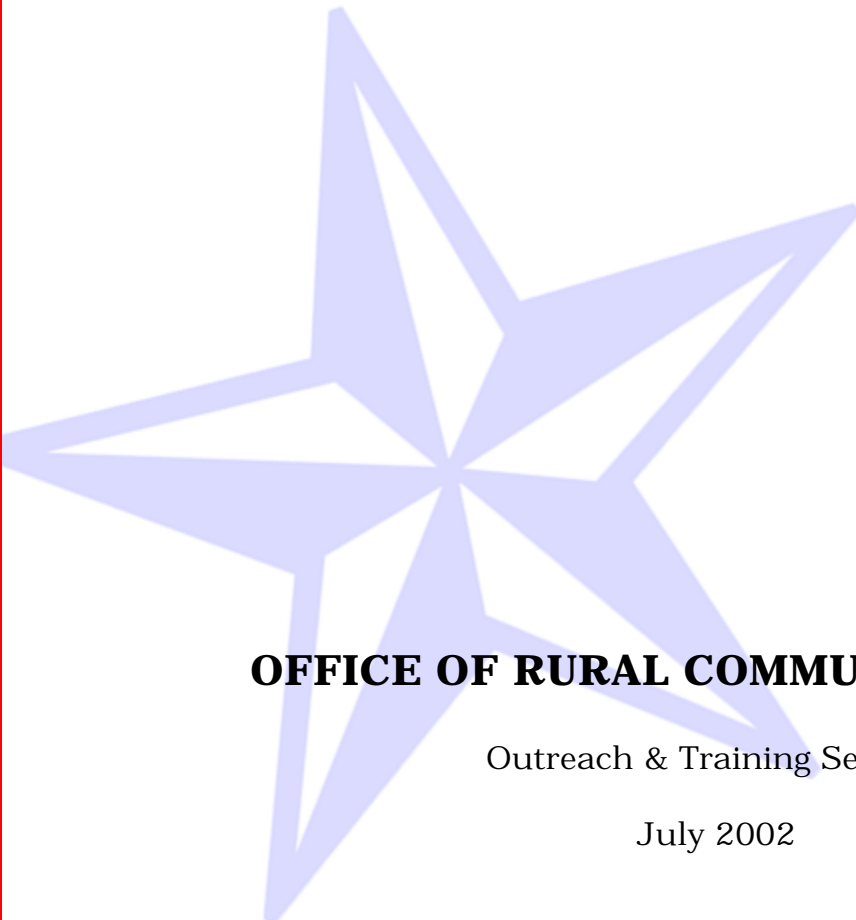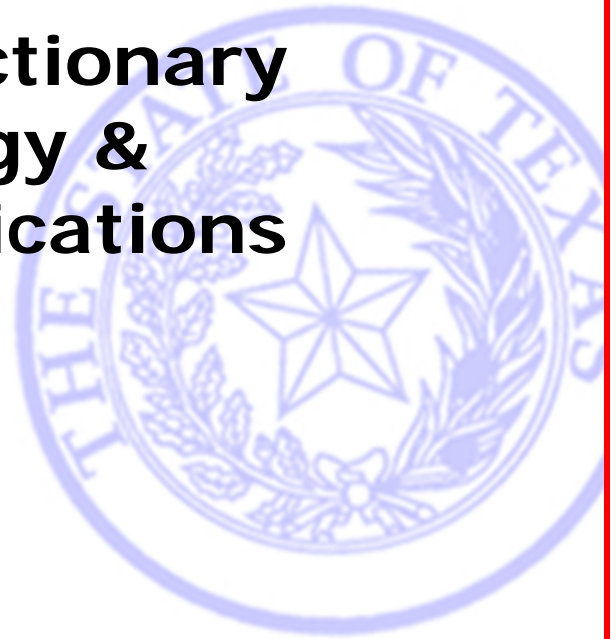# Computer Dictionary Technology & Telecommunications

OFFICE OF RURAL COMMUNITY AFFAIRS

Outreach & Training Services

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Computer Dictionary Technology & Telecommunications

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A Document by the
Outreach and Training Services Unit
Office of Rural Community Affairs

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Introduction

The purpose of this *Computer Dictionary* is to provide a meaningful definition of the important computer and telecommunications words, phrases, buzzwords, and technical terms used in the world of computers and the Internet. While this document is comprehensive, it does not contain every definition possible.

The level should be adequate to provide an explanation of the technology with minimum use of technical terms, and is thus directed towards the lay person.

In the last 100 years, we have seen the extraordinary acceleration of the development of technology. This era has spawned the invention of countless information-based products and allowed us to contact people worldwide, regardless of time and location. The quantity of information available to us is without bounds. However, this need for technology has created the need for a computer-literate workforce. It is the hope that this document will provide the basic knowledge for rural Texans to begin the path towards computer literacy and understanding.

This document is a part of the effort to provide technical assistance, training, materials, and resources to enable rural communities and Texans to move into the Digital Age through the use of technology, computers, high-speed broadband communications, and the Internet. It is the larger goal that rural Texas communities should have access to all of the available resources and information on technology and telecommunications. Thus, it is the anticipated outcome that through this assistance and provided resources, rural Texas communities will develop their capacity to fully utilize technology and telecommunications.

A

Active Application
An application which is currently running and is usually the current window in view on the display. In other words, the active application is the one you are currently able to work in, entering text, creating pictures, browsing the Internet, etc. See **Active Window**, **Application**, **Foreground**.

AC
Alternating Current. The type of electricity that comes out of wall outlets. Some devices, such as laptop and notebook computers, need to use AC adaptors. See **DC**.

AC Adaptor
A Device which transforms AC electricity into a form that a device with special power requirements such as some laptops and notebooks can use. See **AC**.

AC Adapter

Accelerator
Any type of computer hardware that makes something work considerably faster, similar to pressing the "pedal to the metal" in your car. See **Graphics Accelerator**, **Hardware**.

Access Number
The telephone number(s) dialed by the computer modem that lets you connect to the Internet or other online service. See **Internet Service Provider (ISP)**.

Active Matrix Screen
A type of Liquid Crystal Display screen used on portable computers and in desktop displays. In an Active Matrix display, there is a separate circuit for each "dot" or pixel, allowing each pixel to be activated completely independently. This allows high-quality display of movies and computer games. Active Matrix displays provide a sharp, clear image with good brightness and contrast. See **LCD**, **Pixel**.

Active Server Page (ASP)
A Web page technology developed by Microsoft that allows for enhanced, user interactive Internet browsing sessions. Active Server Web pages provide this functionality using embedded computer program instructions along with the standard HTML Web page formatting instructions. The primary use of Active Server Pages is to interact with database and other programs. See **Database**, **HTML**, **Web Browser**, **Web Page**.

Active Window
In Windows, the window containing the text or graphics that will currently be affected by all cursor movements, commands and keyboard entries. See **Background**, **Cursor**, **Foreground**, **Window**.

Administrator
1) A person in an organization who is responsible for setting up and maintaining computer software or hardware or networks. See **Network**.
2) In Windows, the name of the user that has unlimited access privileges and can perform any and all operations on the computer. See **Root**.

Agent
A software program that automatically searches online information based on your specifications. Agents are sometimes called "bots". See **Search Engine**.

AGP
Accelerated Graphics Port. A PC high-speed expansion card interface that is dedicated for a graphics display adapter or video card. High resolution graphics, video, and animation require fast hardware in order to properly display the images smoothly, without loss of information. Today, AGP-based video cards are the current standard. See **Bus**, **Display Adapter**, **Expansion Card**, **Interface**, **Port**, **Resolution**.

Analog
Analog refers to natural events that continuously change, such as movement, temperature, and sound. For example, the sounds your voice produces or the flow of electricity in a wire describe the nature of the "real" world. The measurement of analog events consists of representing the original object and any changes using exact physical values and then collected continuously, like showing the temperature with a mercury thermometer or recording music with a tape recorder. See **Audio**, **Digital**.

Anonymous FTP
See **FTP**.

Anti-Virus
Software that checks a computer for computer viruses and attempts to eliminate them before damage occurs. The software scans files on the disk drive(s), scans E-mails, and scans files that have been downloaded from the Internet or other remote computer. The software can either check for viruses by manually performing the scan operation or can be set up to automatically check for viruses in the background. See **Virus**.
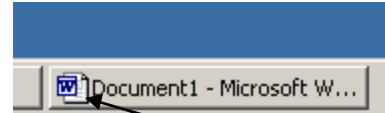
Application

A computer program. Files such as Microsoft Word, Excel, PowerPoint, etc. are applications. Applications give the computers instructions which provide the user with tools to accomplish a task or a certain type of activity. For instance, a word processing application provides space to type in, a means to format the text, and a spelling checker. See **Operating System**, **Program**, **Program File**, **Software**.

Application

Application Icon

In Windows, a picture that represents a running application. This icon appears only after you start an application and then minimize it. See **Application**, **Icon**.

Application Icon

Application Service Provider (ASP)

A company that hosts software applications or services on servers within its facilities. Customers rent the use of the applications and access them over the Internet or over a private connection. See **Internet**, **Server**.

Architecture

The structure and organization of a computer's hardware, or system software, including items such as the CPU type, bus type, etc. See **Bus**, **CPU**, **Hardware**, **Software**.

Arrow Keys

See **Cursor Keys**.

ASCII

American Standard Code for Information Interchange. Pronounced "ask-ee". ASCII is the worldwide standard for representing all of the lower and upper case letters of the alphabet, numbers, and punctuation marks using a unique computer code (or number) for each character. There are 256 characters in the complete ASCII character set. For example, when you press the "A" key on the keyboard, the computer translates it into "01000001" binary code or 65. ASCII characters are used to store text information on computers. See **Binary**, **Character**, **Character Set**.

```
                Standard ASCII                      Extended ASCII
      The first 32 characters are                        (DOS)
              control codes.

  0  Null             |33  !|81  Q||128 Ç|174 «|220 █
  1  Start of heading |34  "|82  R||129 ü|175 »|221 █
  2  Start of text    |35  #|83  S||130 é|176 ░|222 █
  3  End of text      |36  $|84  T||131 â|177 ▒|223 █
  4  End of transmit  |37  %|85  U||132 ä|178 ▓|224 α
  5  Enquiry          |38  &|86  V||133 à|179 │|225 β
  6  Acknowledge      |39  '|87  W||134 å|180 ┤|226 Γ
  7  Audible bell     |40  (|88  X||135 ç|181 ╡|227 π
  8  Backspace        |41  )|89  Y||136 ê|182 ╢|228 Σ
  9  Horizontal tab   |42  *|90  Z||137 ë|183 ╖|229 σ
 10  Line feed        |43  +|91  [||138 è|184 ╕|230 µ
 11  Vertical tab     |44  ,|92  \||139 ï|185 ╣|231 τ
 12  Form feed        |45  -|93  ]||140 î|186 ║|232 δ
 13  Carriage return  |46  .|94  ^||141 ì|187 ╗|233 θ
 14  Shift out        |47  /|95  _||142 Ä|188 ╝|234 Ω
 15  Shift in         |48  0|96  `||143 Å|189 ╜|235 δ
 16  Data link escape |49  1|97  a||144 É|190 ╛|236 ∞
 17  Device control 1 |50  2|98  b||145 æ|191 ┐|237 ø
 18  Device control 2 |51  3|99  c||146 Æ|192 └|238 ∈
 19  Device control 3 |52  4|100 d||147 ô|193 ┴|239 ∩
 20  Device control 4 |53  5|101 e||148 ö|194 ┬|240 ≡
 21  Neg. acknowledge |54  6|102 f||149 ò|195 ├|241 ±
 22  Synchronous idle |55  7|103 g||150 û|196 ─|242 ≥
 23  End trans. block |56  8|104 h||151 ù|197 ┼|243 ≤
 24  Cancel           |57  9|105 i||152 ÿ|198 ╞|244 ⌠
 25  End of medium    |58  :|106 j||153 Ö|199 ╟|245 ⌡
 26  Substitution     |59  ;|107 k||154 Ü|200 ╚|246 ÷
 27  Escape           |60  <|108 l||155 ¢|201 ╔|247 ≈
 28  File separator   |61  =|109 m||156 £|202 ╩|248 °
 29  Group separator  |62  >|110 n||157 ¥|203 ╦|249 ·
 30  Record separator |63  ?|111 o||158 ₧|204 ╠|250 ·
 31  Unit separator   |64  @|112 p||159 ƒ|205 ═|251 √
 32  Blank space      |65  A|113 q||160 á|206 ╬|252 ⁿ
                      |66  B|114 r||161 í|207 ╧|253 ²
                      |67  C|115 s||162 ó|208 ╨|254 ■
                      |68  D|116 t||163 ú|209 ╤|255
                      |69  E|117 u||164 ñ|210 ╥|
                      |70  F|118 v||165 Ñ|211 ╙|
                      |71  G|119 w||166 ª|212 ╘|
                      |72  H|120 x||167 º|213 ╒|
                      |73  I|121 y||168 ¿|214 ╓|
                      |74  J|122 z||169 ⌐|215 ╫|
                      |75  K|123 {||170 ¬|216 ╪|
                      |76  L|124 ||||171 ½|217 ┘|
                      |77  M|125 }||172 ¼|218 ┌|
                      |78  N|126 ~||173 ¡|219 █|
                      |79  O|127 ⌂||
                      |80  P|
```

Asynchronous
Refers to a type of data communications where the transfer of data can occur without time coordination or independent of other events. Dial-up connections using a modem is considered "asynchronous" communications. See **Communications**, **Modem**.

Asynchronous Transfer Mode (ATM)
A communications method for both local and wide area networks (LAN's and WAN's) that supports transferring voice, video, text, and images simultaneously at high speeds. See **Asynchronous**, **LAN**, **Network**, **WAN**.

Attachment
Any type of file, such as a spreadsheet, database, pictures, audio, or program that is physically linked to an E-mail and sent along to the E-mail destination together. Just about all E-mail software programs (Outlook, Netscape, Hotmail, AOL, Eudora, etc.) support file attachments. See **E-mail**, **File**, **Software**.

Audio
The range of sound frequencies that a human can hear (approximately 20 Hz to 20,000 Hz). Early audio devices were analog, because they reproduced the sound by regenerating the original frequencies in a continuous form. Radios carry the audio signal from the antenna to the speaker. Sound was recorded magnetically on audio tapes or pressed into phonograph records for consumers to listen to their favorite bands and musicians. Now audio is converted into a digital format by computers and stored on audio CD's for playback on computers or audio CD players. See **Analog**, **Audio File**, **CD-ROM**, **Digital**, **Digitize**, **Hertz (Hz)**, **Sound Card**.

Audio File
A computer file that contains music or sound that has been converted into a digital format. The sound quality is identical to the original and can be copied over and over without any loss of quality. Some common computer audio files are .AIFF, .MID, .MP3, .WAV, .WMA. Microsoft Windows supports all of these popular audio files with programs (Windows Media Player) to playback and some record capability. The standard audio file, also called sound file, for Windows is the .WAV file and for Apple the .AIFF file. See **Extension**, **MIDI**, **MP3**, **SDMI**.

Authentication
The confirmation of a computer user's identity using passwords, keys, smart cards, fingerprints, voice, retina scan, etc. for security purposes. See **Password**.

AUTOEXEC.BAT
A batch program (set of commands) that is automatically carried out by Windows or MS-DOS whenever the computer is started or restarted. The file contains basic startup commands that help configure the system. See **MS-DOS**.

AVI
A digital video movie format created by Microsoft. AVI is short for "audio/video interleave", which uses a method of including a digital movie and its accompanying sound in the same file. Files in the AVI format have the .AVI extension. See **Audio**, **Digital**, **Extension**, **MPEG**, **QuickTime**, **Video**.

B

Back/Forward Buttons
Toolbar buttons on a Web browser with arrows or text indicating back or forward. These buttons open the previous or next document in the browser's history folder. The back button allows you to return to the previous document viewed. See **History**, **Toolbar**, **Web Browser**.

Back/Forward Buttons

Backbone
A network that connects other networks. It handles the major traffic, employs the highest-speed paths in the network, and may also run the longest distance. Smaller networks are attached to the backbone. However, a backbone can cover a large geographic area or it may be as small as in a single computer. See **Network**.

Background
1) The area behind and outside the active window, including the desktop and any other application windows or icons.
2) Software applications can run in the "background". These applications are still running but are not in the active window and run without user intervention, often hidden from view by the user. See **Active Window**, **Foreground**.

Backup
Creating extra copies of files in case the original copies are damaged or destroyed. For example, consider making at least three copies of important files - one copy on your hard disk, one copy on removable media (floppy disk, Zip cartridge, or special tape cartridge), and another copy stored off-site in a fire-proof safe. Backups can be done daily, weekly, monthly, etc., depending on the importance of the information and how often the information drastically changes. See **Floppy Disk**, **Hard Disk**, **ZIP drive**.

Bandwidth
The amount of information a wire or other communications or network connection can carry, in a form of electrical pulses or light pulses, at any given time. For example, a standard voice telephone connection has a bandwidth of 3 KHz (3000 pulses per second) as compared to a standard Ethernet digital network connection that uses from 10 to 100 Mbps (million bits per second) The greater the bandwidth, the faster the data can be transferred. As an example, bandwidth becomes important when using the Internet.

Bandwidth

9
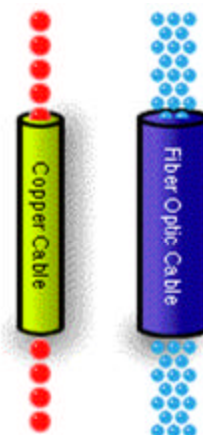
When a lot of people are using the same lines to access the Internet as you are, the network becomes crowded and often clogs up, causing the speed of the data flow to slow down. The more bandwidth a network has, the less likely you will experience this slowdown. See **Audio**, **Broadband**, **Communications**, **Kilohertz (KHz)**, **Mbps**, **Network**.

BASIC
Beginners All-Purpose Symbolic Instruction Code. An easy to learn, popular computer programming language. See **Compiler**, **Programming Language**.

Batch File
An ASCII text file which contains a list of DOS commands and program names. When the batch file is run, the commands and programs are run in sequence just as if you had typed them at the MS-DOS prompt. Batch files are distinguished by their ".BAT" suffix. See **MS-DOS**.

Baud Rate
Speed at which information is transferred, usually referring to the speed of computer modems. Normally measured in bits-per-second or Bps. See **Modems**, **Bps**.

BBS
See **Bulletin Board System**.

Benchmark
Test of performance of a computer or peripheral device, such as measuring how fast a computer can draw pictures on the screen, or complete a series of mathematical calculations. While benchmarks can offer seemingly objective tests of performance, the best test is to use the computer or peripheral with the applications and files you will actually be using.

Beta
A conventional designation of pre-shipping release software or hardware. A beta version of software is sometimes publicly available, but normally is only available to selected users called beta testers. Beta software is usually somewhat unstable, and may have more bugs than a regular release. Beta testing is a way of getting users to pre-test the software or hardware in order to correct as many problems as possible before the release date.

Binary
Means "two" and refers to a basic principle used in computers. Every computer function is based on two digits, 0 and 1. Since computers are electrical devices, they can only deal with "off" or "on". Thus "off" is represented by 0 and "on" represented by 1. A series of combinations of 0's and 1's is used to express all of the information and numbers stored in a computer. See **ASCII**, **Binary Numbers**.

Binary File
A file containing information that is not text information, but either data or a computer program that contains instructions for the computer to execute. Binary files are said to be in "machine-readable" format, meaning the information can only be understood directly by the computer. See **Text File**.

Binary Numbers
Binary numbers have only two digits, 0 and 1, while decimal numbers use 10 digits, 0 through 9.

Binary	Decimal
0	0
1	1
10	2
11	3
100	4
101	5
110	6
111	7
1000	8
1001	9
1010	10

Binary Transfer
Method of transferring files to or from a remote computer in which all eight bits of each byte are transferred. In a text transfer, the eighth bit is ignored.

Binhex
A file format for encoding binary files as text files, for easier transfer between computers. Binhex files usually have the suffix ".hqx".

BIOS
Basic Input Output System. An essential set of computer programs permanently stored on the computer motherboard and provides an interface between the PC hardware and the operating system. The BIOS supports the initial startup, prepares the computer for operation, and ultimately loads the operating system. Computer manufacturers provide BIOS updates to maintain compatibility with new peripherals. Most PC's store the BIOS on a flash memory device that can be upgraded via software obtained from the manufacturer's Web site or via direct mail on floppy disk or CD-ROM. See **Flash ROM**.

Bit
Binary digit. The smallest unit of digital computer information. It is a single digit in a binary number, either 1 or 0 (On or Off). Groups of bits make up storage units in the computer called "bytes", "characters", or "words" and can be manipulated as a group. The most common is the byte, made up of 8 bits and equivalent to one alphanumeric character. Bits are widely used as a

measurement for data transmission, i.e., 10 Mbps means ten million bits are transmitted per second. See **ASCII**, **Binary**, **Byte**.

Bitmap
A picture or image stored as a pattern of dots (pixels) where each dot corresponds to some part of an object and is represented by a bit or set of bits, depending upon whether the picture is monochrome (black & white), color, or shades of gray. The size (and resolution) of the picture or image is described in terms of the number of dots horizontally by the number of dots vertically, i.e., 320x200. See **Graphic File**, **Pixel**, **Resolution**.

Bluetooth
A wireless "personal" network technology for short distance (30 feet or less) communications primarily between portable devices (laptop and notebook computers, PDA's, cellular phones, etc.) and also to desktop devices (computers, printers, etc.). Bluetooth uses radio waves that can transmit through walls. Bluetooth is viewed as a "wireless cable replacement". See **802.11**, **LAN**, **Network**, **PDA**, **Wireless LAN**.

Bluetooth

BMP
Short for "bitmap". A file format for storing pictures or images. This is the standard file format used for desktop "wallpaper" in Microsoft Windows. See **Bitmap**, **GIF**, **Graphic File**, **JPEG**.

Boolean
A common set of rules and concepts of logical operations for comparing data conditions, including LESS THAN, GREATER THAN, EQUAL TO, AND, OR, or NOT that result in true or false rather than an arithmetic result. Used often to specify the conditions of a search using a search engine on the Internet, such as Google, Yahoo, or MSN. For example, if you wanted to use a search engine to locate some information, you could search for "chocolate AND cake AND recipes" to find recipes for chocolate cake.

Bookmark
A way to save the URL of a Web site in order to easily return to it later. Typically a function provided by the Internet browser and is saved or stored on the local computer. See **URL, Web Browser**.

Boot
The start up of the computer and loading of the operating system. The term comes from "bootstrap", since bootstraps help you put on your boots. Booting the computer helps the computer to get started. See **POST**.

Bps
Bits Per Second. Measurement of the speed at which data can be transmitted over a telephone line or computer network.

Bridge
A network device that connects two LAN's together. The Bridge also acts like a traffic cop to direct messages toward a destination and to exclude messages that are intended for other destinations, and to minimize unnecessary network traffic that can clog up the network. A bridge is usually physically located near the network servers and hubs. See **Hub**, **LAN**, **Network**, **Server**.

Broadband
A term referring to high-speed communications lines or services. To understand broadband, think of a single lane of traffic carrying single-passenger cars. The single lane of traffic can only carry so many cars without clogging up. Broadband is equivalent to a four-lane interstate highway, with cars, trucks, buses, and car pools and maybe a rail system in the highway median. Not only do the vehicles carry more people, but there are more lanes or channels combined into a single transmissions path. This is broadband. Broadband Internet access refers to using a T1, DSL, cable modem, or satellite connection to the Internet or a WAN (Wide Area Network). See **Bandwidth**, **Cable Modem**, **DSL**, **Internet**, **Satellite**, **T1**.

Browse
1) In Windows, to look through files and directories and to view the contents of files using programs associated with the type of file. To look at the contents of a database, you would use a database program.
2) To look at Web sites on the Internet. See **Surf**.

Browser
See **Web Browser**.

Buffer
A temporary storage place for information, usually a reserved area of the computer RAM memory. In a computer program, buffers are created to hold some amount of data while it is being used temporarily by the program. See **RAM**.

Bulletin Board System (BBS)
Primarily outdated and replaced by the Internet, Electronic Bulletin Boards are computers running with software which allows callers to leave messages and get information much like an actual bulletin board. Most electronic BBS's can be connected to directly through modem dial-up just like connecting to an ISP, although some can also be accessed through a network. Services that a BBS can offer are conferences on topics of interest and collections of documents (text files, pictures, and sounds). BBS's are often good sources

for software, especially shareware and freeware utilities. See **Internet Service Provider (ISP)**.

Bus
A common pathway, or channel, between multiple devices. On a computer, it is an electrical pathway, or channel, between several circuits, such as between the CPU and memory or between the expansion card connectors on the computer's motherboard. It is called a bus after the fact that a real bus (vehicle) "connects" all of the bus stops on its route, thus an electronic bus goes from its starting point to all of its destinations. Another type of bus is a network bus. An Ethernet network uses a serial bus, which is a common cable connecting all of the points or nodes. See **CPU**, **Ethernet**, **Memory**, **Motherboard**, **Node**, **Serial Bus**.

Byte
The most common unit of computer data, made up of eight binary bits. A byte can represent the equivalent of a single character, a letter of the alphabet, a number, or punctuation, or simply a number. The amount of memory needed to specify one ASCII character; eight bits. See **ASCII**, **Binary**, **Bit**.

C

C
A programming language that has become very popular with programmers. Most of today's software applications are written using this computer language. A computer language such as C is considered a high-level language, meaning it provides a more English-like structure. A C program is converted to the exact machine-specific code that can be directly executed by the computer using a software tool called a compiler. See **Compiler**, **Programming Language**.

C++
An extension of the C programming language. See **Compiler**, **Programming Language**.

Cable Modem
An external modem used to connect a computer to a Cable TV service that provides Internet access. A TV cable Internet connection is considered a high-speed broadband connection. See **Broadband**, **DOCSIS**, **Modem**.

Cache
Pronounced "cash". A cache is used to speed up data transfer. A cache increases speed and efficiency by storing frequently used information and computer instructions and making them instantly available for use by the computer. The larger the cache, the chance that the requested information will be stored in the cache is higher. Since data stored in the cache can be accessed quickly, it speeds up overall data flow. Also the information is read into the cache in larger amounts than actually requested. In many instances, the next request for information will be satisfied by data still stored in the cache, thus improving the efficiency and again, speeding up the process. There are memory, disk, and Web browser caches. See **Web Browser**.
1) Memory and disk caches use very fast RAM memory set aside as a buffer on the motherboard between the CPU and the slower, main memory or physically located on a hard disk drive. Most PC's have two memory caches, L1 (Level 1) and L2 (Level 2). The L1 cache is built in to the PC's CPU and the L2 cache is located between the CPU and main RAM memory. See **Buffer**, **CPU**, **RAM**.
2) Web browser caches hold popular and frequently accessed Web pages for long periods of time to improve performance. See **Web Page**.

CardBus
The 32-bit version of the PC Card. See **32-bit**, **PC Card**, **PCMCIA**.

Cascade
In Windows, a way of arranging open windows in a progressive order on the

desktop so that they overlap each other, with the title bar of each window remaining visible.

Cascading Menu
Also called a hierarchical menu or submenu. A menu that opens from a command on another menu. In Windows, a command that opens a cascading menu has a right arrow next to it. See **Menu**, **Pull-down Menu**.

Cat 5
Defines a type of electrical cable that is used to connect computers, servers, printers, etc. in a LAN (local area network). Cat 5 cable consists of 4 pairs of twisted wires and is capable of supporting data transfers up to 100 Mbps. See **10BaseT/100BaseT**, **Ethernet**, **Mbps**.

CBT
Computer-Based Training. Using a computer as a tool for training and education. CBT programs provide interactive training sessions for literally hundreds of subjects. Most CBT courses are CD-ROM based and use multimedia extensively. See **CD-ROM**, **Multimedia**.

CD-ROM (CD, CDR, CDRW)
Compact Disk-Read Only Memory. Compact Disks typically contain programs or data. Large files of ClipArt and large applications are examples of files which are distributed on CD-ROM. CD-ROMs can hold over 650 MB of data as compared to 1.44 MB for a 3.5 inch floppy disk. CD-ROM's were originally read-only media, but now there are **CDR** (CD Recordable) and **CDRW** (CD Re-Writable) disk drives that allow the user to record content on a blank compact disk. See **Disk Drive**, **Floppy Disk**, **Megabyte (MB)**, **ROM**.
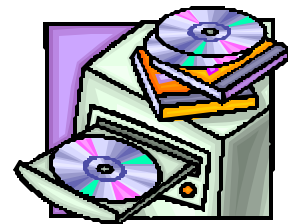
CD-ROM

**Cell**
In a computer spreadsheet application, a cell is the intersection of a row and column. Spreadsheets appear as a series or rows and columns. Usually each column in a spreadsheet is labeled with a letter at the top and each row is labeled with a number at the left. Thus each cell has a unique address, which consists of the column letter and row number (for example, D3). Cells can

contain text, numbers, or formulas.
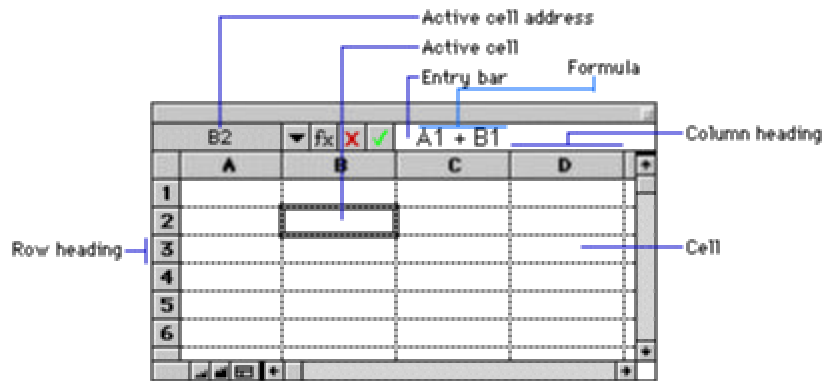
Central Office (CO)
A local telephone company equipment and switching center. A Central Office is usually connected directly to the consumer. Standard telephones lines and DSL lines run from the consumer's home and connect at the Central Office. This connection between the Central Office and your home or business is often called the "last mile". See **DSL**, **POTS**.

Centronics Interface
See **Parallel Interface**.

Certificate of Authenticity (CA)
A computer security ID called a digital Certificate of Authenticity issued by a recognized independent agency, such as VeriSign, after vouching for the identity of a person or company. Used to verify authenticity of information sent electronically and often involves data decryption/encryption. See **Encryption**, **Decryption**.

Character
A single letter, number, or symbol.

Character set
A group of letters, numbers, and symbols that have some relationship in common. For example, the ASCII character set contains all of the standard alphanumeric characters, punctuation, and some symbols. See **ASCII**.

Chat
See **Instant Messaging**.

Check box
In Windows, a small square box that appears in a dialog box and that can be selected or cleared. When the check box is selected, an X appears in the box (alternately, it can be darkened, or identified as selected in another way). A check box represents a selection, option, or function that you can turn off and on. See **Dialog Box**.

Chip
Also called integrated circuit or microchip. A chip is a packaged set of micro-miniature electronic circuits designed for the countless number of computer, consumer, and industrial products. A chip is composed of many thousands or millions of transistors (also called semiconductors), the single logic switch that creates the binary code (0 = off, 1 = on) that the chip uses to perform certain operations. In 1947, the transistor was developed by William Shockley at AT&T's Bell Labs. The integrated circuit or chip was developed by Jack Kilby of Texas Instruments and Robert Noyce of Fairchild in the late 1950's. With the introduction of the microprocessor or computer-on-a-chip, the "personal" computer was made possible. Reducing the size and increasing the speed has been a major priority of the semiconductor industry, which develops and manufacturers the chips. In 1965, Gordon Moore, one of the founders of Intel (the industry leader of microcomputer technology), said that computer chip technology would double in capacity every 18 months. Today this law has reliably predicted the evolution and prices for chip technology. Computers have several different types of chips, all with special functions. Memory chips provide the facility for storing and processing data. Microprocessors are the "brain" of the computer that performs all of the processing of data. Other types of chips provide support for the video display, audio, communications, disk drives, keyboards, mice, etc. The basic material used in the manufacture of chips is silicon, but other materials such as sapphire and gallium arsenide are also used. Chip making is extremely precise. Manufacturing operations are performed in a "clean room", since air particles can carry undesirable particles that can contaminate the process and make the chip worthless. See **Semiconductor**.

CISC
Complex Instruction Set Computer. A type of CPU in which complex, multi-function instructions are built into the hardware of the chip. The Intel Pentium (80x86) Family and the AMD Athlon Family is an example of a CISC processor and is the processor used in the PC. The alternative processor type is RISC. See **Chip**, **CPU**, **RISC**.

CLEC
Competitive Local Exchange Carrier. A company that has the less dominant position in a service area and competes with the primary, local telecommunications provider, i.e., the local telephone company. In Texas, Broadwing Communications, Time Warner, Sprint Communications, etc. are some of the approved CLEC's. See **ILEC**, **POTS**.

Click
In Windows, to select text, an object, or image using the mouse, position the cursor over the text, object, or image and then quickly press and release one of the mouse buttons. For example, clicking on a hypertext link opens that document. See **Hypertext**, **Mouse**.

Click

Client
A computer using services or resources provided by a remote computer, called a server. The client and the server can be in different rooms, buildings, or different geographic locations on the same local area network or wide area network. For example, the "client" computer runs the Internet browser to view the contents of a Web site (server). See **LAN**, **Server**, **WAN**, **Web Browser**.

ClipArt
Collections of pictures and images that may be useful in documents, publications, Web sites, etc. There are thousands of images available for free on the Internet, while others are available for purchase from commercial companies, such as IMSI, Broderbund, etc. ClipArt is usually copyright-free.

Clipboard
A temporary holding area used to transfer text, pictures, or other items between documents and between applications. In Windows, the Clipboard is a reserved memory area. Typically, data is either copied or moved to the Clipboard by using an application's Copy or Cut command, and then copied or moved from the Clipboard to its destination by using the applications' Paste command. In Windows, the Clipboard Viewer is used to see the contents of the Clipboard. See **Copy**, **Cut and Paste**, **Paste**.

Close
To quit an application or "put away" a file. Closing an application means that the computer has stopped it and it is unavailable until the next time you launch it. Closing a file results in a choice to save the file or not. Files not saved are deleted. Saved files will be stored on your hard drive until the next time you need them. See **Application**, **Open**, **Quit**.

Cluster
A group of sectors on a disk. Operating systems typically allocate disk space for files in clusters and is the smallest amount of disk space a file can occupy. The number of sectors per cluster ranges from 8 to 64 sectors, depending upon the total size of the disk drive. For example, a 60 GB disk drive has a cluster size of 32 KB (64 sectors multiplied by 512 bytes per sector). See **Disk Drive**, **Gigabyte (GB)**, **Kilobyte (KB)**, **Sector**.

CMOS RAM
Refers to a small section of non-volatile (does not lose its contents when the computer is turned off) memory used to hold certain hardware configuration settings in PC's, used to initially start up the computer. See **Boot**.

Coaxial cable
A type of electrical cable that is commonly used in communications and video because of its characteristics, especially high-bandwidth and protection from noise interference. It is a two-wire cable containing a solid or stranded insulated wire surrounded by a solid or braided metal shield, wrapped in an

outside plastic covering. The inner wire is the primary wire and the metal shield is the second wire. In your home, coaxial cable is used to provide a Cable TV connection in your den. Coaxial cables are also used in some types of computer networks. See **Bandwidth**.

COBOL
Common Business-Oriented Language. A programming language that is used primarily on large mainframe computers for business programs. See **Compiler**, **Programming Language**.

CODEC
Coder/Decoder. A device that converts audio and video to digital and then compresses the data before sending it. The same process is also used in reverse on data received from the remote computer to convert the data back into the original audio and video for use. See **Compression**.

COM Port
Also called a serial port, which is a connection on a PC, usually named COM1, where you plug in the cable for a serial device. Common serial devices are printers and modems. Serial ports are usually located on the back of the PC, smaller than parallel ports, and usually contain 9 pins (called DB-9). See **Serial Port**.

Command Key
A key found on the keyboards of some computers which provides a keyboard shortcut to execute a command. The performed action is modified by pressing another key in combination with it. On a PC, there are two command keys marked with the Windows symbol and a menu symbol. On an Apple iMac or PowerMac, the command key is marked with the Mac Apple symbol and a symbol resembling a cloverleaf.

Command Line Interface (CLI)
A way of accessing a computer, based on typing commands rather than selecting icons and menu items as with Windows. Extremely popular in the UNIX or Linux Operating System. See **Command Line**, **UNIX**, **User Interface**.

Command
A word or phrase, usually found in a menu, that you choose in order to carry out an action. You choose a command from a menu, or type a command at the Windows Command Prompt or UNIX Console. Some commands are Format, Edit, Open, etc. See **Command Line**.

Command Line
The area on the screen that accepts typed-in commands to run an application or perform a function. You can type commands at the Windows Command Prompt program or the Run dialog box available from the Start Menu in Windows. Interfaces in which you type commands rather than choose them

from a menu are often called command line interfaces. The PC has always had a command line interface. However, only recently has the Apple iMac supported a command line (OS X). See **Command**, **Command Line Interface**, **Dialog Box**.

Command Prompt
Usually refers to the Windows or MS-DOS prompt. The character or characters that appear at the beginning of the command line (usually "C:"), indicating that the computer is ready to receive input.

Communications
The electronic transfer of information from one location to another. Data communications refers to digital transmission, and telecommunications refers to a combination of voice and data, both analog and digital. Networking refers specifically to LAN's and WAN's. However, data communications, telecommunications and networking all fall under the communications umbrella. See **Analog**, **Digital**, **LAN**, **Network**, **WAN**.

CompactFlash Card
Also called CF Card. A CF Card is about a third of the size of a PC Card. Introduced in 1994, CompactFlash memory modules have become widely used for handheld computers PDA's, and digital cameras ("digital film"). There are other types of CF Cards available, including modems, network cards, and serial/parallel port cards. See **PC Card**.

Compatible
The extent to which a computer, peripheral, program or file can work with or understand the same commands, formats, or language as another. For example, if two modems are compatible, they can communicate with each other. Another example, you cannot run an application written only for Windows to run on a computer running UNIX.

Compiler
A program that translates computer instructions (source code) written in a particular programming language into specific, computer-readable instructions (machine code) that can be directly executed by the computer to perform a function or complete a task. This is the process through which computer programs are created. See **Program**, **Programming Language**.

Compression
Compression is the process of removing unnecessary bits of digital information to take up less storage space by looking for repeatable patterns of information. The more patterns that can be found, the more the data can be compressed. For example, text files usually have a large amount of spaces or blanks that can be removed from the file in such a way that it can be restored when the file is needed. Text files can typically be compressed to about 40% of its original size and graphics files from 20%-90%. Some files can be compressed very little. It depends on the type of file and the

compression method being used. Some types of compression methods are lossless, meaning the files can be restored or decompressed exactly. However, audio and video can be compressed to as little as 5% of its original size by using "lossy" compression. Some of the original data is indeed lost during the compression, but the loss is not noticeable to the human ear or eye. Data compression is accomplished by using either computer software or special computer hardware called "codecs" (compressor/decompressor). See **Codec**, **Digital**.

Configuration
The makeup of all your computer's components. The configuration of a computer typically consists of everything that was included when you bought it, including its CPU, memory, disk drives, video card, sound card, CD-ROM drive, operating system, and anything else you might have added to it since then, like a printer or a scanner.

CONFIG.SYS
A text file that the PC reads when booting or loading the operating system. CONFIG.SYS contains custom settings which enable or disable system features, set limits on resources, and extend the operating system functionality by loading device drivers. CONFIG.SYS was primarily used by MS-DOS and Windows 95. The latest versions of Microsoft Windows 2000, Windows ME, and Windows XP, do not require use of CONFIG.SYS. For most PC users, you should not have to worry about CONFIG.SYS, especially if the computer is from a major retail supplier, such as Dell, Compaq, HP, Gateway, Sony, IBM, etc. See **Boot**, **Device Driver**.

Context Menu
In Windows, a menu that appears when you right-click on an object such as a folder or a file. The items in the menu depend on what is appropriate for the object on which the cursor is placed. See **Click**, **Menu**.

Control Characters
ASCII characters which do not print, but give control instructions to the computer or printer. For example, the ASCII code 10 represents LF or "linefeed" and is used to advance to the next line on the screen or on the printer and the ASCII code 13 represents CR or "carriage return" and is used to return to the beginning of a line. In normal PC text files, there is a CR/LF pair of characters at the end of each line of text. You cannot see these two characters, but they are hidden. Without the CR/LF character pair, the text file would contain one single, huge "sentence". Control characters are also used in telecommunications applications to control computer modems.

Control Panel
In Windows, a program or dialog box used to change some of the settings or configuration of the operating system or of the computer. Control panels allow changing keyboard and mouse sensitivity, speaker volume, display colors and resolution, network settings, printer settings, or modem settings.

Control panels are usually part of the operating system, but there are some peripheral devices that come with custom control panels from the manufacturer as part of the software device driver. See **Device Driver**, **Dialog Box**.

Conventional Memory
In a PC or PC-compatible computer, a term from the MS-DOS era, referring to the first 1 MB of memory. MS-DOS and early versions of Windows (3.1, 3.11) required the use of the "conventional" memory space. Today's PC's are not limited to this space, but typically have 128 MB of memory or more. See **Megabyte (MB)**, **MS-DOS**.

Cookie
A small piece of information, when a Web site is accessed, that is sent from a Web server to your computer, and stored on its hard disk. When the Web site is visited again later, the Web server can recall this information. For example, an online Web shopping store might use cookies to remember the contents of your "shopping basket" so that you can resume a shopping session at a later time or some Web sites use cookies to remember your preferences about how you viewed the Web site with the browser, so as to save time when coming back. Cookies are not harmful; they cannot carry computer viruses, they cannot disclose personal information other than what you volunteer, and they don't take up much space on your hard drive. Most Web browsers can be configured to alert you when a Web site wants to send a cookie, so you can either accept it or refuse it. See **Web Browser**, **Web Server**, **Web Site**.

Coprocessor
An additional processor chip which increases the computer's speed by handling specialized chores such as math or graphics.

Copy
To highlight a piece of text or object using a pointing device such as mouse and place it on the computer's clipboard for use in another application. See **Clipboard**, **Cut**, **Paste**.

CPU
Central Processing Unit. Usually refers to the main processor that the computer is built around (such as the Intel Pentium or Motorola PowerPC chip). The CPU, often called the "processor", is located on the motherboard or main circuit board of the computer. See **Microprocessor**, **Motherboard**.

Crash
The sudden failure of a program, computer, or hard drive. A program crash usually means the loss of all your unsaved data and can either require you to restart the program or the entire computer. A hard disk crash can leave your hard drive totally unusable, resulting in the loss of everything on it. See **Backup**, **Hang**, **Reboot**.

CRT
Cathode Ray Tube. A television-like video tube which is the main component in most computer video monitors. See **Refresh Rate**.

Cursor
A symbol used to point to a particular position on the computer screen. In MS-DOS and other character-based displays, the cursor is usually a blinking rectangle or underline and points to a specific character location. In Windows, it is a pointer on the computer screen that moves when the computer's mouse is moved, allowing the user to "point" to a command or position on the screen. It changes shape as it is moved into different windows, from an arrow for selecting items, an I-beam for editing text, or a pen for drawing objects.

Cursor

Cursor Keys
Also called Arrow Keys. Keys used at times to navigate around the screen, especially in text areas. Cursor Keys have arrows pointing up, down, right, and left. Used as navigation alternatives for a mouse or touch pad.

Cut (and Paste)
To select or highlight and then remove something or cut, as with scissors, (text, graphic, table, etc.) from a document. An item or object can be cut, moved to somewhere else in the document, or pasted, as with glue, into another document, or simply deleted. The "cut" item or object is temporarily stored in the Clipboard. See **Clipboard**, **Copy**, **Paste**.

Cyber
The word "cyber" is used as a prefix to associate common words, cybermalls, cyberbanks, cyberlibrary, etc., with computers or the Internet.

Cybercrime
Referring to crime on the Internet, typically related to online fraud, theft, or gaining illegal access to a computer system or network. There are many methods used today to protect computer networks and Web sites and provide security using passwords, secure electronic transmissions, data encryption, biometrics (voice, fingerprints, retina scanning, etc.), firewalls, virtual private networks, etc. See **Cyber**, **Encryption**, **Firewall**, **VPN**.

Cyberspace
Refers to the Internet or to the online, digital world in general and to the computer systems and networks that connects them. See **Cyber**.

CYMB
Cyan, Yellow, Magenta, and Black. A color model used for specifying the colors on printed material. This corresponds to the 4 colors of inks used in most color printers. Colors are created using varying intensities of cyan, yellow, magenta, and black. See **RGB**.

D

Data
An item of information you create and process using your computer. Data can be anything from a word processing document or an electronic (digitized) version of your family's photo album. See **Digitize**.

Database
A structured set of related data that is created and managed by computer software and also used to access and manipulate the data. Databases can contain text, images, sound, or video and be used for financial information, employee records, company sales history, inventories, school grades, birth/death records, etc. See **Data**.

Data Encryption
A process that transforms information into an unreadable or unrecognizable format to protect the content for security purposes. The process is reversed to extract the original information. See **Encryption**, **Decryption**.

Data File
A computer file containing text, pictures, audio, video, or other computer information. See **Audio File**, **File**, **Graphic File**, **Text File**.

DC
Direct Current. Electrical current that flows in one direction and used in electronic circuits, such as computers, TV's, radios, and other electronic appliances. Many portable computers, TV's, and radio's use external power adapters that connect to the standard wall electrical outlet and produce the required DC current. See **AC**.

Debugger
A program or part of a program which aids in locating and correcting errors (bugs) in program code. It is said that the original bug was in fact a moth which found its way into an early computer and caused it to malfunction.

Decryption
The process of unscrambling encrypted computer data, restoring the unrecognizable information back to its original form. The actual method that is used to scramble the data is based on a mathematical process, involving a "key" to perform the calculations. The reverse or decryption process uses the same "key" to unscramble the data. See **Data Encryption**, **Encryption**.

Default Button
In Windows on some of the dialog boxes, the command button that is selected automatically if you press the Enter or Return key on the keyboard

instead of using the mouse. This causes the "default" action to be executed or performed. In most graphical user interfaces (GUI's), the default button has a bold border around it. See **Click**, **Dialog Box**, **Mouse**.

Default Page
Refers to the first page or start page that is displayed when a Web browser is opened. See **Home Page**, **Web Browser**, **Web Page**.

Defragmentation
The process of removing wasted space between the individual fragments of a file on a disk drive. After time, fragmentation occurs when contiguous space is not available on the disk storage device, causing files to load slower and slower. The operating system will split the files into fragments and store the data wherever it can. Defragmentation re-allocates the file storage and moves the file fragments to contiguous locations on the disk drive. Defragmented files load faster! See **Fragmented**.

Degauss
On video monitors, a process that demagnetizes the metal components in the CRT, thus eliminating image distortion that can result from magnetic charges acquired by the components. Some monitors have a built-in degaussing function that can be activated by the user, while some of the newer monitors degauss automatically whenever you turn the monitor on. See **CRT**.

Denial of Service
A type of computer hacker attack that tries to break down a computer, network, or Web site by overloading it with service requests. See **Hacker**, **Virus**, **Web Site**.

Desktop
The term for the background screen in most graphical user interfaces (GUI's) operating systems, such as Windows and is usually what the user sees after the computer is turned on and all of the startup programs have finished loading. See **Graphical User Interface**, **Operating Systems**.

Device
A component of the system's hardware configuration, such as a network card, motherboard, modem, mouse, sound card, or disk drive. Some devices are built-in to the computer, while others are external and added as needed. Device always refers to hardware.

Device Driver
Software that controls how a computer communicates with a device, such as a printer, modem, or video adapter. For example, a printer driver translates information from the computer into information that the printer can understand. Each manufacturer will provide its' own unique driver that is installed into the computer's operating system. Driver "updates" are usually available from the manufacturer's Web site.

DHCP
Dynamic Host Configuration Protocol. A software system that automatically assigns IP addresses to users logging onto a TCP/IP network. It eliminates having to manually assign permanent IP addresses and makes it easier to manage. Dynamic IP addresses are commonly used with Dial-Up connections and ISP's so that IP addresses can be re-used. See **Dial-Up**, **DNS**, **IP Address**, **Internet Service Provider (ISP)**, **TCP/IP**.

Dialog Box
In Windows, a small window that appears temporarily to request information, alert you to a condition, or select the available options for a particular feature in the program. Dialog boxes usually request a response such as "OK to continue" or "Cancel" to stop an operation. For example, a Font Dialog Box would be displayed when the user wants to select and ultimately use a particular font in a word-processing program. Also called a Panel in other GUI operating systems. See **Font**.

Dial On Demand (DOD)
A feature in Windows and other operating systems that will automatically "dial-up" and connect to your ISP whenever a request is made to access the Internet, such as attempting to access a Web site with the Web browser or to attempt to download E-mail. See **Dial-Up**, **Internet Service Provider (ISP)**, **Operating System**, **Web Browser**, **Web Site**.

Dial-Up
The most popular form of Internet connection for the home user. This is a connection using a modem from your computer to a host computer or ISP over standard telephones lines. The maximum available speed for a dial-up connection is 56 Kbps. See **Internet Service Provider (ISP)**, **Modem**.

Digital
Digital refers to any system based on a fixed number of states, rather than continuous or analog, and generated, processed, and stored as a binary number. Computers process all data as digital information. Everything on a computer, from documents to games to music to video is stored in terms of 1's or 0's. Analog data can be turned into digital data by segmenting the samples to a level where human perception is no longer a factor. The term "digital" has become synonymous with computers, technology, and the whole culture that engulfs it. See **Analog**.

Digital Camera
A video or still camera that captures images directly in a digital format rather than using traditional film. Instead of developing the file and producing printed pictures, the images can be transferred to a computer using a serial cable, USB cable, Firewire (1394) cable, or an "electronic film" storage card. As with all digital devices, there is a fixed, maximum resolution and number of colors that can be represented. Digital pictures can also be printed onto

photo-quality paper to produce pictures or uploaded to Web sites for viewing by family and friends from any Internet connection. See **Digital**, **Firewire**, **Flash ROM**, **Serial Port**, **Upload**, **USB**, **Web Site**.

Digitize/Analog to Digital Conversion
The process of converting analog data into digital data for the ultimate purpose of storing the data on a computer for later processing or use. The conversion is done by sampling analog data at very close intervals. The value of the analog data at each interval is then recorded as a digital number. Once the information is captured, it can be easily manipulated to produce a "better than original" version. One common type of device that converts analog to digital is called a scanner that is used for digitizing documents, photographs, or other printed material. The scanner takes a "picture" of the document and produces a bitmap image, which is a digital picture format. See **Analog**, **Bitmap**.

DIMM
Dual Inline Memory Module. A type of pre-assembled computer RAM memory device. SIMM modules are available in 72-pin, 144-pin, 168-pin, 184-pin, and 200-pin formats and support 64-bit wide data. A DIMM memory module plugs into a DIMM socket on the PC motherboard. DIMM memory modules are the main type of memory modules used today. See **64-bit**, **Memory**, **Motherboard**.

Dimmed
A term usually used in GUI's to indicate that a particular command is not available or is disabled. Also sometimes referred to as "grayed out".

DIP Switch
Dual Inline Package. Small on-off switches mounted on PC or computer main or motherboards for the purpose of user configuration. Unless new hardware is added to the computer or the configuration changes, you should not have to worry about them. In most Plug and Play hardware-based PC's, DIP switches are usually not even used. See **Plug and Play**.

Direct Connection
A permanent connection between your computer and the Internet or remote network, usually leased from the telephone company, such as a T1. See **T1**.

Direction Keys
See **Cursor Keys**.

Directory
Part of a structure for organizing and locating files on a
disk drive. A directory can contain files and other
directories (called subdirectories), much like a telephone
directory. The directory can be displayed in alphabetical
order or not. Directories are often referred to as folders
on computers using Windows or other GUI-based
operating system. See **Path**, **Root**, **Subdirectory**.

Directory

Disk Cache
A portion of RAM set aside for temporarily holding information read from a
disk. It is used to make data retrieval faster. See **Cache**.

Disk Drive
A peripheral storage device that holds, spins, reads, and writes magnetic or
optical disks. Information stored on a disk drive remains there even when the
computer is turned off, unlike information stored in memory (RAM). A disk
drive can use fixed media or removable media. A floppy disk can be inserted
and removed from a floppy disk drive, whereas a hard disk is permanently
mounted inside its drive. See **Drive Letter**, **Media**.

Display Adaptor
The specific computer hardware or expansion card that converts (or adapts)
the images and formats the data to be displayed on the computer screen. It
determines the maximum resolution, maximum screen refresh rate, and the
number of colors than can be displayed on the computer video monitor. A PC
display adapter supports both text and graphics modes. On a laptop or
notebook computer, the equivalent hardware is entirely digital, and built into
the motherboard. See **Digital**, **Expansion Card**, **Monitor**, **Refresh Rate**,
SuperVGA, **SXGA**, **VGA**.

Dithered Color
A color produced by a pattern of differently colored dots that simulate the
desired color. A solid color on one device (such as a 256-color monitor) may
be a dithered color on another device. Dithering cannot produce the exact
same results as having the necessary color range. Most PC's today typically
support 65,536 colors to 16.7M (million) colors, thus not requiring dithering.
It is often difficult to accurately reproduce a picture that was created using
true colors on a printer or display that only uses dithered colors and vice
versa. See **Pixel**.

DLP
Digital Light Processing. A video projection technology developed by Texas
Instruments that produces clear, readable images on screens in lit rooms.
DLP technology is highly desirable in all types of projection applications from
small, portable projectors to "electronic" cinema projectors that will
ultimately replace traditional film movie projectors. DLP allows PC video

projectors to be built that are lighter, smaller, brighter, and require less power to operate than current video projectors today. See **Video Projector**.

DNS
Domain Name Server or System. DNS refers to a system of translating Internet domain names into IP addresses, thus letting users locate computers or Web sites on the Internet. The DNS server maintains a list of domain names (host names) and their assigned IP addresses. When a domain name is sent to the DNS server to locate a Web Site, the corresponding IP address is returned to your computer. For example, what this means is that to access Microsoft's Web site, it is much easier to access it using www.microsoft.com than to remember 207.46.197.113. See **Domain Name**, **Internet**, **IP Address**, **URL**.

DOCSIS
Data Over Cable Service Interface Specification. The dominant standard that provides Internet access via cable modems in North America. See **Cable Modem**, **Internet**, **Internet Service Provider (ISP)**, **Modem**.

Document
A data file. Whatever you create with an application, including information you type, edit, view, or save. A document may be a business report, a picture, or a letter and is stored as a file on a disk. See **File**, **Text File**.

Document Window
In most graphical user interfaces (GUI's), a window within an application window. There can be more than one document window open at a time.

Domain
In a computer or communications network, a group of clients, servers, and resources under a single entity.

Domain Name
The name of the specific area of the Internet or network that is associated with a business, school, organization, or individual. A domain name is used to represent the actual IP address. For example, in the www.orca.state.tx.us Web site address or URL, the domain name is "orca.state.tx.us", which represents an IP address of 198.214.43.5. Domain names must be registered, you can't just make one up. You can see if a domain name exists and register it at www.register.com or www.internicregistrations.com. See **DNS**, **IP Address**, **URL**.

DOS
See **MS-DOS**.

Double-Click
Clicking a mouse button twice in quick succession. In Windows, you double-click the left mouse button to "open" a folder or execute an application. See **Click**.

Download
To transfer files, pictures, audio, video, or programs from one computer to another over a network. Downloading often refers to transferring files from a Web site to your PC over the Internet and uploading refers to sending a file from your PC to a remote computer. See **File**, **Internet**, **Upload**.

Downloadable Font
See **Font**, **Soft Font**.

Downstream
Referring to the network connection from the Internet "down" to your computer. Also referred to as the download direction. See **Internet**, **Network**, **Upstream**.

DPI
Dots Per Inch. Used to describe the density or resolution that a printer can print or a monitor can display. Describes the size of the pixels or dots of ink. See **Resolution**.

Drag
To move an object on the screen using a mouse. Position the cursor/pointer on an item, press and hold the left mouse button, move the cursor to a new location (by sliding the mouse), and then release the mouse button. In windows, a window can be moved by dragging it to a new location. See **Click**.

Drag

Drag and Drop
In Windows, an operation performed by first selecting an object or icon on the screen and then moving the object or icon with the mouse into another window or icon. For example files can be copied or moved by dragging and dropping them from one folder to another. In a document, text can be moved by dragging and dropping it to another location.

Drive Letter
The designation assigned to a particular disk drive on a PC. It consists of an alphabetic letter followed by a colon (:). For example, A: and B: usually refer to floppy drives and C: refers to a local hard drive, but could also refer to a logical or network disk drive (may have multiple designations) over a network. A hard drive may actually be formatted into 2 or more logical drive partitions. A CD-ROM drive has it's own designation (usually but not always D:). See **CD-ROM**, **Disk Drive**, **Floppy Disk**, **Partitions**, **PC**.

DRM
Digital Rights Management. A system for protecting the copyrights of digital audio/video content that is distributed over the Internet. It provides a set of rules that enforce copyright compliance for electronic devices that are used to play back the content.

DSL
Digital Subscriber Line. A fast, digital communications service that uses the same wires that carry regular voice telephone service. Actual communication speeds using DSL is directly tied to the distance between your location and the telephone company's Central Office (CO). DSL is an "always on" connection as opposed to Dial-Up or ISDN that requires the user to "make a call" to the ISP. DSL is divided into two basic types. ADSL or Asymmetric DSL is the most popular service for Internet access where fast download (downstream) is required and slower upload (upstream) is acceptable and shares the same line as your telephone. However, a "splitter" must be installed at your location to separate voice and data. SDSL or Symmetric DSL has the same high speed access in both directions and cannot share the same line as your telephone. See **Broadband**, **Central Office**, **Dial-Up**, **Downstream**, **DSLAM**, **G.Lite**, **Internet**, **Internet Service Provider (ISP)**, **Upstream**.

DSLAM
Digital Subscriber Line Access Multiplexer. The equipment that your phone company must install in order to provide DSL Internet service. DSLAM equipment combines regular voice phone calls with digital data on a single DSL line and separates the voice and data in the reverse direction. See **CLEC**, **DSL**, **ILEC**, **Internet**.

DSU/CSU
Data Services Unit/Channel Services Unit. A pair of communications devices that connect a computer to a digital communications line like a T1, similar to connecting a computer to a standard telephone line using a standard modem. The CSU provides the proper connection, while the DSU does the actual sending and receiving of the data. The DSU/CSU devices are often physically in one unit. See **Communications**, **Modem**, **T1**.

DTMF
Dual-Tone Multi-Frequency. The audio tones generated when you press the buttons on a touch-tone telephone to dial a telephone number. See **POTS**.

DVD
Digital Versatile Disc. A CD-ROM format that can hold computer data, music, or full-length movies. DVD discs work only with a DVD drive or player and cannot be played in standard CD players or CD-ROM drives. Many of the newest desktop and portable computers now come with DVD drives. DVD's are the next generation of the VHS video cassette tape. DVD's use video compression to achieve the maximum amount of storage capacity, from 4.7

GB to 17 GB, and provide movie-theater sound with Dolby digital surround sound. Recordable DVD drives have recently been introduced that allow everyone to create "home movie" DVD's. See **CD-ROM**, **Compression**, **Gigabyte (GB)**, **MPEG**.

E

Easter Egg
An undocumented "feature" hidden in a software program that may or may not be officially supported by the company that manufacturers the software. Easter Eggs are usually secret "goodies" that may be short animations, music, or in many cases displays the names of the developers that worked on the software. Easter Eggs are often accessed through some key combination when the About (or Help) Box is opened. See **Windows**.

eBook
An electronic version of a book versus its printed counterpart. With an eBook you can highlight, bookmark, take notes, or draw sketches. Plus, you can view your annotations and rename or erase any of them at any time. For Example Microsoft Reader is a software eBook viewer for Windows-based PC's, notebooks, and PDA's (or Handheld PC's). eBooks make reading books accessible to a broader range of users, especially for those requiring special access. For example, eBooks can be voice-enabled to allow a user to listen to instead of seeing the print. Today there are literally thousands of eBooks available and can be easily downloaded from the Internet. See **Download**, **Internet**, **PDA**, **Windows**.

eBusiness
Electronic business. Doing business online on the Internet. Many companies have Web site store fronts to sell their products and services directly on the Web and take payments using credit cards. Consumers can now pay most of their monthly bills online, as well. See **Internet**, **World Wide Web**.

EIDE
Enhanced Integrated Drive Electronics. A newer version of the IDE standard for hard drives. Also referred to as ATA or ATAPI Interface.

EDI
Electronic Data Interchange. Allows direct computer to computer transactions to conduct business operations such as orders, confirmations, and invoicing, often without any intervention.

E-Mail
Electronic Mail. A method of transferring messages (usually text messages) from one computer to another over a network. E-mail is sent to a simulated mailbox on a host server using an e-mail address to designate its destination. For example an E-mail address might look like, john@company.com. E-mails are not limited to simple text messages, but can have attached files,

E-Mail

pictures, audio, video, etc.

EMS
See **Expanded Memory**.

Emulation
A process by which a computer imitates the actions of another computer, so that the imitating system accepts the same data and executes the same computer programs as the imitated system. For example, it is possible to run Windows and Windows programs on an Apple iMac or PowerMac using a PC Emulator, thus extending the capability of the iMac or PowerMac and allowing the user to work in both environments on a single computer.

Encryption
The process of scrambling computer data or files, making them unrecognizable, for security purposes. The actual method used to encrypt the data is based on a mathematical process, involving a "key" to perform the calculations. This "key" is required to unscramble the data in order to view or access the original data or files. See **Decryption**.

Environment variable
Environment variables tell your computer where to find certain types of information, such as a drive, path, or filename, associated with a symbolic name that can be used by Windows or MS-DOS. In Windows there are system and user environment variables. The system environment variables are created when the operating system was installed for the first time on your computer. You can use the System Properties Control Panel in Windows or the MS-DOS SET command to view or create user environment variables. For example, shown are some typical system and user environment variables used in Windows 2000:

        COMPUTERNAME=USER
        ComSpec=C:\WINNT\system32\cmd.exe
        HOMEDRIVE=Z:
        HOMEPATH=\
        NUMBER_OF_PROCESSORS=1
        OS=Windows_NT
        Path=C:\WINNT\system32;C:\WINNT
        PROMPT=PG
        TEMP=C:\DOCUME~1\USER\LOCALS~1\Temp
        TMP=C:\DOCUME~1\USER\LOCALS~1\Temp
        windir=C:\WINNT

See **Control Panel**.

EPROM
Erasable Programmable Read-Only Memory. A computer chip which can be erased and written to, but which will not lose its information when the

computer is turned off. In a PC, it is typically use to store the PC's BIOS. Flash ROM memory devices have now replaced the earlier EPROM devices because they can be programmed or updated using software instead of having to replace them. See **BIOS**.

E-rate
Education rate. As a result of the Telecommunications Act of 1996, the Federal Communications Commission created a program to provide up to $2.25 billion in discounts for a wide range of telecommunication services for K-12 schools and libraries. These discounts help K-12 schools and libraries throughout the U.S. establish high-quality Internet connections. See **Universal Service Fund**.

Ethernet
The most widely used local area network connection method and defined by the IEEE as the "802.3" standard. Ethernet has become so popular, that any reference to a computer network connection generally implies Ethernet. All Apple Macs and many PC's come with built-in 10/100 Ethernet ports. A 10/100 port means that it supports both 10 Mbps and 100 Mbps speeds. See **10BaseT/100BaseT**, **IEEE**, **LAN**, **Mbps**, **Port**.

EULA
End User License Agreement. The legal agreement between the manufacturer and a software purchaser. It is either a printed piece of paper, printed somewhere on the package, or displayed on screen at time of installation. The license disclaims all liabilities and generally guarantees nothing except that the disk will be replaced if defective.

Expanded Memory (EMS)
A method developed by Lotus, Intel, and Microsoft to access memory beyond the original 640KB limit in MS-DOS. This memory is available only to DOS applications that can support it. It is an older standard, no longer required.

Expansion Card
Also called Expansion Boards. A separate hardware adapter that is installed inside the case of a computer, into an expansion slot on the motherboard, extending the capability of the basic computer. Expansion cards include display adapters, network adapters, modems, sound cards, TV/Radio tuners, SCSI disk adapters, etc. See **Display Adapter**, **Modem**, **SCSI**.

Expansion Card

Expansion Slot
A socket or connector inside a computer for adding expansion cards or boards. Buying a computer with one or more empty expansion slots, enables you to add cards later to expand or improve your computer's capabilities. See **Expansion Card**.

Extended Graphics Array or XGA
A PC video graphics standard that supports a 1024x768 pixel display screen resolution, meaning a maximum resolution of 1024 pixels horizontally and 768 pixels vertically, and with a maximum of 65,536 different colors. See **Pixel**.

Extended Memory (XMS)
In a PC or compatible, the memory above the 1 MB address range and was supported by the XMS or Extended Memory Specification. See **Megabyte (MB)**, **Memory**.

Extension
1) The period and up to three characters at the end of a filename. An extension usually identifies the kind of information a file contains. For example, text files often have the extension .TXT. The convention is often used to help quickly determine the file type.
2) A special file used on Apple Macintosh computers to add extra functionality to the system. These files are stored in the Extensions folder of the System folder.

F

FAQ
Frequently Asked Questions. A FAQ is generally a list of questions and answers about a specific subject.

FAT
File Allocation Table. A special area on a disk drive where MS-DOS and some versions of Windows store information defining the layout of the disk. It is like a map that identifies all of the clusters used to store a file. In a FAT file system, this table is critical. If it is damaged, data can either be lost or require extensive efforts to get the information from the disk. Fortunately there are software tools available that can check the condition of a disk drive, repair some minor problems, and in many cases, retrieve the data. See **Cluster**.

FAX
The electronic transfer of a printed page between locations. FAX machines scan the page and then transmit the digitized image over the telephone system. See **Digitize**, **Modem**, **Scanner**.

FAX/Data modem
A modem that is capable of transmitting and receiving both data and FAX protocols. See **FAX**, **Modem**, **Protocol**.

FCC
Federal Communications Commission. The U.S. government agency that regulates interstate and international communications including, wire, cable, radio, TV, and satellite.

Fiber Optics
A communications system that uses pulses of light instead of pulses of electricity to transfer the information. Fiber optics uses a thin strand of glass optimized for transmitting light. A single strand of optical fiber is capable of transmitting trillions of bits per second (Bps). Fiber optics have several advantages over wires and electrical pulses. Optical fiber is not sensitive to noise interference, is capable of much longer distances between stations, offers higher security, much simpler installation, and much lower transmission errors. Fiber optic communications became widely used when the telephone companies created nationwide systems for carrying voice conversations using digital communications technology. See **Bps**, **Digital**, **OC-3**, **SONET**.

Field
A physical unit of data on a source document, database, screen, or report.

Examples of fields are NAME, ADDRESS, QUANTITY, COST, and TOTAL. Data element is the definition of the field and a data item is the actual data stored in the field. The field name is use to reference and locate the specific data that you need. See **Data**, **Database**.

File
A program, document, utility, or any other stored information on a computer. A file might contain a memo, a drawing done in a graphics application, or a program itself. See **Audio File**, **Binary File**, **Graphics File**, **Text File**.

File Compression
The process of removing the blank space or unnecessary information from a file, usually to reduce the size of the file for the purpose of long term storage or transmission. All files contain blank space. Many times space is allocated in a file that isn't completely filled up. To reduce the file size, the file is compressed or and the blank space is removed in such a way that it can be reformatted or at a later time by the same program. See **Compression**, **File**, **ZIP File**.

File Server
Any computer that provides other networked computers or clients with access to shareable resources. A file server can either be a dedicated computer or a computer that is used simultaneously as a file server and a workstation. In a peer-to-peer network, all of the computers can be file servers as well as clients. In a home network, peer-to-peer networks are more common than traditional client/server networks.

File Sharing
A function of the networking system software that allows more than one user to access the same file, either at the same time or not.

Filter
1) A process that changes data, such as a sort program that changes the sequence of items or a conversion program (import or export filter) that changes data in a text or graphics format into another. See **Program**.
2) A pattern or mask through which only selected data is passed. For example, some E-mail systems have programs that scan E-mail, either looking for important messages or undesirable messages and either notifying the user or automatically deleting the E-mail. See **E-Mail**, **SPAM**.

Finder
An essential component of the Apple iMac operating system software. The Finder provides the basic interface to the iMac, which allows you to view lists of files, start applications, and manipulate files.

Firewall
Software or a hardware device that restricts certain kinds of access to a computer from a network or other outside source. The main purpose is to

block unauthorized access to a company's network to prevent electronic theft or vandalism. See **NAT**, **Proxy Server**.

Firewire
Also known as the IEEE 1394 standard or just 1394. A high-speed serial bus developed by Apple that allows up to 63 peripherals to be connected. Devices are plugged directly into a six-pin socket on the PC (often on the back, but many newer computers have the socket on the front). Firewire supports Plug and Play configuration allowing peripherals to be plugged, configured, and unplugged without turning the computer off, up to 3,200 Mbps with multiple speeds on the same bus, and multimedia operations such as digital video cameras. See **Bus**, **Mbps**, **Multimedia**, **Peripheral**, **Plug and Play**, **Serial Bus**, **USB**.

Firmware
Programs stored permanently in ROM memory devices. See **ROM**.

Fixed Disk
Another name for a hard disk. See **Hard Disk**.

Flash ROM
A type of ROM or Read Only Memory device that can be erased and programmed or updated using software instead of having to replace it, making it very useful for the consumer. The name flash came from its ability to be erased "in a flash". Flash memory devices have become very popular storage devices and are now conveniently packaged as "flash memory" cards in several formats, including the full-size PC Card and the smaller CompactFlash, SmartMedia, or Memory Stick. Flash memory cards provide optional storage for laptops, handheld computers, digital cameras (digital film of the 21st century), and portable music players. See **MP3**, **PC Card**, **ROM**, **PDA**.

Floating Point Unit (FPU)
A coprocessor that provides hardware routines for mathematical function, to be used with a CPU that does not have those functions built in. Current CPU's (such as the Intel Pentium and Motorola PowerPC processors) incorporate floating point functions and do not need a separate FPU coprocessor.

Floppy Disk
A removable disk, often called diskette, covered with a protective package or jacket. Floppy disks are noted for their relatively slow speed, small capacity, and low price. However, floppy disks are portable, have a long life, and generally can be stored easily for safekeeping. Early floppy disks were 5.25 inches wide, had a storage capacity of 1.2 MB, and used a flexible or "floppy" disk. Current floppy disks are generally 3.5 inches wide, have a storage capacity of 1.44 MB, and use a rigid disk. See **Disk Drive**, **Media**, **Megabyte (MB)**.

Flow Control
Also called handshake. A process used to regulate the rate at which information is transferred from one device to another. One device sends a signal to the other when information can be transferred. As soon as the signal is received by the transmitting device, the transmitting device starts sending the information.

Folder
A simulated file folder, shown using the picture of a file folder, that represents a directory or subdirectory on the PC, Apple iMac, and other graphical user interfaces (GUI's). Folders can contain files and other folders. See **Directory**, **Graphical User Interface**, **Icon**, **Root**.
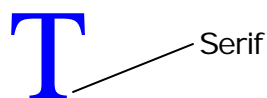
Font
A set of letters, numbers, punctuation marks, and symbols that are a given typeface, size, and design. Fonts are used in the printing of documents to accurately reproduce the many different types of characters, but are also used to display the characters on the computer screen. Usually each typeface (Times Roman, Arial, Verdana, etc.) is made available in

Fonts

normal, bold, italic, and bold italic styles. Some fonts can be scaled to any size while others are a fixed size. Outline fonts, TrueType fonts and PostScript fonts are examples of scaleable fonts. See **Monospaced Font**, **Point Size**, **Proportional Font**, **Scaleable Font**.
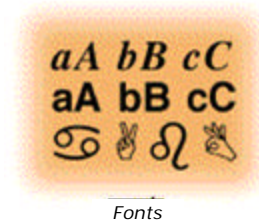
Font Family
A group designation that describes the general look of a font. For example, the Times Roman Font family contains proportionately spaced characters with serifs, or short horizontal lines added to the tops and bottoms of the letters.

Serif

Font size
See **Point Size**.

Footer
Common text, usually the page number or the date, that appears at the bottom of document pages when they are printed. The footer is usually separate from the body text of the document and accessed via a pull-down menu. The opposite of header. See **Header**, **Pull-Down Menu**.

Foreground
The area of the Screen that the active window occupies. See **Active Window**, **Background**.

Format
1) Preparing a disk for use by your computer and operating system. When the computer formats or initializes a disk, it first creates the sector information and then the file storage structures that the operating systems used to keep track of data stored on the disk, destroying any information already there (just as recording on a cassette tape overwrites what was previously recorded).
2) Formatting also refers to the way text is set up on a page (underlining, bold, indenting, etc.)
3) The way information is structured in a file, often specific to a particular application.

FPU
See **Floating Point Unit**.

Fractional T1
A communications line service that provides less than full T1 capacity in increments of 64 Kbps. See **Kbps**, **T1**.

Fractional T3
A communications line service that provides less than full T3 capacity in increments of 3 Mbps. See **Mbps**, **T3**.

Fragmented
Storing data in non-contiguous areas on the disk drive. Over time, as files are updated, new data is stored in the available free space, which may not be contiguous. When many files become fragmented, disk performance can suffer. The process of removing fragmentation is called defragmentation. See **Defragmentation**.

Frame
From a Web browser perspective, frames are separate areas of a Web browser screen. Each frame holds a separate document that stays in its frame, even when the contents of other frames change. Some Web sites use frames to put a table of contents or menus on one side of the screen, and then the items or articles on the other side. See **Web Browser**.

Frame Rate
The number of images (or frames) displayed on a video monitor in one second. Frame rate is directly related to motion. The standard frame rate for movies is 30 frames per second and is the minimum standard for smooth motion or animation.

Freeware
Software that is available without charge, as opposed to shareware. See **Shareware**.

FTP

File Transfer Protocol. Allows users to copy text or binary files between a local computer (client) and any remote computer (server) over the Internet. There are versions of ftp for Windows, Mac OS, and UNIX/Linux, either using text-based command version or a graphical user interface version. A common way to make software (text files, sounds, pictures, utilities, etc.) available is to store them on an "anonymous ftp server". Anonymous ftp servers allow users to logon without a password, specifying "guest" as the user, and then access the available files.

Function Keys

Function Keys

The 12 keys placed along the top of your keyboard and labeled F1 through F12. Function keys typically perform special commands specific to whatever software you're using and often are used in combination with the Ctrl or Alt keys. For example, in Windows, the F1 key is the "help" key that accesses the help system of either the operating system or the application, depending upon which window is active. See **Active Window**, **Command**, **Hot Key**.

G

Game Pad
A pointing device for playing computer games. Game pads are very similar to the controls for popular video games like Sony PlayStation, Nintendo, and Xbox. See **Pointing Device**.

Gateway
1) A device that allows network connections/transfers between physically separate networks that are based on differing protocols (for example, between Internet and AppleTalk networks).
2) A computer or device that provides a connection to the Internet.

GIF
Graphic Interchange Format. A popular file format for graphic images, created by CompuServe. The GIF format files are easy to compress, and therefore used extensively to put pictures or graphics on Internet Web sites. See **Bitmap**, **BMP**, **Compression**, **Graphic File**, **JPEG**.

Gigabyte (GB)
1,024 (MB) Megabytes. (about one billion bytes, hence gigabyte). Usually abbreviated GB as in a 60 GB disk drive. See **Megabyte (MB)**.

Gigahertz (GHz)
Describes the speed at which a computer's CPU or processor runs. Abbreviated GHz. The larger the number before the abbreviation "GHz", the faster a processor runs than another version of the same CPU with a lower number. Thus, a 2.0 GHz Pentium processor is faster than a 1.2 GHz Pentium processor. Gigahertz is also referred to as "clock speed". The processor speed alone cannot be used to measure the overall performance of a computer. The actual performance of a computer is determined by the CPU speed, motherboard design, memory speed, disk speed, and software design. See **CPU**, **Hertz (Hz)**, **Megahertz (MHz)**, **Motherboard**.

G.Lite
A version of ADSL targeted for quicker and easier installation by the consumer. It eliminates the splitter required by ADSL and the associated installation charge, but all of the standard voice telephones must have a filter to block the high frequency portion of the signal and "clean" up the voice. See **DSL**.

GPF
General Protection Fault. On PC's the processor and system hardware detects when an illegal instruction from a program is executed or a memory location

is accessed, thereby causing the system to malfunction or "crash". When a GPF occurs, an error message is displayed, and the program stopped, since it is generally unable to continue. In Windows, this event is what has been referred to as the infamous "Blue Screen of Death"!

Graphical User Interface (GUI)
A way of interacting with a computer, based on graphics instead of text, providing an attractive, easy-to-use interface. GUI's typically use icons, pictures, menus, buttons, and dialog boxes to operate the computer using a mouse as well as a keyboard to accept input. Microsoft Windows, Apple Mac OS/OS X, and the UNIX X-Window system all use GUI's as the primary user interface, but also support a text-based Command Line Interface, as well. Microsoft MS-DOS supported only a text-based command-line interface. See **CLI**, **Dialog Box**, **Icon**, **Mouse**, **User Interface**.
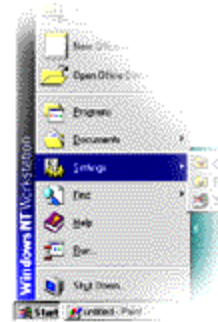
Graphical User Interface

Graphic File
A picture that has been digitized and stored electronically in a computer file. Also called an image file. See **Compression**, **File**, **JPEG**, **MPEG**.

Graphics Accelerator
Computer video display hardware specially configured to provide enhanced performance. See **Accelerator**, **Hardware**, **Display Adapter**, **Video**.

H

H.Dot Terms
The set of rules or protocol that describe the video and audio standards for video conferencing. See **Protocol**.

>**H.320:** Original standard for wide area video conferencing over ISDN and point-to-point dedicated telephone lines. See **ISDN**, **WAN**.

>**H.323:** Standard for video conferencing over LAN's and the Internet using IP protocol. Allows any combination of voice, video, and data to be used. See **LAN**.

>**H.324:** Standard for video conferencing using standard, analog telephone lines and modems. See **POTS**.

Hacker
The term "hacker" originally was used to mean an expert computer user who enjoys solving technical challenges, implying relentless experimentation or "hacking" to solve a problem. Unfortunately, the name has been used to mean "cracker", which refers to someone that performs an illegal act or whose primary purpose is to create destruction. It takes an experienced hacker to gain illegal access into a secure network or Web site with intent to get information, to create destruction, or to steal. However, many of the hackers are honest professionals. See **Denial of Service**, **Virus**.

Handheld
See **PDA**.

Handshake
See **Flow Control**.

Hang
A sudden freeze up of a computer program. A computer that is "hung" has a display screen that looks like it's working, but it actually has stopped working and the neither the mouse or keyboard will function. See **Crash**, **Reboot**.

Hard disk
A disk drive that contains one or more fixed, rigid disks or platters, permanently sealed inside it. Hard disks have fast access speed and high capacity, now greater than 120 GB. Often referred to as the "hard drive". See **Disk Drive**, **Gigabyte** (**GB)**.

Hard Disk

Hardware
Refers to the physical computer devices, such as the CPU, motherboard, memory, disk drives, video monitor, printer, scanner, etc. See **Motherboard**.

Hardware Handshaking
Hardware (usually a computer modem) that handles data flow control automatically.

Header
Text that appears at the top of every page of a document when it is printed, such as the title, document name, or chapter name. The header is usually separate from the body text of the document and accessed via a pull-down menu. The opposite of footer. See **Footer**, **Pull-Down Menu**.
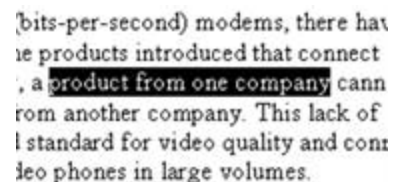
Hertz (Hz)
Stands for "Hertz" and pronounced "hurts". A term that is used to describe the electrical vibrations of a sound, the electrical pulses in a computer, and radio signals. One Hz is equal to one cycle per second. One thousand cycles is called KHz, one million cycles is called MHz, and one billion cycles is called GHz. Today see it commonly used to describe the speed of personal computers, such as a computer using a 900 MHz Intel Pentium CPU. See **CPU**, **Gigahertz (GHz)**, **Kilohertz (KHz)**, **Megahertz (MHz)**.

Hidden File
A file that is not visible in a directory listing. In Windows and MS-DOS, the system files IO.SYS and MSDOS.SYS are hidden to prevent them from being easily deleted. Some operating systems allow the user to hide files to prevent unauthorized access. See **Directory**.

Highlight
Using a mouse to select certain text. Starting with the cursor at one end of a piece of text, the left mouse button is held down as the mouse is moved across the piece of text. As the mouse moves, the text changes color. The highlighted text can then be copied or moved elsewhere in the document or to another

Highlight

document or some other operation performed, such as changing the font, size, or style. See **Cursor**, **Drag**, **Font**.

Hierarchical Menu
Also called a Submenu or Cascading menu. A secondary menu that appears while dragging and holding the cursor over an item in a menu. It gives you choices of options that apply to the item you are selecting in the menu. See **Cascading Menu**, **Menu**.

History
A list or log kept by your Internet browser that keeps track of recent Web sites visited. There is usually a Browser function to access the History List to easily find and return to a previously viewed Web site. The amount of time to keep track of Web site accesses, usually measured in number of days, can be customized by the user. See **Web Browser**.

Hits
The number of times a program or item of data has been accessed. For example, when you access a page from a Web site, the web page itself counts as one hit to that Web site. The measurement of Web site hits is used to determine the number of people requesting Internet services from a Web site and also for planning the capacity of the Web server to access demands. See **Internet**, **Web Page**, **Web Server**, **Web Site**.

HLS
Hue, Luminance, and Saturation. Another model for specifying colors, primarily for computer monitors and televisions. Also common in computer applications is RGB for computer displays and CYMB for printers. See **CYMB**, **Hue**, **Luminance**, **Saturation**, **RGB**.

Home page
1) The main page of a Web site. It is the first page seen when accessing a Web site and acts as a table of contents to the rest of the pages on the Web site, containing links to the additional locations within the site, as well as external sites. Web site pages are text documents embedded with special HTML codes that provide the formatting and support to link to other pages. Web pages can be created with ordinary word processors, but there are several programs, such as Microsoft FrontPage, HotMetal Pro, etc., that use a graphical interface for page creation and automatically generate the HTML codes. See **HTML**, **Hyperlink**, **Web Site**.
2) The first page viewed when a Web browser is opened. See **Default Page**, **Web Browser**.

Hot Key
A keystroke or combination of keystrokes used as a shortcut for executing an application or activating a function. The keyboard function keys, F1-F12, are examples of Hot Key shortcuts. The key sequence, Ctrl-Alt-Del, is also an example of a combination Hot Key.

HTML
HyperText Markup Language. The primary data format used to create and define a Web page. HTML determines what gets displayed on your screen when accessing a Web page, such as defining the locations and characteristics of each item on the page. HTML is derived from SGML, Standard Generalized Markup Language, which is widely used in the document publishing industry. Normally, you would need to know HTML in order to create Web pages, but there are software programs, such as

Microsoft FrontPage, HotMetal Pro, etc., that minimize the need to know HTML. See **SGML**, **Web Page**, **Web Server**.

> **HTML**
>
> \Maria Roberts\
> \October 29, 1952\

HTTP
HyperText Transfer Protocol. A set of rules or procedures (protocol) for managing the transfer of Web pages or hypertext (HTML) documents between Web browsers and Web servers. By convention, Web sites have a URL beginning with "http://". See **HTML**, **Protocol**, **S-HTTP**, **URL**, **Web Browser**, **Web Page**, **Web Server**.

Hue
Position of a color in the color spectrum that defines the exact components of that color. For example, purple is between red and blue. Luminance and saturation also affect the appearance of a color. See **HLS**.

Hyperlink/Hypertext
A linkage between related text or items. Hyperlinks and Hypertext is a basic concept of the World Wide Web. Links embedded within Web pages are references to other Web pages and can be used to seamlessly "go to" the referenced Web page. Hyperlinks usually appear on Web pages as underlined colored text, direct URL's, or pictures. See **Icon**, **URL**.

hypertext

Hypertext

I

I/O Address
On a PC a number used to identify a peripheral device such as a serial port, parallel port, sound card, etc. The address is used for communication between the computer software and the device and must be unique; otherwise conflicts will occur and the devices with not operate correctly. In earlier PC's, I/O addresses had to be manually configured by the manufacturer or the person building the computer. Microsoft introduced Plug and Play in Windows 95 to allow the computer to determine what hardware is in the computer and automatically select the I/O addresses. See **Hardware**, **Plug and Play**.

Icon
A small picture used to represent a program, file or document, folder, or disk drive in a graphical use interface operating system such as Windows, UNIX/Linux, or Mac OS. Icons are used on the operating system desktop, in menus, dialog boxes, Internet Web pages, etc. See **Desktop**, **Dialog Box**, **GUI**, **Web Page**.
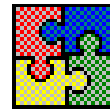
Icon

IDE
Integrated Drive Electronics. A type of hardware interface widely used to connect hard disks and CD-ROMs to a PC. IDE is very popular because it is a low cost way to connect these peripherals. IDE is officially known as the ATA specification and has evolved over the years to provide faster access speeds. For example ATA-100 supports a transfer rate of 100 million bytes per second. See **Hardware**, **Interface**, **Peripheral**.

IEEE
Institute of Electrical and Electronic Engineers. A membership organization that includes engineers, scientists, and students involved in electronics and other related fields. The IEEE is also involved with creating and supporting standards for computers and telecommunications.

IEEE 1284 Bidirectional Printer Cable
The specification created by the IEEE for a standard parallel printer cable with enhanced data transfer speeds and cable length up to 32 feet. The most important feature is its ability to support bi-directional data flow, which means that not only can the computer send information to a printer or device, but the printer or device can send information, such as status information (out-of-paper, out-of-ink, etc.) or actual data (i.e., from a scanner), back to the computer. See **IEEE**, **Parallel Port**.

ILEC
Incumbent Local Exchange Carrier. Your existing local telephone company.
See **CLEC**, **POTS**.

Import
To move or copy an item or file into an application or environment that is a
different format than the original, native format. The file is converted to the
new format while attempting to change as little as possible about the
appearance of the file when printed. For instance, Microsoft Word is able to
import files created from Corel Word Perfect.

Initialization Files
In Windows, files with the extension .INI and contain specific system or
program configuration information, such as a user name, default directory, or
software license number. INI files were generally text files which made them
easy to delete or accidentally changed. In the later versions of Windows, the
use of .INI files has been replaced by the Registry, which is a single,
combined configuration database that the operating system manages and
provides some protection against corruption. However, if you are still using
software that uses .INI files for configuration, it is recommended to make
backup copies. See **Backup**, **Database**, **Directory**.

Ink Jet Printer
A computer printer that shoots heated droplets of ink
onto the paper. Ink jet printers have become the most
popular, affordable type of desktop or personal printer
and most all of them can print in both color and B/W.
Ink jet printers use four colors, cyan, magenta, yellow,
and black in replaceable cartridges. The print quality of
ink jet printers is very good, but laser printers still
produce the best quality. See **Laser Printer**, **Printer**.

*Color Inkjet
Printer*

Insertion Point
The current cursor location in a text window that marks or locates where
typed text will be entered, edited, cut, or pasted. See **Cursor**, **Cut**, **Paste**,
Pointer.

Install
The process of loading a program on your computer, particularly on your
hard drive. During a typical install, files are copied onto your hard drive and
the software sets itself up to run with your particular computer and its
devices. Many programs also give you customization options, such as what
parts of the software you want to install and what parts you want to leave
out. See **Operating System**, **Program**.

Instant Messaging (IM)
A program that allows multiple users to carry on real time "conversations" or
"chatting" with each other by typing messages on their computers and then

sending them over the Internet or network, instead of actually speaking to each other. Participants can immediately read and respond to messages. Microsoft's MSN Messenger and AOL's Instant Messenger are two examples of popular Internet Messaging programs.

Interactive
Back-and-forth dialogue between a computer and the user. The user initiates and action which gets an immediate response from the computer. Thus, personal computers are interactive. You use a command and the computer responds instantly.

Interface
The interaction and connection between the hardware, software, and the user. Hardware interfaces are the plugs, sockets, and wires, that physically connect all of the hardware components of a computer. Software interfaces are the "connections" between the many components of the operation system and programs used to communicate with each other and to the hardware. User interfaces are the keyboards, mice, microphones, commands, menus, programs, or other ways that you use to communicate to the computer.

Internet
The worldwide collection of interconnected networks that provide a wide variety of services and resources, using the TCP/IP network protocols. The Internet supports Web, communications, and file servers, remote access of computers, E-mail, and business transactions. See **World Wide Web**.

The Internet

Internet Explorer
Microsoft's Web Browser for accessing and viewing the Internet. Microsoft integrated "IE" into its' Windows operating systems. However, versions are available for the Macintosh and UNIX platforms. See **Web Browser**.

Internet Service Provider (ISP)
A company that provides you with access to the Internet, either through a dial-up connection (AOL, MSN, etc.) or a broadband connection such as DSL (SBC), cable modem (RoadRunner), satellite (DirectPC, StarBand), or a T1 (SBC) line. There are national ISP's (MCI, Sprint, UUNET) that operate and maintain the very high speed backbones or primary networks. Regional ISP's link into these backbones to provide service for their subscribers and smaller, local ISP's hook directly into the national backbones or into the Regional ISP's. See **Cable Modem**, **DSL**, **Internet**, **Satellite**, **T1**.

Interrupt
On a PC, a signal from a device or peripheral that gets the attention of the computer when the device or peripheral is ready to accept or send

information. For example, when a key on the keyboard is pressed or when the mouse is moved, an interrupt is generated and control is transferred to the computer's operating system, to determine the action to take. See **IRQ**, **Operating System**.

Interrupt Request (IRQ)
There are 16 hardware connections in a PC used to signal the operating system that a device or peripheral needs attention, such as a mouse, keyboard, modem, printer, etc. On older PC's, typically each device connected to the computer must use a separate IRQ. Newer PC's can share IRQ's, making it easier to install new expansion cards and devices. To find out which IRQ each device on your computer is using refer to the computer manufacturer's manuals or from utility programs that are part of the operating system. See **Expansion Card**, **Hardware**, **Interrupt**.

Intranet
Refers to a private network and/or Web site, typically internal to a company. Although Intranet Web pages may link to the public Internet, an Intranet Web site cannot be accessed by the general public. See **Hyperlink**.

IP
Internet Protocol. Refers to the communications method used to route a message to a different network or over the Internet, using an IP address to connect to the remote computer. See **IP Address**.

IP Address
A number that identifies your computer as unique on the Internet. Every computer, workstation, server, or Web server must have a unique IP address. Without it, computers would not be able to connect to each other over the Internet using TCP/IP or other Internet protocols. The actual IP address is a long series of digits separated by periods. An example IP address is 207.46.197.113. Fortunately, there is an easier way for you deal IP addresses called DNS or Domain Name System or Service. DNS takes a type of name that is easier to use and remember and translates it into the actual IP address. For example, 207.46.197.113 is the IP address of www.microsoft.com. So instead of entering [207.46.197.113](207.46.197.113) to browse Microsoft's home page, you enter www.microsoft.com instead. IP addresses can be fixed (static) addresses that don't change or dynamic addresses that change. See **DHCP**, **DNS**, **TCP/IP**.

IRC
Internet Relay Chat. The Internet's version of a CB radio, IRC lets you "chat" in real time with other people by using typed messages. See **Chat**.

ISA
Industry Standard Architecture. Pronounced "eye-suh". The expansion card specification for the PC. It was developed by IBM as part of the original PC architecture. Because of its limited capabilities, most PC's now use expansion

cards based on the PCI specification. ISA is now generally considered obsolete. See **Expansion Card**, **PCI**.

ISDN
Integrated Services Digital Network. A computer communications standard, announced in the mid 1980's, for providing digital communications. ISDN requires a special ISDN modem (technically called a Terminal Adapter) and provides up to 128 Kbps data transmission speed. See **Kbps**, **Modem**.

J

Java
A network oriented programming language invented by Sun Microsystems. Programmers use Java to write programs that are safe and easy to download through the Internet. Using Java, Web pages can feature things like animations, calculations, games and other "tricks". In fact, Java can be used to write programs that can do most of the things your regular software can do. Java is specifically built so that an application can run on any kind of system, so a separate Windows, Mac OS, or UNIX version is not needed. Java programs will run on any computer with "Java Virtual Machine" software installed in the Web browser and Web server software. Microsoft's Internet Explorer browser and Netscape's Navigator browser have Java support included. Java is not required to access the Internet. However, Java has become very popular and many Web sites are designed using the enhanced functionality of Java. See **Program**, **Programming Language**, **Web Browser**, **Web Page**.

Joystick
A pointing device for playing computer games. Joysticks typically have a base, a playing stick, and control buttons. See **Pointing Device**.

Joystick

JPEG
Joint Photographic Expert Group. An efficient file format for still pictures or graphic images that is very popular due to its high compression capability. The compression is "lossy", meaning the image is not an exact representation of the original image. JPEG files can be easily downloaded and shared. For example, a JPEG color image can be downloaded directly into a newspaper article as it is going to press or inserted into a brochure. See **Compression**, **Graphic File**.

K

Keyboard
A piece of equipment that provides a basic means of input much like a standard typewriter keyboard with the addition of several specialized function keys. See **Peripheral**.

Kbps
Kilobits Per Second (thousand bits per second). Speed at which data is transferred. See **Bit**, **Bps**.

Kbps

Keyboard Command
Using the keyboard to navigate menus and buttons and select options by pressing the keys in some sequence or order.

Kilobyte (KB)
For technical specifications, it refers to 1,024 bytes. In general usage it sometimes refers to 1,000 bytes (since kilo means 1,000). It is usually abbreviated KB, as in 64KB, and is used in discussing memory and hard drive storage.

Kilohertz (KHz)
A measurement of the frequency of electrical pulses per second. Kilo means "a thousand", so 1 KHz means 1,000 pulses or cycles per second. KHz is usually associated with audio or sound. The normal hearing range of sounds is 20 Hz to 20 KHz. See **Hertz**.

L

LAN
Local Area Network. A group of personal computers connected together with a communications link in order to share programs, data, and peripherals. The most common network link is Ethernet. Local area networks eliminate isolationism, promote collaboration, enhance productivity, and reducing the number of required printer, etc. **See Ethernet**, **Network**, **WAN**.

LATA
Local Access and Transport Area. The geographic region set up to define local and long distance telephone calls within the United States. Telephone calls within a LATA are handled by the local telephone companies (CLEC, ILEC) and under jurisdiction of the Public Utilities Commission (PUC). Long distance calls (calls between LATAs) are handled by inter-exchange carriers, that includes AT&T, MCI WorldCom, Sprint, etc. and governed by the FCC. See **CLEC**, **FCC**, **ILEC**, **PUC**.

Launch
To start an application or program. Launching an application brings it up on your screen and makes it active, allowing you to use it. See **Active Window**, **Application**, **Program**.

Laser Printer
A printer that uses a laser beam, similar to the process used by standard copy machines, to produce fast, high-quality output. The most common laser printers are black-and-white only and are available in three price/speed categories ranging from 4-8 ppm (pages per minute), to 17-32 ppm, to 40-60 ppm. The print quality ranges from 300 to 1,200 dpi (dots per inch), which is considered adequate for most documents, up to 2,400 dpi for high-quality commercial publications. Color laser printers are slower than their black-and-white counterparts, with typical print speeds of 4-10 ppm. However, there are color laser "digital printing press" printers that can print 70 or more pages per minute. See **Ink Jet Printer**, **Printer**.

LCD
Liquid Crystal Display. The type of technology used for portable computer displays, as well as many other electronics display applications, such as watches, etc. LCD displays are now becoming very popular as replacements for traditional CRT-based displays. LCD displays use thousands of tiny, individual crystals, called pixels arranged in a row/column matrix to create the complete picture on the screen. When a crystal pixel is energized, light is redirected and appears as "on".

Liquid Crystal Display

Un-energized, the crystal pixel passes light and is "off". There are two basic types of LCD displays: Active Matrix (notebook PC's and desktop displays) and Passive Matrix (digital watches, etc.). See **CRT**, **Pixel**.

LED
Light-Emitting Diode. An electronic device that emits light when energized. The most common LED color is red, although other colors can be generated. Used for displays in some electronic devices, LED's were originally used in the first digital watch display. LCD's have generally replaced LED's, because they require considerably less power and easier to manufacture. See **LCD**.

Line Conditioner
An electrical device (may be built in to a UPS) that ensures a constant level of electricity, by eliminating momentary drops or surges in voltage from the power source. Power surges are the most common cause of damage to computers and electronic equipment. See **UPS**.

Link
An emphasized word or phrase on a Web page that acts as a pointer to other related information and requires a mouse click to access the information. See **Click**, **HyperLink/HyperText**.

Linux
A version of the UNIX operating system that runs on a variety of computers. By license, Linux is freely available, but there are several companies that provide distributions including support and training for a fee. Due to its stability, Linux has gained a large following in the Internet community for hosting Web servers and is growing rapidly as a personal, desktop operating system. See **Operating System**, **Server**, **UNIX**.

LPT1
The name used by PC's in MS-DOS and Windows to refer to the first parallel printer port on a computer. The second parallel port, if there is one, is LPT2. The printer is usually connected to LPT1. See **Parallel Port**.

Luminance
The measure of the brightness of a color. Luminance corresponds to the total amount of light coming from a given surface area. Luminance, also called lightness or intensity, is used along with hue and saturation, in the HLS color model. See **HLS**, **Hue**, **Saturation**.

M

Macintosh
Computer developed by Apple Computers, first released in 1984. The Macintosh was one of the first computers to use a graphical user interface. Today, Apple continues to produce several different models (iMac, Power Mac, iBook, etc.) from the Macintosh heritage. The Mac is the de facto standard in desktop publishing and the graphics arts industry. See **Graphical User Interface**, **Mac OS**, **OS X**.

iMac

Mac OS
The original operating system produced by Apple for their Macintosh computers. Today, Apple provides the operating system, OS X, for the iMacs and Power Macs. See **Graphical User Interface**, **Macintosh**, **Operating System**, **OS X**.

Macro
A sequence of commands, keystrokes, or menu selections that have been assigned a name or a hot key that creates a short cut for the purpose of fast and easy execution of the sequence. See **Hot Key**.

Mail Server
A computer that receives, holds, and sends E-mail messages for users on the Internet or network, much like a "post office".

Math Coprocessor
See **Floating Point Unit**.

Maximize

Maximize Button

To increase the size of a window to its maximum dimensions. Microsoft Windows includes a maximize/minimize button on the top bar (title bar) of a window. See **Title Bar**, **Window**.
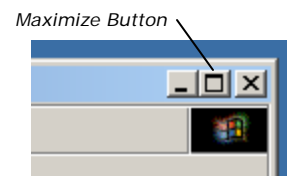
Mbps
Megabits Per Second (million bits per second). Speed at which data is transferred. Hopefully as modems and serial transmissions become faster, Mbps will be used to discuss their speed. See **Bit**, **Bps**.

Media
Refers to the material used to hold data, including floppy disks, hard disks, zip disks, tapes, CD-ROMs, etc. Data can be written or stored on all of these media formats and later read or retrieved for use. The data storage capacity

and the read/write/erase capability of each media type varies depending on the media type. Most media types have a life span of 30 years. See **Disk Drive**, **Gigabyte (GB)**, **Megabyte (MB)**.

Media	Capacity	Type	Capability
Floppy Disk	1.44 MB	Removable	Read/Write/Erase
Hard Disk	5-120 GB	Fixed	Read/Write/Erase
Zip Disk	100, 250 MB	Removable	Read/Write/Erase
Other Removable	1-2.2 GB	Removable	Read/Write/Erase
Tapes	2-200 GB	Removable	Read/Write/Erase
CD	650 MB	Removable	Read Only
CDR	650 MB	Removable	Read/Write Once
CDRW	650 MB	Removable	Read/Write/Erase
DVD	4.7 GB	Removable	Read Only
DVD-R, DVD+R	4.7 GB	Removable	Read/Write Once

Megabyte (MB)
1024 Kilobytes (about one million bytes, hence megabyte). Usually abbreviated MB as in 128MB of memory.

Megahertz (MHz)
Describes the speed at which a computer's CPU or processor runs. Abbreviated MHz. The larger the number before the abbreviation "MHz", the faster a CPU runs than another version of the same CPU with a lower number. Thus, a 933 MHz Pentium Processor is faster than a 650 MHz Pentium Processor. Megahertz is also referred to as "clock speed". The CPU speed alone cannot be used to measure the overall performance of a computer. The actual performance of a computer is determined by the CPU speed, motherboard design, memory speed, disk speed, and software design. See **CPU**, **Gigahertz (GHz)**, **Hertz (Hz)**, **Motherboard**.

Memory
Computer storage area for information and applications. RAM (Random Access Memory) is used for the computer's workspace and is usually temporary, which is why you have to save your files before you quit a program or turn the power off. ROM (Read Only Memory) memory holds its contents permanently and is not used for user data. RAM and hard disk space should not be confused. RAM is temporary, active storage while the hard disk offers semi-permanent storage and holds inactive, "saved" files. Adding more memory to a computer will often increase the computer's performance, since more data will be available much faster.

Memory Protection
A capability of some operating systems that prevents one program from destroying the memory space of another program. Using various computer hardware and software techniques, a "wall" is created around each program in memory that controls a program's access to instructions and data, so that

one program cannot corrupt another program in memory. Memory protection will often allow a single program to crash without affecting other programs, or the system as a whole. See **Memory**.

Menu
An on-screen list displaying a series of command choices or options from which the user can choose. See **Menu Bar**, **Pull-down Menu**.

Menu Bar
An on-screen horizontal row or vertical column of names or headings categorizing all of the pull-down menus for commands within the program, usually found in graphical user interface (GUI) operating systems. In some instances, the menu bar might be at the top, bottom, or even sides of the screen. See **Graphical User Interface**, **Menu**, **Operating System**, **Pull-down Menu**.

Menu Bar

MFLOPS
Million Floating Point Operations Per Second. A measure of computing performance; specifically, the speed at which certain mathematical functions are performed. See **Math Coprocessor**.

Microprocessor
A central processing unit (CPU) on a single chip. Microprocessors are the 'brains" behind all personal computers. Intel, AMD, and Motorola are the manufacturers of microprocessors used in today's personal computers. Often the word "processor" is used instead of "microprocessor". See **Chip**, **CPU**.

MIDI
Musical Instrument Digital Interface. A standard that lets electronic musical instruments and computers communicate with each other. Instead of recording the actual music sounds or waveforms, the MIDI format contains instructions for playing the music, such as when to start the note, its pitch, length, volume, and musical attributes. MIDI music files take up much less disk space than sound files (.MP3, .WAV, .WMA, etc.) that contain the actual digitized music. See **Digitize**, **Sound Card**.

MIME
Multipurpose Internet Mail Extension. A method for converting binary data and files into ASCII text to allow the transferring of these files (such as sound and graphics files, or word processing files with embedded formatting codes) over E-mail. Most E-mail programs (Outlook, Outlook Express, Eudora, Netscape Communicator, etc.) allow the user to "attach" files to an E-mail in order to electronically send the file to someone. On the other end, when the E-mail is received, the E-mail program (after converting the file back to its original format) allows the recipient of the E-mail to save the file

to disk in order to use the file. See **ASCII**, **Attachment**, **Binary**, **Text File**, **E-mail**.

Minimize

To reduce the size of a window. Microsoft Windows includes a maximize/minimize button on the top bar (title bar) of a window. See **Title Bar**, **Window**.
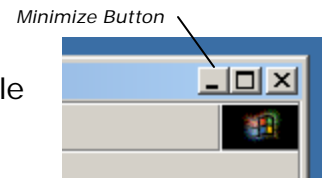
MIPS

Millions of Instructions Per Second. Used to describe the execution speed of a computer. For instance, 5 MIPS is 5,000,000 instructions per second, meaning that the computer is capable of executing that many instructions per second. Today's personal computers perform operations at greater than 100 MIPS. MIPS rates are not uniform. Some are averages, while some are peak performances. In addition, it takes more instructions on some machines to perform the same function (RISC vs. CISC). The MIPS rate is just one factor in overall performance. Overall performance is affected by the motherboard design, memory speed, disk speed, and system software. See **CISC**, **Motherboard**, **RISC**.

Modem

Modulate-Demodulate. A name for the communications device that enables a computer to transmit and receive digital information over an analog telephone line. The digital pulses are converted to audio frequencies and vice versa. However, a modem is not only a digital-to-analog and analog-to-digital converter, but also dials the telephone number, answers the call, and controls the speed of the transmission. Common modem speeds are 300, 1200, 2400, 9600, 14,400, 19,200, 28,800, 33,600, and 56,000 bps. See **Analog**, **Bps**, **Communications**, **Digital**.
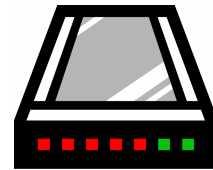
External Modem

Monochrome

A monitor that displays only one color. Some monochrome monitors can also display various shades of gray and are called gray-scale monitors.

Monitor

A hardware device used to display the "visual output of a computer", the screen, operating system desktop, or whatever the user "sees". Uses a CRT tube (the same tube used in a TV). See **CRT**, **Desktop**, **Display Adapter**.

Monospaced Font

A fixed-width font in which all characters have uniform widths, such as Courier, as opposed to a variable-width, proportional font, such as Times

AWIM AWIM

Courier
Monospaced

Times Roman
Proportional

Roman. See **Font**, **Proportional Font**, **Scaleable Font**.

Mosaic

A freeware Web browser, developed by the NCSA (National Center for Supercomputing Applications) used to view Web site pages. See **Web Browser**, **Web Site**.

Motherboard

The main circuit board in a personal computer. In a PC, the motherboard contains the CPU (processor), other supporting computer circuitry, expansion card connectors, memory, and various peripheral interfaces (keyboard, mouse, serial & parallel ports, disk drive, network, etc.). Some motherboards have the video display hardware directly on the motherboard, instead of an expansion card. It is often possible to improve the performance or upgrade the capabilities of a PC by replacing the motherboard with a newer model. There are many companies that make motherboards that are user-replaceable.
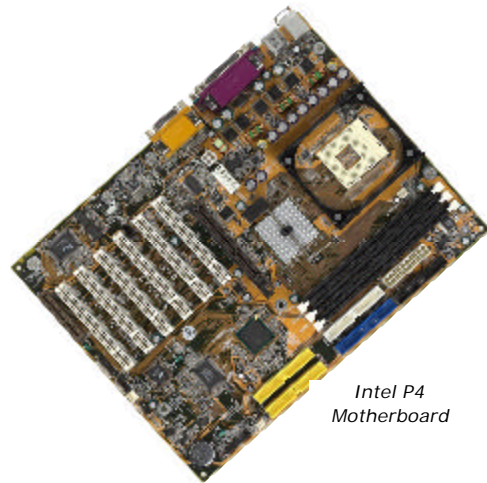
Intel P4 Motherboard

Mouse

A mouse is a small type of pointing device with a ball on the bottom. As you move the mouse across a surface, the ball turns, turning receptors inside the mouse. These receptors send signals to the computer which cause a pointer or cursor on screen to move in a way which corresponds to the direction and speed the mouse was moved (Try turning the mouse backward, away from the computer, and moving it.). There are also optical mice that track the motion of the mouse by reflecting light off the surface. See **Pointing Device**, **Touch Pad**, **Trackball**.

MP3

An audio compression technology used to compress CD-quality sound, while providing almost the same quality. MP3 files are usually 12 times smaller than the original digitized music file. MP3 technology has made it feasible to download CD-quality audio from the Internet quickly, causing it to become a worldwide phenomenon. MP3 revolutionized music distribution, but unfortunately has also created a major legal issue for the music publishers. The publishers are trying to cope with this problem by introducing copyright protection. See **Compression**, **Digitize**, **SDMI**.

iPod MP3 Player

MPEG
Moving Pictures Experts Group. A standard for compressing audio and video data. It is a "lossy" compression scheme, which means the data loses some quality in compression. MPEG-1 provides the standard for commercial audio CD's and conventional video CD's. MPEG-2 supports a wide variety of audio and video formats including legacy TV, HDTV, and DVD movies. MPEG-4 is the next generation that goes far beyond traditional compression methods, allowing interaction and intellectual property protection methods. See **AVI**, **Compression**, **QuickTime**.

MRU
Most Recently Used. A list of the most recently used items, such as files, pictures, programs, or websites. Microsoft Windows has a list of "recently accessed files" that is located in the "Start" menu and Internet Explorer Web Browser has a list of recently accessed websites. See **Menu**.

MS-DOS
Microsoft Disk Operating System. The original operating system for PC's, which used a text-based, command prompt interface. Versions of Microsoft Windows before Windows 2000 and XP had MS-DOS built-in. See **Command Line Interface**, **Operating System**, **Windows**.

Multimedia
Presenting information in more than one form, including the use of text, graphics, audio, animated graphics, and full-motion video or movies. For example, multimedia programs are typically games, encyclopedias, and training courses, presentations, or movies. However, any application with sound and/or video can be called a multimedia program. A "multimedia" computer typically has a graphics accelerator, sound card, speakers, and a fast CPU that can handle the graphics, animation and video. See **Graphics Accelerator**, **Sound Card**.

Multipoint Control Unit (MCU)
A device used in video conferencing that connects multiple, simultaneous locations and acts as an audio and video switch. The MCU allows all of the participating sites to hear each other and switches the camera focus between the sites, either automatically depending upon who is speaking or manually. Think of a "live" television show with multiple cameras and microphones used to show different views or scenes of the program. See **Video Conferencing**.

Multiprocessor
A computer system that uses more than one CPU running in parallel for faster performance. See **CPU**, **Microprocessor**.

MultiSync
A computer monitor that has the ability to run at different frequencies, allowing the monitor to display different resolutions. See **Monitor**.

Multitasking

The ability to run more than one program at the same time. There are different types of multitasking. Cooperative multitasking requires a program to be written to allow other programs to access the system. In preemptive multitasking, the system can suspend any program to allow other programs access. Preemptive multitasking provides better performance, as programs can switch with less overhead.

Multithreading

The ability to have more than one task occurring in an application. For example, you could have a large spreadsheet calculate values while continuing to use that spreadsheet or print a complicated document while continuing to work on that document. Applications must be written according to certain specifications in order to multithread.

N

NAT
Network Address Translation. An Internet standard that allows all of the computers on a private, local network to have "private" IP addresses and share one public Internet IP address and providing the local network with Internet access. All of the computers on the local network can access the Internet, but because of the "private" IP addresses, nobody on the public Internet can access the local computers. See **Firewall**, **IP Address**.

Netscape Navigator
A commercially available Web browser for accessing and viewing the Internet. Versions are available for Windows, Macintosh, UNIX, and Linux. See **Web Browser**.

Network
A group of computers connected by wires or wireless and using software that enables them to exchange information and share equipment (such as printers and disk drives). See **Communications**, **LAN**, **WAN**.

Network

Network Interface Card
A type of expansion card used to connect a computer to a network such as an Ethernet network. See **Ethernet**, **Expansion Card**, **Network**.

Newsgroups
A service on the Internet reserved for discussions on specific topics. Messages are posted in the newsgroups and replied to by interested people. See **Post**, **Usenet**.

Newsreader
A software program for accessing and reading Usenet newsgroups. On Windows, news can be read with a Web browser or a newsreader such as Outlook Express can be used for reading, posting, and replying to Newsgroups. See **Newsgroups**, **Usenet**, **Web Browser**.

NFS
Network File System. A networking protocol suite developed by Sun Microsystems and used widely in the UNIX world. Used to share directory trees across a network.

NNTP
Network News Transfer Protocol. The set of rules and procedures (protocol) used to connect to Usenet newsgroups on the Internet. Usenet newsreaders

support the NNTP protocol. See **Newsgroups**, **Newsreader**, **Protocol**, **Usenet**.

Node
In communications, a node is network junction, station, or connection point. For example, a personal computer connected to a network is a node.

Notebook Computer
Small, compact portable computer also called a laptop computer. Measurements are usually about 8.5 x 11 inches and weigh between 4 and 9 pounds. Notebook computers are self-contained, full featured (built-in keyboard, audio, speakers, pointing device, disk drives, etc.) and can operate from batteries or AC power. The screen is a flat, LCD display. See **LCD**.

Notebook PC

NTFS
New Technology File System. The next generation file system, developed by Microsoft for Windows NT, for the traditional FAT file system. NTFS offers extended file security and recovery from disk crashes. NTFS is available today in Windows 2000 and Windows XP. See **FAT**.

O

Object Linking and Embedding (OLE)
A proprietary software system from Microsoft that allows applications to transfer and share information. For example, a spreadsheet document can be embedded in a text document. In this case, a copy of the spreadsheet is placed into the new compound document. Any changes made to the embedded spreadsheet only affect the document that contains it. An object can be linked instead of embedded. When a change is made to a linked object, you are changing the original and any documents that link to that object are updated automatically to reflect the changes.

OC-3
Optical Carrier 3. Specifies a particular fiber optic communications channel which supports a transmission speed of 155.52 Mbps. See **Digital**, **Fiber Optics**, **Mbps**, **SONET**.

OCR
Optical Character Recognition. Computer software technology that is used to convert a printed document into its text file equivalent. When a printed document is scanned, it is turned into a picture. The OCR software analyzes the "picture" of the document in order to identify all of the letters, numbers, and punctuation marks. When the OCR software recognizes a character, it translates it into the equivalent ASCII character code or ASCII text. This continues until the entire document is processed. The end result is an ASCII text file that is equivalent to the printed document, which takes up much less space and can be modified or edited. While not perfect, OCR software can recognize up to 90% of the text that it translates. However, old, worn, and unclear documents may prove extremely difficult to convert.
See **ASCII**, **Scanner**, **Text File**.
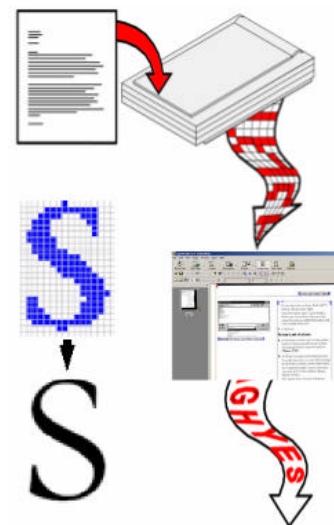
OCR Process

Offline
Term describing when your computer is not connected to another computer, a network, or the Internet. The computer can still be used for word processing, creating pictures, spreadsheets, presentations, or for any other operations not requiring information or services from the network or Internet. See **Online**.

Online
Term describing when your computer is connected to another computer, a network, or to the Internet in order to access information or services. Online can also refer to your printer. For instance, if your printer is online, it's properly connected to your PC, loaded with paper, and turned on. See **Offline**.

OOBE
Out Of Box Experience. The experience of setting up and using a new computer or software program for the first time. Computer manufacturers have tried to make the setup process as easy as possible for the consumer. There has been several industry guidelines established to encourage manufacturers to create products that make the "Out of Box" experience a successful endeavor for the consumer.

Open
To recall an existing file on the display screen to review, make changes, or perform some other operation to it. Files are typically opened from within the application that was used to create them. Some operating systems, like Windows, allow you to select the file and then open it and launch the application at the same time. See **Application**, **Close**, **Quit**.

Open Architecture
A type of computer system in which the specifications are made public in order to allow and encourage third party manufacturers to produce additional expansion cards or add-ons, and to allow users to easily install these add-ons. The original IBM PC, PC, or PC-compatible is "open architecture". See **Expansion Card**.

Operating System
The main system software or master control program that runs the computer. The operating system provides the user interface, controls all of the peripherals attached to the computer, provides an "environment" for all of the software programs that run on the computer, keeps track of all of the data or information stored on the computer, and provides security. Among popular operating systems are the versions of Microsoft Windows, Mac OS, MS-DOS, UNIX, Linux, etc. See **Interface**, **Peripheral**.

OS X
Apple's next-generation operating system that is the successor to Mac OS 9 and designed for Apple's iMac family of computers. OS X is backwards compatible with legacy Mac applications (OS 9 and earlier) as well as applications written for OS X. OS X's new graphical user interface (GUI) is called "Aqua". OS X is entirely derived from the BSD 4.4 UNIX operating system. The entire set of UNIX commands is also to Mac users. See **Graphical User Interface**, **Macintosh**, **Operating System**, **Mac OS**.

P

Packet
A block of computer data that is transmitted contiguously from one computer to another over the Internet or network. A packet contains the data, where to send the data, and additional data to correct errors that might occur during the process.

**Panel**
See **Dialog Box**.

Pantone
System of color matching designed to ensure that color output will be the color intended whether on-screen or in output from a printer.

Parallel Interface
An interface between a computer and a parallel device, such as a printer. The computer sends or receives multiple bits of information simultaneously, as opposed to a single bit at a time using a serial interface. A parallel interface is usually bi-directional, meaning it can send and receive in both directions. See **Interface**, **Parallel Port**, **Serial Interface**.

Parallel Port
A 25-pin female cable connector (called DB-25) usually located on the back of a computer and normally named LPT1, that is primarily used for connecting a printer. Some computers have more than one parallel port and are labeled LPT2, LPT, etc. A parallel port sends or receives data multiple bits at a time as opposed to serial or one bit at a time. A cable called an "**IEEE 1284 Bidirectional Printer Cable**" is used to connect the printer to the parallel port on the computer. See **Parallel Interface**, **Serial Port**.

Printer Port Connector
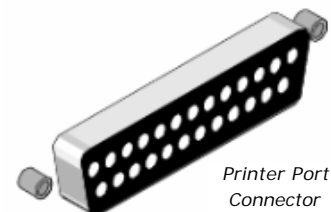
Parallel Printer
A printer with a parallel interface, which you connect to a parallel port. See **Parallel Interface**, **Parallel Port**, **Printer**.

Parameter
Any value passed to a computer program by the user or by another program in order to customize the program for a particular purpose. A parameter may be, for example, a file name, a coordinate, a range of values, or a code of some kind. See **Program**.

Parity Checking
Unfortunately, data communications can be affected by any interference or distortions on the line, such as when sending an E-mail or fax. As a result, some information may never arrive or might be altered. That's why error-checking is a part of data communications and is used to help ensure that information is transmitted and received correctly. Parity checking uses a single bit (called the parity bit), either a 0 or 1 depending on the number of data bits sent, so that the number of 1's is either even or odd for each group of bits transmitted without error. The parity setting is often important in communications. If you are having difficulty with a particular modem, check the parity setting (either odd, even, or none); it must be the same as the modem on the remote end you are connecting to. See **Bit**.

Partition
A division of the space on a disk drive into smaller areas to further organize the total space on the disk drive. For example, a 20 GB drive could be divided into two 10 GB partitions, each acting like a separate drive to the operating system. See **Gigabyte (GB)**, **Hard Disk**.

Password
A secret word or code used to serve as a security measure against unauthorized access to a computer or to data. Passwords are now commonly used to protect computer resources. You may need to enter a password when you turn on your computer, to use a printer, or to gain access to a network resource. When selecting a password, do not use your name or any part of it. Do not use words that are found in a dictionary or commonly used around your office. Secure passwords should contain a combination of upper and lower case letters and may contain symbols or numbers.

Paste
To cut or copy a piece of data (text, graphic, table, etc.) from one location in a document and place it into another document or location in the same document. All graphical-based operating systems, such as Windows, Mac, etc. have cut and paste capability that is usually selected from an "Edit" menu. See **Copy**, **Clipboard**, **Cut**, **Menu**, **Operating System**.

Path
Specifies the location of a file. For example (in MS-DOS), the path of the file BOB.DOC which is located in the DOCUMENT directory in the SALES directory on the C drive, is C:\SALES\DOCUMENT\BOB.DOC. Paths are applicable to every operating system that uses directories.

PC
Personal Computer. Usually PC refers to any IBM-compatible personal computer. See **Personal Computer**.

PC Card
A credit-card sized, removable expansion 16-bit card for portable computers

standardized by PCMCIA. PC Cards are commonly used to add modems, network adapters, radio transceivers, and flash memory-based disk drives. The PC Card is a "Plug and Play" device, which is configured automatically at startup or at insertion time. The PC Card standard has been replaced by the 32-bit CardBus standard. See **16-bit**, **32-bit**, **CardBus**, **PCMCIA**, **Plug and Play**.

PCI
Peripheral Component Interconnect. An expansion card interface commonly use in PC's, Macintosh's, and workstations. This bus features faster performance, as well as hardware compatibility across different computer systems, so the same card can be used, though different software drivers are needed. The main advantages of PCI is the "Plug and Play" capability, automatically configuring the cards at startup, the sharing of interrupt IRQ's, and the high-speed data path. See **Expansion Card**, **Interface**.

PCMCIA
Personal Computer Memory Card International Association. A standard for hardware expansion, mainly for notebook computers. PCMCIA is supported by PC's and Apple and features ease of use and portability. The PCMCIA created the PC Card. See **CardBus**, **PC Card.**

PDA
Personal Digital Assistant or Handheld. A small, handheld computer primarily used as an organizer for personal information, such as an address book, to-do list, calendar, notes, etc. However, today's PDA's and handheld's have advanced to have the power to provide wireless E-mail, Internet access, enhanced color displays, and can connect to desktop computers to share documents or exchange information. The main characteristic of a PDA or handheld is that it can be

iPAQ Pocket PC

easily held in one hand and operated with the other. The main distinction between a "PDA" or handheld is the primary method of input. The PDA uses a stylus to "tap" selections on menus and to enter characters instead of a keyboard. A Handheld has a miniaturized keyboard built-in, but also typically has a stylus. The two most popular types of PDA's are the Palm and PocketPC.

PDF
Portable Document Format. A document format designed by Adobe that allows documents to be created on one type of computer and then displayed or printed on many different types of computers. The Adobe Acrobat software program is available for DOS, Windows, Mac, and UNIX/Linux operating systems and is used to create PDF files by "printing" the file. The Acrobat Reader is used to display and print PDF files and can be downloaded free of charge from www.adobe.com. PDF files have a .pdf file extension. See **Document**, **Extension**, **File**.

Peripheral

A computer term used for devices that are connected to a personal computer and controlled by its CPU. Peripherals can be internal (installed inside the computer) or external (outside the computer, but connected electronically to it). Common peripherals include keyboards, monitors, mice, disk drives, printers, scanners, modems, and joysticks. See **CPU**, **PC**, **Personal Computer**.

Personal Computer

A computer designed for use by one person at work or at home. A personal computer is very different from a mainframe computer which is designed for intensive computational tasks and often shared by multiple users who are connected to the "mainframe". Today, a complete personal computer with a printer costs less than $1,000. The size is based on the built-in peripherals and components; the speed is based on the CPU that runs it; and the output quality is based on the type and resolution of its display monitor and printer. See **CPU**, **Monitor**, **PC**, **Peripheral**, **Printer**.

Original IBM PC

PGP

Pretty Good Privacy. A freeware software application for providing security for file transfers (E-mail, etc.) through file encryption. See **Application**, **Encryption**, **Freeware**.

PIF

Program Information File. A file that provides information about how Windows should run a non-Windows application. For example, you use a PIF to direct Windows to run an MS-DOS application in a full screen rather than in a window, or to specify a start-up directory. See **Launch**, **Windows**.

Ping

Getting its name from Navy sonar technology, Ping is a network utility used to find out if a computer exists on the Internet or network and is online. Ping sends out an "Are you there?" message and waits for a response. Ping uses a domain name or an IP address to "talk" to the remote computer or device. See **Domain Name**, **IP Address**, **Online**, **Utility**.

Pixel

The smallest graphic unit or picture element that can be displayed and controlled on the screen by the computer display adapter. Pixels are usually made up of one or more energized (generating light) dots of color. Monochrome displays use one dot per pixel. Color displays use a red, green, and blue dot per pixel, each of which can be energized at different intensities,

Pixel

creating a range of colors from the viewable, perceived mixing of these dots. Black is all dots off and white is all dots turned on with maximum intensity. See **Display Adapter**, **Monochrome**.

Plug and Play (PnP)
Used to refer to hardware or software that requires an absolute minimum of effort to install, thus eliminating the frustration of re-configuring the computer. An example of a Plug and Play device would be a sound card that, once installed in an expansion slot, communicates with your computer's operating system to let it complete the setup and configuration of the card for you. All Microsoft Windows versions since Windows 95 supports Plug and Play. See **Expansion Slot**.

Point Size
An attribute or property of a printed text character. It is the measurement of the height of a particular font (set of printed text characters). A single point is 1/72 of an inch. For example, 12 points, abbreviated 12 pt., is the height of standard, 6 lines per inch, typewriter text. See **Font**.

Pointer
A movable symbol on the display that is used to point to something (menu, item, picture, text, etc.) on the display and often changes shape depending upon where it is and where it is pointing to. See **Cursor**.

Pointer

Pointing Device
An input device you use to move the pointer on the screen, choose commands, press buttons, select text, create drawings, and so on. A mouse is a pointing device. See **Mouse**, **Touch Pad**, **Trackball**.

POP3
Post Office Protocol 3. A standard E-mail server commonly used on the Internet. It provides temporary message storage that holds incoming E-mail until users log on and retrieve their E-mail messages. POP3 follows a very simple protocol (set of rules) called the SMTP messaging protocol that allows single user machines to download E-mail from a POP server. See **Protocol**, **Server**, **SMTP**.

Port
A connector and its associated computer hardware, used for sending or receiving data from a computer to its peripherals (printer, scanner, modem, etc.) or to other computers. Serial, parallel, USB, and SCSI ports are commonly used ports. See **Peripheral**, **USB**.

Post
To send a message to an online newsgroup, forum, or bulletin board. See **Newsgroups**.

POST
Power-On Self-Test. A test of internal circuitry, memory, and installed hardware. It is a built-in self-check of the computer before attempting to load the operating system. If no problem is found, the computer will continue the boot process, ultimately loading the operating system. If a problem is found, the computer will attempt to "play" a series of tones on the it's internal speaker or attempt to display an error message on the screen. See **Boot**, **Operating System**.

PostScript
A page description language from Adobe Systems designed for describing text and graphics, usually built into high-end output devices such as laser printers and typesetters. It is the de facto standard for commercial typesetting and printing. Postscript documents are portable in the sense that the document does not contain any information that is printer-specific. There is also a special set of Postscript fonts that are specifically designed to work with Postscript. Thus with PostScript, you can create documents using a variety of font sizes, as well as high quality graphics. Display PostScript is the use of PostScript for the computer's own display (on a monitor). See **Font**.

POTS
An acronym for "Plain Old Telephone Service", referring to the standard, worldwide voice telephone service.

Plain Old Telephone

Power Surge
A sudden increase or "spike" in the power line voltage. Power surges can damage data and your computer. See **Surge Protector**.

PPP
Point to Point Protocol. An implementation of the TCP/IP protocol to be used over serial lines (modems). Allows direct access to the internet over a modem and has since superceded the SLIP protocol. See **SLIP**.

PPPoE
PPP over Ethernet. A method used by broadband providers to allow you to connect to an ISP. See **DSL**, **Ethernet**, **Internet Service Provider (ISP)**, **PPP**.

PPTP
Point-to-Point Tunneling Protocol. A standard for creating secure, virtual private networks made popular by Microsoft Windows. See **Dial-Up**, **VPN**.

Press
Action performed using either button on the mouse. Click the mouse button but do not release it. Continue to hold the mouse button. Pressing is used in selecting items from menus, dragging items, and using scroll bars. You can release the mouse button after completing the task.

Print Queue
A list of files that have been sent to a printer. The list indicates the file currently printing and those waiting to be printed.

Print Server
A device and/or program that manages shared printers. See **Print Queue**.

Printer
A computer peripheral that converts computer output into printed material. The printed output can be text, pictures or graphics, or a combination. The most common types of printers are dot-matrix printers (prints similar to a typewriter), ink jet printers, and laser printers. See **Ink Jet Printer**, **Laser Printer**.

Printer Driver
A series of instructions that allow a program to communicate with a specific printer. The driver is either supplied with the operating system or direct from the printer manufacturer. From time to time, the manufacturer will supply new drivers or upgrades. These upgraded drivers can usually be downloaded from the manufacturer's Web site. See **Device Driver**, **Download**, **Operating System**.

Printer Fonts
Fonts that are stored in your printer's memory, or soft fonts that are sent to your printer before a document is printed. Because the font works only with the printer in which they are stored, the operating system (or environment) must either approximate the font on-screen or separate screen versions must be installed. If the operating system cannot match the printer and on-screen fonts, the font generated for the printer will not display accurately on the screen. See **Font**.

Processor
Same as CPU. See **CPU**.

Program
A sequence of instructions that can be executed by a computer. In common usage, program, software and application all pretty much mean the same thing. Usually, a program is a complete executable file, whereas "software" and "application" more accurately describe collections of program and data files devoted to a single purpose, such as word processing. See **Application**.

Program File
On a PC, a file that starts an application or program. A program file has an .EXE, .PIF, .COM, or .BAT filename extension. See **Program**.

Programming Language
Just like people speak languages to communicate, computers have their languages that they understand. Computer languages have their own

vocabularies with key words, letters, numbers, and symbols that represent operations or sequences of operations that computers perform. There are also certain "grammar" rules, as well. Today, there are a few programming languages that are widely used: C (by far, most popular), Basic, Fortran, Cobol, and Java. See **Basic**, **C**, **Cobol**, **Compiler**, **Java**, **Program**.

Proportional Font
A font in which different characters have varying widths, such as Times. See **Font**, **Monospaced Font**, **Scaleable Font**.

Protocol
An agreed-upon set of rules or standards that define how communications is handled by computers and networks, particularly for the format and transmission of data. Protocol standards are jointly created by companies and organizations in order to promote functionality, interoperability, and compatibility between vendors and manufacturers.

Proxy Server
A proxy server sits between a client program (typically a Web browser) and some external server (typically a Web server on the Internet). The proxy server can monitor, intercept, and filter (block) any and all traffic being sent to the external server or that comes in from the Internet connection. Since this filtering works both ways, a proxy server can be used to keep users out of particular Web sites (by monitoring for specific URL's) or prevent hackers from unauthorized access of the internal network. A Proxy Server also acts as a "middle man" Web server for your entire domain or whatever clients you place behind the proxy server firewall (a logical block between your clients and the rest of the Internet). If a Web page requested by a client Web browser is not on the proxy server's access control list, the request is processed normally and the retrieved Web page is sent back to the requesting client. If, however, the requested Web page or Web site is on the control list, the client instead receives a message indicating that the URL is not accessible or not valid. Proxy servers are available for common Internet services such as HTTP Proxy for Web access and SMTP Proxy for E-mail. See **Domain**, **Firewall**, **Hacker**, **HTTP**, **SMTP**, **URL**.

PUC
Public Utilities Commission. A regulatory agency in every state that governs public utilities such as electricity, gas, oil, sewer, water, transportation, and telephone services.

Pull-down Menu
A method of selecting a command in an application having a menu bar that categorizes commands under a number of headings. By clicking on the category head, a list of commands is extended downwards. Clicking on an item in that list initiates the command. See **Click**, **Command**, **Menu**, **Menu Bar**.

Pull-Down Menu

Q

Queue
A list of files that have been sent to a device such as a printer. The list indicates the file currently being acted on by the device (printed) and those waiting to be acted on (printed). The first one sent to the printer is the first one that will be printed and then removed from the list. See **Printer**.

Queue

QuickTime
A digital video standard developed by Apple Computers. Viewers to look at QuickTime movies are available free of charge from www.apple.com. QuickTime movie files have a .MOV extension. See **AVI**, **Digital**, **Extension**, **MPEG**, **Video**.

Quit
To exit an application. Quitting an application makes its functions unavailable until the next time you launch that application. See **Application**, **Close**, **Open**.

QWERTY
Name of the standard American-English keyboard. The letter keys in the top row from left to right are "Q-W-E-R-T-Y", hence the name.

R

RAM
Random Access Memory. The memory
that can be used by applications to
perform necessary tasks while the
computer is on. Memory chips that
can hold easily changed information

DIMM Memory Module

as long as there is an electric current running through them, but go blank
when the electricity is cut off. The term "Random Access" refers to the ability
of a processor to immediately access any part of the memory. Many people
confuse RAM and the hard disk. RAM is temporary storage while the hard
disk is semi-permanent storage. One way to understand the difference
between the two is to relate RAM to short term memory and the hard disk to
long term memory. Just as lots of memories are stored in your brain, lots of
information is stored in a computer's hard drive. However, you can only
actively think about and use a small portion of what you remember at any
given time. This is similar to RAM. When a computer is using an application,
it is loaded into RAM.

RAM Disk
Also called a virtual drive. A portion of RAM that is used as if it were a disk
drive. RAM drives are much faster than hard disks because your computer
can read information faster from memory than from a hard disk. However,
information on a RAM drive is temporary and is lost when you turn off or
reboot your computer. See **RAM**.

Raster Font
See **Screen Font**.

Read-Only File
A file that you can read but cannot make changes to.

Readme File
A name for a file containing information that wasn't
included in the user manual or other documentation
for a software program. The Readme File is usually
located on the original disk or CD-ROM containing the
software or documentation. See **Application**, **File**,
Program.

Read Me

Real Audio
A software system for playing sound files in real time over the internet.
Produced by Progressive Networks. See **Audio File**.

Reboot

To reset a computer by reloading its operating system. A reboot does not require that the power to the computer be turned off and on again. Many computers have a reset button that can be pressed if the computer crashes or hangs in such a way that you lose all control through the mouse and keyboard. See **Boot**, **Crash**, **Hang**.

Recycle Bin

In Windows, the folder (icon of a trash can on the desktop) that can be used for deleting files. It is a temporary place where unneeded or unwanted objects are placed eventually to be removed from your hard disk. Final removal from the hard disk can be either automatic or manual. See **Desktop**, **Folder**, **Hard disk**, **Icon**, **Windows**.

Windows Recycle Bin

Refresh Rate

The refresh rate is the number of times per second the image is painted onto the screen. A CRT uses a phosphor material that when energized by an electron beam, glows, thus ultimately creating the image on the screen. Refresh is necessary, because the phosphors hold their glow for just a fraction of a second. The higher the refresh rate, the more rock solid the image will appear on screen. Most computer monitors use a refresh rate of 60 Hz to 110 Hz. The advantage of using the higher rates is to avoid screen fluctuations or flicker, commonly present at 60 Hz. See **CRT**, **Hertz (Hz)**.

Repeater

A communications device used in networks to extend transmission distances by amplifying or regenerating signals. Repeaters are used extensively in increasing the distance of networks, such as between buildings. Repeaters are used to join lengths of network cables, or to split a network cable into multiple segments, or to join two LAN's of the same type together, i.e. an Ethernet network. There are also wireless repeaters to boost the signal and extend the transmission distance for wireless networks. See **Network**, **Wireless LAN**.

Resolution

Indicates the number of dots (or pixels) that make up an image on a screen or printer and determines the degree of sharpness. On the screen, resolution is expressed as a matrix of dots (pixels). For examples a resolution of 640x480 means 640 dots (pixels) across each of 480 lines. The same resolution will look sharper on a small screen than a larger screen. The higher the resolution, the more information or

Resolution

finer and smoother images can be displayed at one time and a given size. Jagged lines will smooth out with higher resolutions. In Windows, there is a Display Properties Control Panel that allows you to change the display

resolution. Some common settings are 640x480, 800x600, 1024x768, 1280x1024, and 1600x1200. In printers, resolution is measured in dots per inch (dpi). Common printer resolutions are 300, 600, 1200, and 2400 dpi. See **Control Panel**, **Pixel**.

Restore
1) The process of copying file(s) to the hard disk from a backup to recover damaged or lost information. See **Backup**.
2) In Windows, to restore a window to its previous size. The restore button on the top bar (title bar) of the window is the same button as the maximize button whenever the window is not already at maximize size. See **Maximize**, **Minimize**, **Window**.

RGB
Red, Green, Blue. A color model for generating video on a display screen. Colors are generated as varying intensities of the red, green, and blue dots. RGB stands for the three primary colors; that is, the primary colors when light is added together to produce the color. Red, yellow, and blue are the primary colors when ink is blended and put onto (white) paper. When all three are turned on high, white is created. Black is produced with all of the dots off. This is how the computer display is able to produce all of the available colors and shades of gray. See **CYMB**, **HLS**.

RISC
Reduced Instruction Set Computer. A type of computer processor or CPU that has a simpler set of instructions it can perform. More complex instructions are created by combining these simple instructions together to produce the same result. However, a RISC processor can execute its instructions in a single cycle. Thus the RISC processor is often faster than its CISC counterpart and is designed and manufactured more economically. An example of a RISC CPU is the Motorola G4 Processor used by Apple in the iMac and PowerMac. See **CISC**, **CPU**.

RJ-11
The most common telephone jack used for telephones, modems and FAX machines. It is a 6-pin jack and used with a four-wire cable. See **FAX**, **Modem**, **POTS**.

RJ-45
An eight-pin connector used on 10BaseT/100BaseT Ethernet network cables. See **10BaseT/100BaseT**, **Ethernet**.

ROM
Read-Only Memory. A chip or chips with information, usually a program, programmed into them at the time of their manufacture. These chips cannot be re-written, hence "read-only". The contents of ROM are permanent, even when the computer is turned off. The first instructions that a computer executes after the power is turned on are stored in a ROM device and it also

contains the instructions that the computer uses to load the operating system. See **BIOS**, **Operating System**.

Root
1) In a computer file system, the starting point or the main, top-level directory of a disk. When the computer is first started, the root directory is the starting directory. All other directories are accessed by naming their path relative from the root directory. If the root directory is corrupted, access to all of the other directories will be affected. See **Directory**, **Path**.
2) It is also a name for the "superuser" account in UNIX/Linux, who has unlimited access privileges and can perform any and all operations on the computer. See **Administrator**.

Root Directory
The top-level or the main directory of a disk. In Windows and MS-DOS, the symbol for the root directory is a backslash (\). See **Folder**, **MS-DOS**, **Root**, **Windows**.

Router
A communications device that helps data travel from one point to another on a network. They make decisions about which path through the network traffic will follow, switching and forwarding the data based on information sent with the data. The data travels from router to router across the network or the Internet until it reaches its final destination. Thus routers serve a major part of the Internet backbone, ultimately interconnecting all of the networks. Each network connected by the router has a unique identity with its own Internet IP address. Every network at some point will have some type of router, including a home network. See **Backbone**, **IP Address**.

RTF
Rich Text Format. A word processing file standard. RTF attempts to maintain some aspects of document formatting during transfers and conversions. See **File**, **Format(3)**.

Run
To launch or start a program or application. See **Launch**, **Quit**.

S

Saturation
Refers to the amount of white contained in a color. For example, a fully saturated red would be a pure red. Saturation is used as an attribute of the HLS color model which is similar to the way an artist mixes colors by adding black and white to pure colors. See **Hue**, **HLS**, **Luminance**.

Save
The process of storing the data generated by a program or application to disk or hard drive. To avoid lost data, "save" often while you work. Some software programs have an "auto save" feature that automatically saves data on a periodic basis.

Scaleable Font
A font that is generated in the required point size on the fly from a base-level font containing letters, numbers, punctuation marks, and symbols. Scaleable fonts eliminate having to store hundreds of different sizes of fonts on the disk. Windows uses TrueType fonts, which is a scaleable font technology that can generate both screen and printer fonts. See **Font**, **Point Size**, **TrueType Font**.

Scanner
A device that can be attached to your computer (either through the parallel port, USB, or SCSI) that reads a printed page or photograph and converts it into a graphic image for use on the computer. Scanners can be a great way to do things like copy a newspaper article into your computer for future reference, or scan a photo of a new baby to put on an announcement card you're creating with one of your applications. Microsoft Windows has basic scanner support built-in. However, the scanner manufacturer usually supplies more extensive software support with the scanner. See **Digitize**, **Optical Character Recognition**, **USB**.

Screen Font
Also called a raster font. The font that is displayed on your screen, which may approximate a printer font, so that documents look approximately the same on the screen as they do when printed.

Screen Saver
An application designed to protect your display when it's on, but not in use. It is usually moving picture or pattern that appears on your screen when you have not moved the mouse or pressed a key on the computer for a specified period of time. Screen savers prevent screen damage that is caused when the same areas of light and dark are displayed for long periods of time. Windows has a set of built-in screen savers, but it is also possible to create

custom screen savers, download them from the Internet, or buy them separately.

Scroll
To move through text or graphics (up, down, left, or right) in order to see parts of the file or list that cannot fit on the screen. Scrolling can be done using either the cursor (arrow) or page up/down keys on the keyboard or a mouse or other pointing device. See **Cursor Key**.

Scroll Arrow
An on-screen arrow on either end of a scroll bar that you use to scroll through the contents of a window or list box in the corresponding direction, usually using a mouse or other pointing device.

Scroll Bar
A vertical or horizontal bar at the side or bottom of a window in a GUI (See **GUI**) operating system that allows you to move around quickly in a document. The bar is clicked on using the mouse and then dragged to scroll the screen in the corresponding direction. Scroll bars typically have arrows for moving up, down or sideways in increments and a slider button that lets you

Scroll Bars

make big movements. See **Scroll Arrow**, **Scroll Box**.

Scroll Box
In the scroll bar in a GUI window, the small box that shows the position of information currently in the window or list box relative to the contents of the entire window. See **GUI**, **Scroll Bar**.

SCSI
Small Computer System Interface. Pronounced "scuzzy". SCSI is hardware interface used to connect computers with hard drives and other peripherals. SCSI is widely used in servers because of its ability to support up to 15 drives or devices on the same interface.

SDMI
Secure Digital Music Initiative. A set of rules for securely distributing digital music over the Internet. Announced in February 1999, it is backed by the Recording Industry Association of America (RIAA) and Sony, Warner, BMG, EMI, and Universal, the top 5 music production companies. SDMI provides the guidelines for developing compliant digital rights management systems. See **DRM**.

Search Engine
An application typically hosted on a Web site and used by your Web browser to help you find virtually anything, including documents, daily news, weather, stock reports, travel, entertainment, shopping, or information on the Internet

using key words or phrases. Some example search engines on the Internet are Google, Yahoo, MSN, Ask Jeeves, Altavista, etc. See **Web Browser**, **Web Site**.

Search and Replace
A command in an application that lets you search a document for a particular word, number or phrase and change every occurrence to a different word, number or phrase all at once or instance by instance. Searching is usually initiated from a pull-down menu or an icon on the application. See **Icon**, **Menu**, **Pull-Down Menu**.

Sector
The smallest unit of storage on a disk drive that can be read or written, which is 512 bytes on a standard PC or PC-compatible. See **Byte**, **Cluster**.

Select
To mark an item so that a subsequent action can be carried out on that item. You can usually select an item by clicking it with a mouse or pressing a key. After selecting an item, you choose the action that you want to affect the item. For example, in order to delete a file, it must first be selected. See **Click**, **Highlight**.

Semiconductor
Refers to type of miniaturized electronic component, such as transistors or "chips" that require less space, are faster, and require low power. Semiconductors are made from silicon, germanium, or sapphire. Semiconductors have made possible the personal computer as well as many other portable electronic devices. See **Chip**, **Transistor**.

Serial Bus
A type of serial interface that supports attaching multiple peripherals to a computer. Although both transmit and receive data serially, a serial bus differs from a serial port. A serial port can connect only one device to a computer at a time. Ethernet is an example of a serial bus on a network. See **Bus**, **Ethernet**, **Firewire**, **Serial Interface**, **Serial Port**, **USB**.

Serial Interface
An interface between a computer and a serial device, such as a printer or modem, by which the computer sends or receives data one bit at a time to the device as opposed to parallel. See **Interface**, **Serial Port**.

Serial Port
A 9-pin or 25-pin male cable connector (called DB-9 or DB-25), usually located on the back of a computer and normally named COM1, that is primarily used for connecting modems, mice, some printers and other communication devices. Some computers have more than one serial port and are labeled COM2, COM3, etc. A serial port transmits data one bit at a time

as opposed to parallel or multiple bits at a time. See **Parallel Port**, **Serial Interface**.

Server
A computer or software package that provides a specific kind of service and shared by users connected to it by a network or the Internet. A server can be dedicated to a single function, like handling a company's E-mail, or it can be a computer with a number of server applications or services running on it that enable it to handle E-mail, provide an Internet connection, and fax documents for the entire organization. A server might also be running a Web site for public access on the Internet. The main reason to have a server is the need to provide a shared network resource or service. Standard PC's running Windows can provide file and print sharing, a shared Internet connection, and even a "personal" Web server. See **File Server**, **Web Server**.

Server
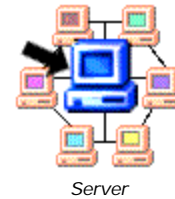
SGML
Standard Generalized Markup Language. An international standard for the publication and distribution of electronic information. HTML, the language used to create Web pages is a form of SGML. See **HTML**.

Shareware
Software distributed free of charge with the expectation you'll pay for it (honor system) if you end up liking it and using it. Shareware is software you try before you buy. Generally less expensive than store - bought software, shareware can be found in Web sites all over the Internet. See **Freeware**.

Shortcut Key
A key or key combination that you press to carry out a command or action. In Windows and on the Macintosh, if a command has a shortcut key, the key combination is listed to the right of the command name on the menu. In MS-DOS and many DOS applications, one letter of a command is bolder, a different color, or underlined. To select that command, you may press that letter. Other operating systems may have other methods. In Windows, F1 is the common function key for Help, Ctrl+A "selects all" of the items in a window, and Ctrl-Alt-Del restarts the computer.

S-HTTP
Secure HyperText Transfer Protocol. A set of rules or procedures (protocol) for managing secure transactions over the Internet between Web browsers and Web servers. By convention, Web sites using SSL have a URL beginning with "https://" instead of "http://". See **HTTP**, **Protocol**, **S-HTTP**, **SSL**, **URL**, **Web Browser**, **Web Page**, **Web Server**, **World Wide Web (WWW)**.

SIMM
Single In-Line Memory Module. An earlier type of small circuit board or

module containing multiple RAM memory chips that makes it easier to add memory to a computer. A SIMM memory module plugs into a SIMM socket on the PC motherboard. SIMM modules are available in 30-pin and 72-pin formats and support 32-bit wide data. See **32-bit**, **Memory**, **Motherboard**.

SLIP
Serial Line Internet Protocol. An implementation of the TCP/IP protocol to be used over serial lines (modems). Allows direct access to the Internet over a modem. See **PPP**.

SMTP
Simple Mail Transfer Protocol. The protocol used to transfer E-mail between computers on the Internet. It is a server to server protocol, so other protocols (like POP3) are needed to transfer the E-mail to a client machine. See **POP3**, **Protocol**, **Server**.

Socket
1) A socket is the UNIX TCP/IP communications method for accomplishing communications between computers. What this means is a socket is used to allow one computer to speak to another, very much like the telephone is used to allow one person to speak to another. Just as you hang up when you're through speaking to someone over the telephone, you must disconnect the socket connection when the computers are finished talking to each other. See **TCP/IP**.
2) Refers to a receptacle, connector, or jack on a computer such as an expansion card socket. See **Expansion Card**.

Soft Font
A set of characters of a particular typeface or font that is stored on the computer's hard disk and downloaded to the printer before printing the document. Also called downloadable font. The computer's operating system or the application usually controls the loading process of soft fonts. Soft fonts are usually available from a font vendor or from the printer manufacturer. See **Font**.

Software
A set of instructions or program that make computer hardware perform particular tasks. System software is made up of programs such as the operating system, device drivers, macros, and other control programs. Application software is any program that creates or processes information for the user such as word processing, spreadsheet, presentations, accounting, graphics and illustrating, or E-mail. Most companies provide upgrade programs to provide the latest version to its customers, usually at a lower cost. Contrast with hardware. See **Hardware**, **Upgrade**.

Solid Color
A color that appears on a display when all pixels are the same color. On a monochrome display, there are only two solid colors: black and white.

SONET
Synchronous Optical Network. A fiber optic digital communications system commonly deployed by telephone companies and common carriers. SONET networks are the standard in telephone networks, but are often used as network backbone communications links for the Internet or WAN. A typical SONET fiber optic cable carries 288 separate optical fibers, with each fiber capable of carrying 48,000 telephone calls. SONET data communications speeds range from 51 Mbps to multiple Gbps (billions of bits per second), which is considerably faster than T1 or T3 lines, and is specified by the OC (Optical Carrier) speed or service level. See **Bps**, **Digital**, **Fiber Optics**, **OC-3**, **T1**, **T3**.

Sound Card
A computer expansion card that records and plays back sound, handling the audio files for your PC, and provides inputs for multiple sound sources such as a microphone, the audio from a CD-ROM drive, etc. and outputs for speakers or an external amplifier like your stereo system. One thing to look for in a computer with a sound card is Sound Blaster compatibility, a specification widely used by many applications. If sound quality is really important to you, look for a sound card that also has "Wavetable Synthesis". This technology enables your computer to play back the prerecorded sounds of actual instruments. There is music software, both part of the operating system and available for purchase, that will let you play and create music. See **Audio**, **Audio File**, **Expansion Card**, **MIDI**.

Source Code
A software program in the form of an ASCII text file. Source code is the program as it is written in a particular programming language, such as C, Visual Basic, Fortran, Java, etc. In order to run the program, source code must be translated into the computer's native language using another program called a compiler or an interpreter. Compilers and interpreters for PC's are available from Microsoft, Motorola, IBM, Sun Microsystems, Intel, and usually available with versions of the UNIX/Linux operating systems. See **ASCII Text File**, **Compiler**, **Operating System**.

SPAM
Unwanted, unsolicited, or otherwise undesirable E-mail, advertisements, political or social commentary or other junk information, that disrupts normal Internet activities and is considered valueless and annoying. One way to deal with spam is simply to delete it without reading it. Spam can be controlled by using an E-mail filtering system that tells your E-mail reader to look for certain words in them or to look for a specific sender address and then either deletes the E-mail message or puts it wherever you want it to. For example, a folder named Junk or Trash.

Spool
To transfer data intended for a peripheral device, such as a printer, to temporary storage, either in memory or to hard disk. From there the data is

transferred to the peripheral device at a later time, without slowing down the computer or delaying it, as it performs other operations. See **Peripheral.**

SSL
Secure Sockets Layer. A means for encrypting information as it is sent over the Internet. This method is commonly used by companies engaged in financial transactions or merchandise sales over the Internet to provide security on their Web sites. SSL on a secure Web server encrypts any transmitted data so that when you submit your credit card number on their Web page, it is protected against any unauthorized person. SSL verifies that you are who you say you are by using a user ID and a password. See **Data Encryption**, **Internet**, **Password**, **S-HTTP**, **Socket**, **Web Server**, **Web Site**, **World Wide Web (WWW)** .

Startup Disk
Also called a bootable disk. A disk that contains the operating system files necessary to start up a computer. For example, an MS-DOS startup disk must have the hidden system files (IO.SYS and MSDOS.SYS) and a COMMAND.COM file. You should have an extra system disk around and kept in a safe place, in case the system files on the main hard disk that starts your computer become damaged. Without a system disk, you will not be able to boot the computer, access the hard disk, and repair the damaged files. A startup disk is usually a floppy disk, CD-ROM, or some other type of removable media. In Windows, follow the procedure to "Create an Emergency Start Up disk" to create a startup or bootable disk. See **Boot**, **CD-ROM**, **Floppy Disk**, **Media**.

Store and Forward
Temporary storage of any type of information for transmission to its destination at a later time. This allows for routing the information over networks that are not available at all times. For example, a message could be created and stored for delivery at night when off-peak transmission rates are available.

Subdirectory
A directory within or beneath another directory. In order to gain access to a subdirectory, the path name must include all of the directories above it. For example (in MS-DOS) the path C:\SALES\DOCUMENT\, the directory DOCUMENT is a subdirectory which is located in the SALES directory on the C drive, C:\. See **Path**.

Submenu
Also called a cascading menu or hierarchical menu. It is a secondary menu that appears while dragging and holding over an item in a menu. It gives you additional choices that apply to the item you are selecting in the menu. In Windows, the Start menu has the Programs submenu to provide a launching pad for all of the programs stored on the hard disk. See **Cascading Menu**, **Menu**.

Subnets
Logical divisions of a network divided into smaller sub-networks. Created using routers or gateways on networks with high traffic. Gives better administrative control and improves performance.

SuperVGA or SVGA
Super Video Graphics Array. The PC video graphics standard that expanded the display resolution on a PC to 800x600 pixels with more than 256 colors. Unfortunately there were several SuperVGA standards, that differed slightly, and therefore limited compatibility. See **Display Adapter**, **Pixels**, **VGA**.

Surf
Slang for "browsing the Internet".

Surge Protector
A device for protecting computers and computer devices from power surges. Surge protectors collect and harmlessly diffuse the excess current. Installation is simple; instead of plugging the computer directly into the wall outlet, plug the surge protector into the wall outlet and then plug the computer into the surge protector. Surge protectors are available from computer stores, home improvement stores, and office supply stores. See **Power Surge**.
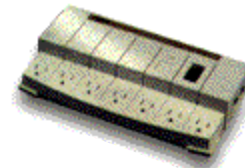
Surge Protector

Swap File
A disk file that is used to temporarily save a program or part of a program that is currently running in memory in order to free up memory for another higher priority task. Swap files are usually located on the main hard drive and can be either temporary or permanent. See **Virtual Memory**.

SXGA
The PC video graphics standard for at least 1280x1024 pixel screen resolution with 16.7 million colors. See **Display Adapter**, **Pixel**, **SuperVGA**, **VGA**.

Synchronous
Refers to a type of data communications that is coordinated in time. First, the two computers or devices exchange instructions to establish synchronization and then data is sent in a continuous stream. Much higher speeds can be achieved using synchronous communications. See **Asynchronous**, **Communications**.

System Disk
See **Startup Disk**.

System File
On a computer, a program on the hard disk that is part of the operating

system or other control program. System files provides the interface to the computer and control basic operations like saving and printing. A system file is usually hidden, that is, it is not shown in the directory listing. See **Operating System**.

T

T1
A type of communications line provided by telephone companies that is able to send and receive computer data at 1.544 Mbps (million bits per second). T1 lines are widely used for connecting a LAN to the telephone company and ultimately to the Internet. See **Communications**, **Internet**, **LAN**, **Mbps**.

T3
A type of communications line provided by telephone companies that is able to send and receive computer data at 44.736 Mbps (million bits per second). T3 lines are widely used for connecting a LAN to the telephone company and ultimately to the Internet. See **Communications**, **Internet**, **Mbps**.

Task
Any program that is currently running on your computer. In Windows, you can switch between tasks, using the Taskbar at the bottom of the screen or using the **Alt-Tab** key on the keyboard. See **Taskbar**, **Windows**.

Taskbar
The band or bar along the bottom of the Windows desktop. The "start" button is located there, as well as buttons for any software application or windows you have open at the time. Click on a button and it activates that application or window. See **Desktop**, **Windows**.

Taskbar

Task List
In Windows, a control panel that shows a list of all of the applications currently running and allows switching between them, stopping applications, or information about the application or process. One of its most common uses is to "kill" or stop programs that have stopped responding. Also called Task Manager. See **Control Panel**, **Windows**.

TCP/IP
Transmission Control Protocol/Internet Protocol. The primary networking rules or protocols used on Internet communications. TCP/IP supports the method to locate, connect, and exchange data with a remote computer over the Internet or network. See **DHCP**, **DNS**, **IP Address**, **Protocol**.

Telecommuting
Working at home and communicating with the office by electronic means, usually through computers and telecommunications technologies, including the Internet. Telecommuting often involves the use of faxes, modems, data

transmission, and video conferencing. See **Modems**, **Telecommunications**, **Video Conferencing**.

Teleconferencing
An interactive telecommunications session between three or more participants that are geographically separated. See **Telecommunications**, **Video Conferencing**.

Telemedicine
Long distance medicine. The process of using video conferencing for medical consultations and diagnosis. With a link to a large medical center, rural health care facilities can perform treatment and diagnosis available only in larger metropolitan areas. A medical specialist can view and monitor the patient's vital statistics while observing the local medical professional that is actually examining the patient. Blood pressure, temperature, EKG, skin snapshots, ultrasound, etc. can be transmitted for study. Even the image of a blood sample under a microscope can be transmitted for review. See **Video Conferencing**.

Telephony
Refers to the telephone industry in general, but means the process of converting sound into electrical signals, transmitting it over wires or radio and converting it back into sound. See **POTS**.

Telnet
A terminal emulation protocol used on the Internet and TCP/IP networks. It allows a user at a PC or terminal to connect to a remote computer, logon, and run a program or perform an operation. See **Protocol**, **Terminal Emulation**.

Terminal Emulation
A software program that allows a computer to simulate a particular type of computer terminal to connect to a remote computer. For example, to connect to a mainframe computer or minicomputer, the PC must act like the kind of terminal the mainframe requires for proper operation. The user then interacts with the remote computer by entering commands in the program window.

TEX-AN 2000
A Texas statewide telecommunications network providing voice, data, Internet, and video communications services to Texas State agencies, both Houses of the Texas Legislature and Legislative Agencies, state and community colleges and universities, public schools, city and county governments, public libraries, and special districts such as municipal water districts. See **Internet**, **Network**, **Telecommunications**.

Text Editor
A software program used to create, view, and modify files that contain only

text, such as DOS batch files, computer source code, etc. In Windows, Notepad is a text editor. Text editors do not support the formatting functions of word processors. See **ASCII Text File**, **Batch File**, **Source Code**.

Text File
A File that contains only ASCII text characters without special formatting, as opposed to a graphic file or binary file. See **ASCII**, **Binary File**, **File**, **Graphic File**.

Text Mode
A computer display mode that displays only text and not graphics. Before graphical user interface (GUI) operating systems were common, text mode was the primary mode of computer displays, with limited or no graphics support. MS-DOS is an example of a text-only operating system. See **Display Adapter**, **GUI**, **MS-DOS**, **Operating System**.

Tile
In Windows, a way of arranging open windows side-by-side, so that no windows overlap but all windows are visible. Each window must be sized appropriately so as to only take up a portion of the whole screen. For example you might want to see the contents of two windows at the same time for comparison. Only one window can be selected at a time, but the others can remain open for viewing. See **Window**.

Title Bar
Area at the top of a window which indicates the name of that window. In most GUI's, the title bar is dragged to move the window. Title bars usually have icon buttons to close the window as well as resize the window (maximize and minimize) if clicked with the mouse. See **Click**, **Drag**, **Window**.

Title Bar
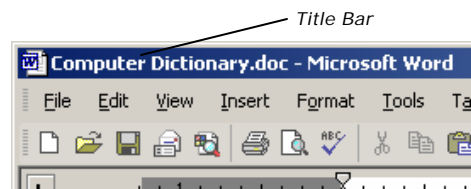
Toolbar
A bar across the top of the computer window or program containing buttons that represent frequently used commands or choices. Some toolbars are customizable, allowing you to add and delete buttons as desired. For example, Microsoft Word has several available toolbars that allow easy

Toolbar

access to frequently used tasks. In many cases new toolbars can be created or customized for the particular software application. See **Buttons**, **Icons**, **Window**.
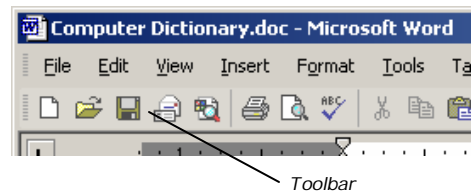
Topology
In a computer or communications network, refers to the pattern of

interconnection between computers, servers, printers, etc. For example, networks can have a star, ring, or bus configuration.

Touch Pad
A type of pointing device that uses a pressure sensitive pad to control the position of the pointer on the screen. Touch pads can also be special graphics tablets where each point on the tablet references a specific location on the screen; when you touch a point on the pad (usually with a special pen), the cursor moves right to that point. Touch pads are very common on laptop and notebooks as an alternative for a mouse. See **Mouse**, **Pointing Device**, **Trackball**.

Trackball
A pointing device with an exposed ball that rotates with your thumb or fingers. Trackballs, like mice, are used as pointing devices, to control the on-screen cursor, and to enable you to execute software commands quickly by clicking built-in buttons. See **Mouse**, **Pointing Device**, **Touch Pad**.

Transistor
The tiny electronic device that revolutionized the Information Age and spawned

Tray
In Windows, the small area on the right side of the Taskbar at the bottom of the screen which usually contains the clock and other icons. See **Taskbar**, **Windows**.

Tree
A graphical diagram that displays the hierarchical structure of the folders or directories on a disk drive. An example of a tree diagram is a company's organization chart. See **Directory**, **Subdirectory**.

TrueType Font
A scaleable font technology developed jointly by Microsoft and Apple that provides a portable, consistent, and flexible font system for computers. TrueType fonts are sometimes generated as bitmaps or soft fonts, depending on the capabilities of your printer. TrueType fonts can be sized to any height, and print out exactly as they appear on the screen. See **Font**, **Scaleable Font**.

Twisted Pair Wire
Commonly used for telephone and network wiring. Twisted pair consists of two pairs of wires, one for transmitting and one for receiving data. The wires in each pair are twisted together to reduce interference between them. 10BaseT/100BaseT Ethernet cable is twisted pair. See **10BaseT**, **100BaseT**, **Ethernet**.

U

Undo
To reverse the last action. Many applications include an undo command available from a pull-down menu. If you make a mistake, such as accidentally deleting something, you can recover it. In some applications you can only undo the last action. In others you can undo an entire series of actions in the order that they were done. See **Application**, **Word Processor**.

Undo

Unicode
A superset of the ASCII character set that uses two bytes to describe each character rather than one, thus supporting up to 65,536 characters rather than 256. This accommodates most of the alphabets of the world's languages. Fundamentally, computers just deal with numbers. They store letters and other characters by assigning a number for each one. Before Unicode was invented, there were hundreds of different methods for assigning these numbers. Even for a single language like English no single encoding was adequate for all the letters, punctuation, and technical symbols in common use. What this means is that Unicode enables a single software product or a single Web site to be targeted across multiple platforms, languages and countries without re-engineering. It allows data to be transported through many different countries without corruption. See **ASCII**, **Byte**.

Universal Service Fund
Funding available to communities across the country for acquiring affordable telecommunications services. The funds are distributed from a single, common universal service account of approximately $2.25 billion. Over 1900 telecommunications companies contribute to the USF based on their interstate and international end-user revenue, in accordance with FCC regulations. The funds are administered by the Universal Service Administrative Company, an independent, non-profit organization. The USAC is responsible for collecting contributions, disbursing funds to eligible entities, and monitoring operations and accomplishments. See **E-rate**.

UNIX
A multiuser, multitasking operating system developed by AT&T in 1972; it features strong networking capabilities. It runs on a variety of computers, whereas MS-DOS and Windows only run on Intel x86-based computer. UNIX is widely used in high-end workstations and especially servers, and for mission-critical applications and transaction/financial processing. UNIX and now Linux platforms are extremely popular for Web servers. See **Linux**, **Multitasking**, **Operating System**, **Server**, **Workstation**.

Upgrade
An upgrade is a hardware or software product that's a newer version, usually an improvement on the earlier version. For example a software upgrade would be installing Microsoft Windows 98 with Windows XP. Software companies usually offer upgrades at a reduced cost from the original cost of the product. A hardware upgrade would be installing a newer, faster CPU that replaces your current CPU.

Upload
To transfer files, pictures, audio, video, or programs from one computer to another over a network. Uploading often refers to transferring files from your PC to a Web site over the Internet and downloading refers to receiving a file on your PC from a remote computer. See **Download**, **File**, **Internet**.

UPS
Uninterruptible Power Supply. A backup power unit that provides temporary power when the normal power supply is interrupted. UPS systems can be stand-by, only supplying power when the regular supply is interrupted, or fulltime, relying on regular power and/or batteries to supply it while it supplies power to the protected device. A UPS is not necessary on most computer systems, but can be important on systems that need to be up 24 hours a day, such as servers. Small UPS systems provide power from batteries for a few minutes, long enough for it to be gracefully shutdown. Large, sophisticated UPS systems provide power from electrical generators that can provide power for days.

Upstream
Referring to the network connection from your computer "up" to the Internet. Also referred to as the upload direction. See **Downstream**, **Internet**, **Network**.

URL
Uniform Resource Locator. Used with the Internet to easily identify the address or location of a Web site or other resource. For example, the URL http://www.orca.state.tx.us identifies the location of the Office

http://www.orca.state.tx.us
URL

of Rural Community Affairs Web site. The "http" prefix is the Web protocol that gives you access to a Web server, the "://" is simply a separator, and the www.orca.state.tx.us is the domain name. You enter the URL in the location or address box on your browser to get to our Web site. An IP Address, such as 198.214.43.5, can be entered instead of a domain name. See **Domain Name**, **HTTP**, **IP Address**, **Protocol**, **Web Browser**, **Web Site**, **WWW**.

USB
Universal Serial Bus. A recent type of fast, serial interface that allows up to 127 peripherals to be connected. Devices are plugged directly into the four-pin socket on the PC (usually on the back) or into a multi-port expansion adapter called a "hub". One of the primary features is its Plug and Play capability, allowing peripherals to be plugged, configured, and unplugged without turning the computer off. USB supports peripherals such as a keyboard, mouse, joystick, scanner, printer, modems, digital camera, etc. USB has a maximum speed of 12 Mbps. The next generation USB, USB 2.0, is just now becoming available which will dramatically increase the speed to 480 Mbps. USB 2.0 will support video and challenge IEEE 1394 as the serial interface of the future. See **IEEE 1394**, **Mbps**, **Peripheral**, **Plug and Play**, **Serial Interface**.

Usenet
A collection of public discussion areas on the Internet, usually maintained by volunteers. Usenet provides a large number of "newsgroups" or bulletin boards that discuss a wide variety of topics, including technical computer, scientific, recreational, and social areas. Usenet newsgroups can be accessed with a number of programs on different computer platforms. On Windows, news can be read with a Web browser or a newsreader such as Outlook Express can be used for reading, posting, and replying to Newsgroups. See **Bulletin Board System**, **Newsreader**, **Newsgroups**, **Web Browser**.

User Interface
The combination of menus, screen design, keyboard commands, command language and online help, which creates the way a user interacts with a computer. If input devices other than a keyboard and mouse are required, support for this is also included. In the future, natural language recognition and voice recognition will become standard components of the user interface. Two types of user interfaces are command line (CLI) and graphical (GUI). See **Command Line Interface**, **Graphical User Interface**.

Utility
A software program intended to make the use of a computer easier and support everyday use such as file management (creating, moving and renaming folders, copying and deleting files), searching for files, comparing file contents as well as performing diagnostic routines to check performance and current health of the hardware.

UUCP
UNIX-to-UNIX Copy Protocol. Networking software from the UNIX operating system used to transmit data over phone lines. UUCP is not used much now. See **Operating System**, **UNIX**.

UUencode/UUdecode
A system for converting and sending binary files as text files over the Internet via E-mail. A UUencode utility converts the 8-bit binary characters in

the file into 7-bit ASCII character. A UUdecode utility converts it back into its original format at the receiving end. Widely used on UNIX computers. See **Binary File**, **Text File**, **UNIX**, **Utility**.

V

V.Dot Terms
A series of evolving modem communications standards that were developed to provide support for increasing speeds and to provide some error-correction capabilities. See **Bps**, **Data Compression, Kbps**, **Modem**.

V.32: Supports standard 9600 bps.

V.32bis: Supports 14.4K bps.

V.34: Supports 28.8 Kbps.

V.42: Supports error detection and data compression.

V.42bis: Supports a different data compression scheme than V.42.

VGA
Video Graphics Array. The minimum hardware specification for a PC video display that created the first quality color graphics display available on the PC and was the first display adapter that had hardware acceleration to display graphics faster. VGA features 640x480 pixel resolution and 256 colors (8-bit graphics). See **Display Adapter**, **Pixel**, **SuperVGA**.

Video
A term that refers to the electronic recording and display of pictures, full-motion movies, or animation on computers or televisions. See **Display Adapter**, **VGA**.

Video Conferencing
Video Teleconferencing. A discussion between two or more people, each in a different location, but capable of seeing and hearing each other through real-time, "live" video and sound being carried by a communications network. Many PC's are now video conferencing ready. With the addition of a small, inexpensive video camera, these computers can be used for video conferencing. Today, there are several video conferencing standards that provide support for simultaneous video, audio, and data that allows for complete interaction and collaboration while sharing data. The minimum communications bandwidth required for video conferencing is 64 Kbps. See **Bandwidth**, **H.Dot Terms**, **Kbps**.

Video Conferencing

Video Projector

A device that connects to the standard VGA video output from a computer and projects it onto a screen or white wall for showing multimedia presentations (e.g., PowerPoint), movies, or computer displays for training. See **DLP**, **VGA**.

Video Projector

Virtual Memory

Method of using hard disk space to extend the memory size of a computer, thus creating the effect of having more memory than really exists. The operating systems swaps inactive portions of its memory to hard disk, in order to temporarily use the memory space for some other task or program. In Windows, the amount of virtual memory available equals the amount of free RAM plus the amount of disk space allocated to the swap file. See **Swap File**.

Virtual Reality (VR)

An emerging technology that is used to create or simulate, a 3-D illusion in an interactive, computer generated environment or world that attempts to approximate something of a real-world experience. VR can be used for entertainment as well as training. You can see and feel the experience, even though it's not actually happening. Flight simulators for training airplane pilots and astronauts were the first form of this technology, which provided a very realistic and very expensive simulation.

Virus

A computer program that infects and replicates itself in computer files, spreading from computer to computer. Some viruses can be relatively harmless, simply displaying a message on your screen. Other viruses can be extremely damaging, crashing your hard drive so you lose all your data. There are three things you can do to protect yourself from a virus infection. Buy and use an anti-virus or virus detection application frequently. Back up your hard drive frequently. And be careful what files you introduce into your computer. Viruses are often found in files passed between users, especially on the Internet and bulletin boards and E-mail. See **Worm**.

VoIP

Voice over IP or Internet Telephony. A method for voice telephone service over the Internet instead of using your telephone. All you need is the VoIP client software installed on a computer with a sound card, speakers, and a microphone. It is possible to connect to clients on the POTS network or some companies have client software that allows direct PC-to-PC voice communication. See **Client**, **IP**, **POTS**, **Sound Card**.

VPN

Virtual Private Network. A private, secure network connection established within a public network, such as the Internet. Today, there is tremendous

interest in using VPN's over the Internet, especially due to the constant threat of hacker attacks. Users can access VPN's via any ISP that supports PPTP on its servers. The user's PC must also provide support for PPTP. See **Hacker**, **PPTP**.

VRML
Virtual Reality Modeling Language (originally, Virtual Reality Markup Language). An evolving language specification to provide virtual reality resources on the Internet. Currently, VRML allows Web site designers to create three-dimensional objects, surfaces, and ultimately Web sites. VRML lets you enter a simulated environment or world through the eyes of a character who is virtually present in that environment. You see what the character sees, as if you were there. See **SGML**, **Virtual Reality**, **Web Site.**

W

W3C
World Wide Web Consortium. An international industry organization founded in 1994 to develop common standards for the Internet. See **World Wide Web**.

WAN
Wide Area Network. A network connecting computers, terminals, and other equipment over a large geographic area, such as a city, state, or country. A WAN can also be a network connecting all of the geographic locations of a company together or connecting a community together. In other words, a wide area network (WAN) allows separate local area networks (LAN), usually contained within a building or complex, to communicate. The Internet is basically one gigantic WAN that connects business, government, educational, private and public networks, and communities around the world. See **Internet**, **LAN**, **Network**.

WAP
Wireless Application Protocol. A standard for providing cellular phones, pagers, and other handheld devices with secure access to E-mail and Internet Web services. WAP provides complete environment for wireless communications including a wireless counterpart of TCP/IP and WML, a counterpart to HTML. WAP is air interface and device independent so that it can be used with just about any cellular phone or handheld device (PDA) and runs over all of the major wireless networks in place now and in the future. See **HTML**, **Interface**, **PDA**, **Protocol**, **TCP/IP**.

Web
See **World Wide Web**.

Web Browser
A program that provides access to the Internet, allowing the user to view Web sites and fully use the multimedia resources. A Web browser will require Internet connectivity either through a high-speed broadband connection (DSL, cable modem, satellite, etc.) or a dial-in connection (telephone line and modem) and sufficient graphics display capabilities. Although Mosaic was the first browser, the two major browsers today are Microsoft Internet Explorer and Netscape Navigator. In order to view a Web site, you type its address
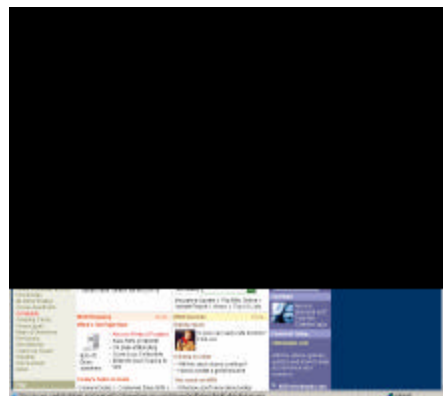
Microsoft Internet Explorer

(URL) into the browser's address or location box; for example, www.website.com, and the home page of that site is downloaded to your browser. The home page is an index to other pages on that site that you can jump to by clicking a "click here" message or an icon. Links on that site may take you to other related sites. See **Home Page**, **Internet Explorer**, **Link**, **Netscape Navigator**, **URL**, **Web Site**.

Web Cam
A low-cost digital video camera that is used to send periodic images or continuous frames to a Web site for display. The Web Cam software captures the images as JPEG or MPEG files and uploads them to the Web server. Web Cam sites have cameras pointed at just about everything imaginable, including people at their daily work, buildings, scenery, etc.

Web Master
A person responsible for developing, writing, and maintaining a Web site. Webmasters must be proficient in HTML as well as one or more scripting languages such as Java and Perl. They may also have experience with more than one type of Web Server. See **HTML**, **Java**, **Web Server**, **Web Site**, **XML**.

Web Page
An individual document on the World Wide Web, usually defined by a single HTML file and referenced by a single URL or Web address and usually part of a Web site. Web pages are created by either a Web master or a Web designer and accessed by users on the Internet with a Web browser. See **Domain Name**, **HTML**, **URL**, **Web Browser**, **Web Master**, **Web Site**.

Web Server
A computer that provides Web services on the Internet. It includes the operating system, Web server software, networking software, and the Web site content (Web pages). The term Web server may also refer just to the Web server software and not the entire computer system. A single computer used to provide all of the Internet services for a company would include the Web (HTTP) server, FTP server (file downloads), NNTP server (newsgroups), and SMTP server (E-mail). See **FTP**, **HTTP**, **Newsgroups**, **NNTP**, **Operating System**, **SMTP**, **Web Page**, **Web Site**.

Web Site
A server that contains Web pages and other files which is online to the Internet for accessing 24 hours a day. A Web site is a location on the Internet, specifically the World Wide Web, with its own address and URL. Universities, organizations, governmental bodies, companies and individuals all can and do have Web sites on the Internet. See **Domain Name**, **Server**, **URL**, **World Wide Web**.

Wildcard
A character that can be used to represent any other character or series of

characters in a statement. For instance, the wildcard "*" allows "DAN*Y" to refer to both "DANNY" and "DANDY". Useful in searches when you don't know the exact text you are looking for, and in specifying an action to be performed on a group of files.

Window
A rectangular frame on the screen, that you can view a section of a program being currently worked on or a live document, worksheet, database, etc. You can open, close, and move windows around the desktop, and reduce or enlarge the size of the windows. You can also open multiple windows of the same application or of different applications. The active window is the window

Window

you're currently using, the window where your cursor is located. See **Cursor**, **Desktop**, **Graphical User Interface**, **Menu**, **Mouse**, **Windows**.

Windows
The most widely used operating system for personal computers developed by Microsoft. Windows provides a graphical user interface and desktop environment, in which programs are displayed in re-sizable, movable windows on the display screen. One of the major advantages of Windows is the wealth of application programs that are available worldwide and is the de facto standard for desktop and portable computers. Windows has built-in networking and strong Internet support. Microsoft has released a complete generation of Windows operating systems from Windows 3.0 and including Windows 95, 98, 98SE NT, 2000 Workstation and Server, ME to its latest Windows XP. Windows versions are available for new PC's or available as upgrades for existing PC's with Windows already installed. Microsoft has also released a version of Windows for handheld computers or PDA's called Windows CE. See **GUI**, **Operating System**, **PDA**, **Window**.

Winsock
Windows Sockets. The Windows built-in interface to TCP/IP. Windows network software applications that communicate using TCP/IP are Winsock compliant. See **Network**, **Socket**, **TCP/IP**.

Wireless LAN
A local area network that depends upon radios and antennas to transmit and receive the data between stations or nodes, instead of using Ethernet. Wireless LAN's (WLAN) function like cellular phone systems, where users can roam between access points without dropping the connection. Wireless connectivity is growing rapidly, as there are now many products available. WLAN's support distances up to 30-40 miles. The major standard is IEEE 802.11. See **802.11**, **Ethernet**, **LAN**, **Network**, **Node**.

Word Processor
A computer software application which provides you with the tools necessary to create, edit and format text. Word processors commonly include an area

to enter text, the ability to control the format of text (bold, italics, size), indenting, margins, the ability to check spelling, etc. Most word processors now also handle graphics and linking to other objects such as spreadsheets, databases, and complete multimedia experiences.

Word Wrap
A feature that moves text from the end of a line to the beginning of a new line as you type. With word wrap, you do not need to press ENTER at the end of each line in a paragraph.

Workgroup
A group of related computer users in a LAN (local area network) that are sharing files and resources with each other. See **Client**, **LAN**, **Server**.

Workstation
A class of desktop computer, considered to be a high-performance, single-user computer used for graphics design, CAD (computer-aided design), CAE (computer-aided engineering), scientific, and simulation applications. These applications typically require complex, intensive mathematical computations to complete a particular task and high-performance computer graphics. As personal computers have continued to become more powerful, the distinction between personal computers and lower end workstations has blurred.

Worm
A type of computer virus that uses the computer's resources to copy itself repeatedly until it spreads itself over the entire network, eventually clogging the network so that no information can be accessed or moved. See **Virus**.

World Wide Web (WWW)
Refers to the entire collection of Internet Web sites offering text, graphics, sound, and animation resources in an easy to use way, through the "http" protocol and hyperlinks. In the 1990's, the Web became the center of Internet activities, because the Web browser provided an easy, point-and-click access to the largest collection of online information in the world, and is increasing at a staggering rate. The Web has also turned into an online shopping mall as secure, electronic financial transaction capabilities have been added and as a source of entertainment with online games, movies, and music. The Web is "run" by everyone from the companies providing the Internet services, the telecommunications companies providing communications network, to all of the organizations and people that operate Web sites. Security and privacy is one of the main issues on the Web today. Since any information you disclose on the Web can go almost anywhere, protection against theft and personal privacy invasion. Today there is everything available from secure Web sites, passwords for authentication, data encryption, and network security monitoring equipment. See **Data**, **eBusiness**, **Encryption**, **HTTP**, **Hyperlink**, **Internet**, **Internet Service Provider (ISP)**, **Password**, **Protocol**, **S-HTTP**, **SSL**, **W3C**, **Web Site**.

WYSIWYG

What You See Is What You Get. The ability to display, on a monitor, the same image and page layout that will appear on printed output. Pronounced "wizzywig".

X

X Windows
A graphical windowing system developed to work with different operating systems, and to support networking. That is, one machine may be running an application, and the user interface to the application can be running on another machine. Primarily used on UNIX and Linux systems. The original versions of UNIX used a command line interface. X Windows was developed by MIT, several years after UNIX was introduced, to provide a basic window that can have multiple graphical user interfaces, or a customizable look and feel. X Windows is the UNIX equivalent of the window support in Microsoft Windows. See **Graphical User Interface**, **UNIX**, **Window**.

XML
Extensible Markup Language. A new version of the SGML language being used on the World Wide Web. Whereas HTML deals with fonts and size and defines how the pieces of a Web page are displayed or "how it looks", XML defines what information the pieces contain or "what it is". Thus, just about any information, such as product number, salesman, quantity, cost, etc. can be identified and allow a Web page to act like a database. See **Database**, **Font**, **HTML**, **SGML**, **Web Master**, **Web Page**.

XML

`<firstName>Maria</firstName>`
`<lastName>Roberts</lastName>`
`<dateBirth>10-29-52</dateBirth>`

HTML

`<font size="3">Maria Roberts</font>`
`<b>October 29, 1952</b>`

XMS Memory
See **Extended Memory**.

Y

Y2K
Year 2000 Problem. The inability of older computers and software to properly deal with a date beyond the year 1999 and to recognize the century change to 2000. The reason was that the older computers and software stored dates as 12-21-80 instead of 12-21-1980. So, when the year changed from 1999 to 2000, the date became 01-01-00, and the computer interpreted the date as January 1, 1900. It was estimated that it cost more than $300 million worldwide to correct.

Z

ZIP Disk

A "3.5" removable disk media and drive technology that uses 100 MB removable cartridges that cost about $10 each. Zip disks have become the most popular removable storage medium since the floppy disk. In 1998, a 250 MB version of the Zip drive was introduced that also reads and writes the 100 MB cartridges. Zip drives come installed in some new computers, but also can be bought separately and added as an external drive. See **Disk Drive**, **Megabyte (MB)**, **Media**.
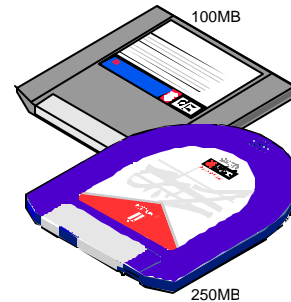
ZIP Disks

ZIP File

A type of file that contains one or more files and compressed in the .ZIP file format, which fits in a smaller amount of space. Each individual file is compressed or "zipped" and then stored within one "container" file. The individual files are extracted and uncompressed or "unzipped". The original concept was developed by Phil Katz in the 1980's and created the original compression and decompression programs, PKZIP and PKUNZIP. This format has become so popular that many other companies have developed ZIP and UNZIP programs for various operating systems, including Windows, UNIX, and Mac OS. See **Compression**, **File**.

Numbers, Symbols, Etc.

802.11
The dominant wireless network (LAN) standard that uses radio waves instead of wires. 802.11 is actually a family of standards that supports communications speeds from 2 Mbps to 54 Mbps. Today the most common is 802.11b sending data at 11 Mbps. See **LAN**, **Mbps**, **Wireless LAN**.

10Base2
The name for Ethernet running on thin coaxial cable. Obsolete.

10Base5
The name for Ethernet running on thick coaxial cable. Obsolete.

10BaseT/100BaseT
Ethernet running on twisted pair cable. It looks like phone cord, but it is special cable tested to handle the higher communications speeds and uses modular plugs at the end called RJ-45 connectors, which are slightly larger than standard telephone connectors. This type of cable is called CAT-5. The effective data rate speeds of 10BaseT and 100BaseT are 10 Mbps and 100 Mbps, respectively. See **Cat 5**, **Ethernet**, **LAN**, **Mbps**.

16-Bit
Refers to the size or the number of bits transferred between the computer and a peripheral device, between the CPU and its memory, or the amount of data that the CPU can compute at the same time. See **Bit**, **CPU**.

32-Bit
Refers to the size or the number of bits transferred between the computer and a peripheral device, between the CPU and its memory, or the amount of data that the CPU can compute at the same time. See **Bit**, **CPU**.

64-Bit
Refers to the size or the number of bits transferred between the computer and a peripheral device, between the CPU and its memory, or the amount of data that the CPU can compute at the same time. See **Bit**, **CPU**.

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