboard) is temporarily stored in the RAM.

RAM differs from ROM in that the CPU can read information out of the ROM, but cannot write to it as it can with RAM. Information such as certain embedded parts of operating systems are stored in a ROM chip by manufacturers. Another important distinction is that the information in the RAM gets lost when its power supply is turned off (normally the main power supply of the computer), whereas information storage in the ROM is independent of electrical power supply. RAM can be accessed in a nonsequential

order by electronic switching among different memory locations without increasing access time. This distinguishes it from other non-IC memory devices such as a magnetic disc or hard drive, where it is faster to access locations sequentially because the drive head has to be physically moved to another disc location. The counterpart of the hard drive is the CD-ROM.

If the electricity goes out before you have saved a file, the file will probably be lost forever because the RAM is responsible only for quick, executable commands. When a program is launched, it must be copied from the secondary memory (ROM) to the main memory (RAM) in order for the computer to run it. RAM memory is associated with the computer's memory chip, while ROM describes the memory available on a hard or floppy disk. There is a good reason for having these two types of memory. A computer chip works much faster than a computer disk; if a disk were responsible for providing the CPU with memory, it would take much longer to run programs.

Relational Database: A collection of data organized on the basis of logical or natural association between items. Relational databases provide the basis for Web search programs. There are three traditional types of database management systems: hierarchical, relational, and network. (Object-oriented database systems are currently in development.)

Relational databases are commonly structured as a series of tables. The rows represent records and the columns represent fields that are common to all records. The data is controlled by a database management system (DBMS). Current popular database systems include Oracle, Microsoft's SQL Server, IBM's DB2, SQL/DS, and IMS, and smaller consumer products such as dBase, Access, FoxPro, and Paradox. A number of programs automatically explore the World Wide Web, building databases of titles, headings, and URLs. These databases form the basis for Web search programs.

Reboot: A lot of people like to kick their computers. A reboot, however, usually means shutting down your computer or modem and then restarting it. Unless your computer has frozen, it's best to use the shutdown or restart commands. Some modems don't have a reboot button, but you can just power them off and on.

RSS, Rich Site Summary or RDF (Resource Description Framework) Site Summary: An XML format for sharing content among different Websites such as news items. How does it work? A Web site can allow other sites to publish some of its content by creating an RSS document and registers the document with an RSS publisher. A web publisher can post a link to the RSS feed so users can read the distributed content on their site. Syndicated content can include news feeds, listings of events, stories, headlines, etc.

RTF (Rich Text Format): This is a formatting language. Unlike HTML, which is concerned with a document's structure, RTF is geared toward controlling the format of a document. So, while HTML uses commands to indicate things such as lists, headings, and normal paragraphs, RTF uses commands to mark a document's font size, typeface, and style.

Search Engine: A special Web program that searches the contents of a database of available Web pages and other resources. Search engines provide information related to specific topics or keywords supplied by a user. Researching resources on the Web is much easier if you use the right tool rather than following random hyperlinks all over Webspace. Search engines represent a class of software tools that can examine and catalog huge amounts of information in helping you locate Web sites of potential interest to your searching needs. This is how most of them work:

- Somewhere in the background, laboring in obscurity, you'll find automated Web-traversing programs called robots, spiders, wanderers, or worms. These programs do nothing but follow hyperlinks wherever they may lead around the Web. Each time they get to a new Web document, they examine and catalog its contents, saving the information for later transmission to a search engine database elsewhere on the Web.
- At regular intervals these automated information gatherers transmit their recent acquisitions to a remote database, where the information is sifted, categorized, checked, and stored for easy access.
- When users use a search engine, they're actually searching a database that has been created and compiled by the efforts of these data-gathering spiders and robots. These searches are handled by a full-blown database management system that communicates with a CGI program that drives the search engine's user input form, to solicit input and report results.
- Using those keywords or search terms that users provide, the database locates "hits" (exact matches) and also "near-hits" (matches with less than a 100% match of the full set of terms supplied). The best search engines employ something called "fuzzy logic" that allows the engine to systematically look for near hits, as well as outright matches. (This capability makes Excite and InfoSeek both so powerful and useful).
- The database management system returns hits and near-hits to the CGI program, where they're transformed into Web pages that deliver the results of your search request. This latter activity is an excellent example of generating HTML on-the-fly, because these pages are put together only after the results are returned.

Secure HTTP (S-HTTP, HTTPS): A security-enhanced version of HTTP developed by the Internet Engineering Task Force (IETF) in early 1994. It includes built-in encryption to provide more secure communications on the Web.

Server: A networked computer that listens for service requests from clients, and provides responses to legitimate requests. Almost all Internet services are delivered by networked computers that run highly specialized server software, typically at least one program or process for each such service that a machine can deliver. Thus, the computer that delivers Web pages can be called a Web server (though it may serve other things as well), while the machine that delivers Telnet services can be called a Telnet server.

Most Internet servers are members of a server category called "dedicated servers"... that is, they're dedicated to the job of providing one or more Internet services and little if anything else. This is particularly true for servers available to the entire Internet, because of potential demand and usage requirements.

Shaping: Shaping refers to the slowing of your Internet connection speed to normal 'modem speed', to around the speed of a 56k dial up connection. If you have a flat rate broadband plan, shaping will only occur if you have exceeded your monthly download allowance. Although your Internet connection speed will decrease when you are shaped, you will still have full access to the Internet. Once shaped, you remain at modem speed until the next month rolls over.

SHDSL: SHDSL is an ultra high speed DSL technology with the same download and upload speeds. SHDSL is designed for use with databases, VPNs (Virtual Private Networks), and in-house servers requiring remote access.

Shell Accounts: Text based interfaces controlled by the host servers, which normally do not allow for the use of graphic Web browsers.

Shockwave: A three dimensional (3D) animation technology/format created by the Macromedia company. Macromedia Director produces Shockwave files, which can be viewed through a Shockwave player, a browser "plug-in" computer program or other multimedia applications that can access the player. Shockwave can be used to create more sophisticated animations than the Macromedia Flash format. Shockwave uses the .dir file extension for source files and .dcr extension for Shockwave "movies."

SLIP: A software technique for connecting a computer to the Internet. With SLIP, you can dial up a local ISP that offers SLIP to put yourself on the Internet. You are no longer just a terminal. You can Telnet and FTP to other computers and pull their files directly back to your computer, not the ISP's computer.

SMTP: Simple Mail Transfer Protocol is the protocol by which e-mail is routed over the Internet.

Snail Mail: A pejorative term used to describe standard surface mail. It is used by those who have been spoiled by the speed and convenience of e-mail.

Spam: Spam is unsolicited junk email which someone has sent to you. Spam is usually advertising or an attempt to trick you into giving out personal details. About 20 billion spam messages are sent per day that's 7.3 trillion annoying messages a year! You should never reply to a spam message as you'll let the spammers know they can target you.

Spamming: The abuse of any electronic communications medium to send unsolicited messages in bulk. While its definition usually extends to any unsolicited bulk electronic communication, some exclude from the definition of the term "spam" messages considered by the receiver (or even just the sender) to be targeted, non-commercial, or wanted. In the popular eye, the most common form of spam is that delivered in e-mail as a form of commercial advertising. However, over the short history of electronic media, people have spammed for many purposes other than the commercial, and in many media other than e-mail. Spammers have developed a variety of spamming techniques, which vary by media: e-mail spam, instant messaging spam, Usenet newsgroup spam, Web search engines spam, weblogs spam, and mobile phone messaging spam.

Spamming is economically viable because advertisers have effectively no operating costs beyond the management of their mailing lists. Because the barrier to entry is so low, the volume of unsolicited mail has produced other costs which are borne by the public (in terms of lost productivity and fraud) and by Internet service providers, which must add extra capacity to cope with the deluge. Spamming is widely reviled, and has been the subject of legislation in a number of jurisdictions.

Spider: Synonymous with a crawler, this is a program that searches the Internet and attempts to locate new, publicly accessible resources, such as WWW documents, files available in public FTP archives, and Gopher documents. Also called wanderers or bots, spiders contribute their discoveries to a database that Internet users can search by using a search engine. Spider technology is necessary because the rate at which people are creating new Internet documents greatly exceeds any manual indexing capacity (although search directories prefer the manual approach).

Surfing: The act of rapidly navigating through the Net. As one may surf on top of waves, so one surfs over the Net's flow of information. The descriptive moniker also alludes to the very active, dedicated nature of the sport. Also called "cybersurfing", "netsurfing", "websurfing", "surfing the net", etc.

TCP/IP: A set of protocols that were created specifically to allow development of network and internetwork communications on a global scale. Although the origins and definition of TCP/IP date back

over 25 years, TCP/IP remains the most durable and common set of protocols in use in network communications today. TCP/IP supplies extended network capability to machines and networks of different types, using many different operating systems and communicating using a wide variety of technologies, which can include local and asynchronous links, packet radio transmissions, and satellite links.

Telnet: A program that allows you to log onto a remote computer host to execute programs or retrieve data on that host. Telnet provides electronic remote access to data libraries across the country and research organizations around the globe.

Top Level Domain (TLD): A top-level domain (TLD) is the last part of an Internet domain name; that is, the letters which follow the final 'dot' of any URL. For example, in the domain name CommerceConnections.com, the top-level domain is .com (or COM, as domain names are not case-sensitive). A full list of currently existing TLDs can be found at the list of Internet top-level domains on the Commerce Connections website. The Internet Assigned Numbers Authority (IANA) currently classifies top-level domains into three types:

- country code top-level domains (ccTLD): Used by a country or a dependent territory. It is two letters long, for example jp for Japan.
- generic top-level domain (gTLD): Used (at least in theory) by a particular class of organizations (for example, com for commercial organizations). It is three or more letters long. Most gTLDs are available for use worldwide, but for historical reasons gov and mil are restricted to the government and military, respectively, of the USA.
- infrastructure top-level domain: The top-level domain arpa is the only one.

Traffic: The amount of user activity on a Web site. Visitors who have received some form of compensation are known as "incentivized traffic." Also known as "Page Impressions" or the number of times a Web page is requested from a server. This is the preferred counting method for traffic measurement (instead of hits) because it only counts documents, not individual files. A single HTML page is counted as one page impression. In another sense, the millions of data packets that stream through cables, cords, glass, and air are commonly referred to as "traffic."

Upload Speed: Broadband plans are expressed in terms of download and upload speeds. If you are sending a big file (say the riotous photos of your last birthday bash) the time it takes to leave your outbox is the upload speed.

URL: Uniform Resource Locator is the equivalent of a phone number or an office address. A URL represents the exclusive address of a page of information on the Internet.

Usenet/Usenet News Groups: A collection of approximately 14,000 forums covering a wide variety of topics that exist on the Internet (some are very good and some are really very bad). News Groups are organized around specific subjects and topics and include participants from all over the world.

Vector: A line in computer graphics designated by its end points (x-y or x-y-z coordinates). A vector layer does not use pixels for storing image information. Instead, it stores a vector object as a set of properties that describe its attributes, dimensions, and position in the image. Each time an image is opened, these properties are used as instructions for drawing the objects. Because the objects are independent elements, you can move them without affecting the rest of the image.

Virus: Computer viruses are malicious programs which attack your computer. A bad computer virus can delete files and make your computer run at snail pace. Opening an email with an infected attachment is the most common way to get a virus. Some viruses now even fake messages from your friends to try to trick you into catching them. Luckily, you can protect yourself by running an anti-virus program which stops viruses. Common anti-virus programs include Norton AntiVirus®, McAfee VirusScan®, and Virex®. They are worth every penny!

Virtual Community: A term commonly used to describe a group of people who exchange ideas through computer networks, listservs, newsgroups, and Web-based bulletin boards. They might not ever meet face-to-face. Generally these people meet over the long-term, on a regular basis, and share their ideas about a variety of subjects, depending upon their special interest. The discussions could relate to hobbies, music, health, self help issues, professional and scholarly activities.

VLAN: A Virtual Local Area Network. VLAN is a group of devices on one or more LANs that are configured (using management software) so that they can communicate as if they were attached to the same wire, when in fact they are located on a number of different LAN segments. Because VLANs are based on logical instead of physical connections, they are extremely flexible.

VPN: A Virtual Private Network, a private data network that makes use of the public telecommunication infrastructure, maintaining privacy through the use of a tunneling protocol and security procedures.

WAN: A Wide Area Network. This is a network which covers a wide distance. The Internet is the largest WAN in the world.

Web Bot: A term that applies to programs/applets (macros and intelligent agents) used on the Internet. Such bots perform a repetitive function, such as posting messages to multiple newsgroups or doing searches for information.

Web Crawler: A web crawler (also known as a web spider or ant) is a program which browses the World Wide Web in a methodical, automated manner. Web crawlers are mainly used to create a copy of all the visited pages for later processing by a search engine, that will index the downloaded pages to provide fast searches. A web crawler is one type of bot, or software agent. In general, it starts with a list of URLs to visit. As it visits these URLs, it identifies all the hyperlinks in the page and adds them to the list of URLs to visit, recursively browsing the Web according to a set of policies.

Web Development: The developing of a Web Site, including the planning, flowcharting, design and scanning of graphic images to the writing and editing of the text, HTML, and Java programming, testing, and finally, installation.

WebMaster: Responsible for Web software maintenance, and ensuring that the latest versions of network software are installed and functioning properly. While WebMasters are responsible for updating information, verifying the accuracy of links, and making additions, they are not necessarily responsible for the written content of a Website; a WebMaster is not necessarily the author of his Web.

Web Server: A server dedicated to storing data, such as Web pages, and distributing it on the World Wide Web. There were approximately 6000 Web Servers in 1994. Today there are over 250,000.

Wireless Broadband: Wireless Broadband is an ultra high speed Internet connection similar to SHDSL that does not require a phone line and is primarily used by business customers outside DSL enabled areas.

Wireless Network: A method using infra-red, ultra-violet or radio waves, of connecting computers into a network.

Worm: A destructive computer program that replicates itself throughout your computer's hard drive and memory. Worms use up the computers resources and pull the system down. Worms can be spread via mass e-Mailings if the user opens an attachment. A program that moves through a network and deposits information at each node for diagnostic purposes or causes idle computers to share some of the processing workload.

World Wide Web: A vast worldwide hypermedia system consisting of a network of networks. WWW is the multimedia-enabled layer of the Internet. A hypermedia, information storage system, linking computer-based resources around the world. Computer programs called Browsers enable words or icons called hyperlinks to display, text, video, graphics and sound on a computer screen. The source of the material is at a different location, a different file in the same directory, a file in another computer, which can be located anywhere in the world.

WYSIWYG: An acronym for "what you see is what you get". It refers to a very neat and visually pleasing type of user interface, one in which what you see on your computer screen is what you will see printed on paper. Text editing programs were among the first to use WYSIWYG, but it is now used widely in word processing, graphics programs, and desktop publishing as well. WYSIWYG is pronounced "whizzy-wig".

XML (Extensible Markup Language): A less robust variety of SGML, a system for organizing and tagging elements of a document so that the document can be transmitted and interpreted between applications and organizations. Human readable XML tags defines "what it is," and HTML defines "how it looks." XML allows designers to create their own tags. For example:

```
HTML <font size="2">Jane Doe</font>
      <b>March 27, 1975</b>
      <firstName>Jane</firstName>
XML   <lastName>Doe</lastName>
      <dateBirth>03-27-75</dateBirth>
```

In the HTML version the tags identify formatting options, such as font size and bold. In the XML example, the tags identify the content. Because XML can support business-to-business transactions by making the transmission and interpretation of data easier, it has the potential to become the standard for the exchange of data over the Internet.

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