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- Definitive coverage of hardware, software, the Internet, and more!



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Apple Extended Keyboard.

Apple Filing Protocol *n.* See AFP.

Apple key *n.* A key on Apple keyboards labeled with an outline of the Apple logo. On the Apple Extended Keyboard, this key is the same as the Command key, which functions similarly to the Control key on IBM and compatible keyboards. It is generally used in conjunction with a character key as a shortcut to making menu selections or starting a macro.

Apple Macintosh *n.* See Macintosh.

Apple Newton *n.* See Newton.

AppleScript *n.* A script language developed by Apple Computer, Inc., for Macintosh computers running under the Mac OS to execute commands and automate functions. See also script.

AppleShare *n.* A file server software developed by Apple Computer, Inc., that works with the Mac OS and allows one Macintosh computer to share files with another on the same network. See also file server, Mac OS.

applet *n.* A program that can be downloaded over the Internet and executed on the recipient's machine. Applets are often written in the Java programming language and run within browser software, and they are typically used to customize or add interactive elements to a Web page.

AppleTalk *n.* An inexpensive local area network developed by Apple Computer, Inc., for Macintosh computers that can be used by Apple and non-Apple computers to communicate and share resources such as printers and file servers. Non-Apple computers must be equipped with AppleTalk hardware and suitable software. The network

uses a layered set of protocols similar to the ISO/OSI reference model and transfers information in the form of packets called frames. AppleTalk supports connections to other AppleTalk networks through devices known as bridges, and it supports connections to dissimilar networks through devices called gateways. See also bridge, frame (definition 2), gateway.

AppleTalk Phase 2 *n.* The extended AppleTalk Internet model designed by Apple Computer, Inc., that supports multiple zones within a network and extended addressing capacity.

AppleWorks *n.* A suite of productivity applications, formerly known as ClarisWorks, distributed by Apple Computer, Inc., and shipped on the iMac computer. AppleWorks/ClarisWorks is an integrated product that includes support for word processing, spreadsheets, databases, drawing, painting, charting, and the Internet.

appliance *n.* 1. See server appliance. 2. See information appliance. 3. A device with a single or limited purpose with functionality. This functionality is similar to a simple consumer appliance.

appliance server *n.* 1. An inexpensive computing device used for specific tasks including Internet connectivity or file-and-print services. The server is usually easy to use but does not possess the capabilities or software of a typical server for general office use. 2. See server appliance.

application *n.* A program designed to assist in the performance of a specific task, such as word processing, accounting, or inventory management. Compare utility.

application binary interface *n.* A set of instructions that specifies how an executable file interacts with the hardware

provide users with the graphics-based interface characteristic of that computer. *See also* System V.

auxiliary device *n.* *See* peripheral.

auxiliary equipment *n.* *See* peripheral.

auxiliary storage *n.* Any storage medium, such as disk or tape, not directly accessed by a computer's microprocessor, as is random access memory (RAM). In current usage, such media are typically referred to as *storage* or *permanent storage*, and the RAM chips that the microprocessor uses directly for temporary storage are referred to as *memory*.

availability *n.* 1. In processing, the accessibility of a computer system or resource, such as a printer, in terms of usage or of the percentage of the total amount of time the device is needed. 2. A measure of the fault tolerance of a computer and its programs. A highly available computer runs 24 hours a day, 7 days a week. *See also* fault tolerance.

available time *n.* *See* uptime.

avalanche ad *n.* One of several larger formats for online ads developed to replace traditional banner ads on the Internet. Avalanche ads are generally 120 x 800 pixels in size. *See also* skyscraper ad.

avatar *n.* In virtual-reality environments such as certain types of Internet chat rooms, a graphical representation of a user. An avatar typically is a generic picture or animation of a human of either gender, a photograph or caricature of the user, a picture or animation of an animal, or an object chosen by the user to depict his or her virtual-reality "identity." *See* superuser.

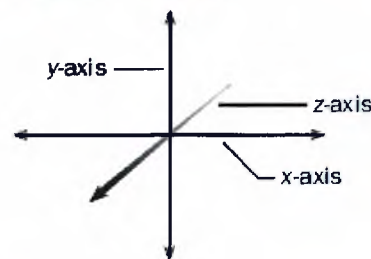
.avi *n.* The file extension that identifies an audiovisual interleaved data file in the Microsoft RIFF format.

AVI *n.* Acronym for Audio Video Interleaved. A Windows multimedia file format for sound and moving pictures that uses the Microsoft RIFF (Resource Interchange File Format) specification.

awk *n.* A UNIX-based language designed for file processing applications, awk is a part of the POSIX Command Language and Utilities standard. It is considered a subset of PERL.

AWT *n.* *See* Abstract Window Toolkit.

axis *n.* In a chart or other two-dimensional system using coordinates, the horizontal line (x-axis) or vertical line (y-axis) that serves as a reference for plotting points. In a three-dimensional coordinate system, a third line (z-axis) is used to represent depth. *See the illustration. See also* Cartesian coordinates.



Axis.

computer-aided engineering *n.* See CAE.

computer-aided instruction *n.* See CAI.

computer-aided learning *n.* See CAL.

computer-aided manufacturing *n.* See CAM (definition 1).

computer-aided testing *n.* See CAT (definition 1).

Computer and Business Equipment Manufacturers Association *n.* See CBEMA.

computer art *n.* A broad term that can refer either to art created on a computer or to art generated by a computer, the difference being whether the artist is human or electronic. When created by human beings, computer art is done with painting programs that offer a range of line-drawing tools, brushes, shapes, patterns, and colors. Some programs also offer predrawn figures and animation capabilities.

computer-assisted diagnosis *n.* The use of computers by physicians in diagnosing patient conditions. Medical application programs can help to determine the cause, symptoms, and treatment of a problem as well as to maintain a record of a patient's medical history and test results. See also expert system.

computer-assisted instruction *n.* See CAI.

computer-assisted learning *n.* See CAL.

computer-assisted teaching *n.* See CAI.

computer-augmented learning *n.* See CAL.

computer-based learning *n.* See CBL.

computer-based training *n.* See CBT.

computer center *n.* A centralized location that contains computers, such as mainframes or minicomputers, along with associated equipment for providing data processing services to a group of people.

computer conferencing *n.* Person-to-person interaction through the use of computers located in different places but connected through communications facilities.

computer control console *n.* See system console.

computer crime *n.* The illegal use of a computer by an unauthorized individual, either for pleasure (as by a computer hacker) or for profit (as by a thief). See also hacker (definition 2).

computer-dependent *adj.* See hardware-dependent.

Computer Emergency Response Team *n.* See CERT.

computer engineering *n.* The discipline that involves the design and underlying philosophies involved in the development of computer hardware.

computer family *n.* A term commonly used to indicate a group of computers that are built around the same microprocessor or around a series of related microprocessors and that share significant design features. For example, the Apple Macintosh computers, from the original Macintosh (introduced in 1984) to the Quadra, represent a family designed by Apple around the Motorola 68000, 68020, 68030, and 68040 microprocessors. Computer families tend to parallel microprocessor families, but this is not always the case. For instance, Macintoshes are no longer made with 680x0 processors, and the Macintosh family has "extended" to another generation: the Power Macs, based on the PowerPC microprocessor.

computer game *n.* A class of computer program in which one or more users interacts with the computer as a form of entertainment. Computer games run the gamut from simple alphabet games for toddlers to chess, treasure hunts, war games, and simulations of world events. The games are controlled from a keyboard or with a joystick or other device and are supplied on disks, on CD-ROMs, as game cartridges, on the Internet, or as arcade devices.

computer graphics *n.* The display of "pictures," as opposed to only alphabetic and numeric characters, on a computer screen. Computer graphics encompasses different methods of generating, displaying, and storing information. Thus, computer graphics can refer to the creation of business charts and diagrams; the display of drawings, italic characters, and mouse pointers on the screen; or the way images are generated and displayed on the screen. See also graphics mode, presentation graphics, raster graphics, vector graphics.

Computer Graphics Interface *n.* A software standard applied to computer graphics devices, such as printers and plotters. Computer Graphics Interface is an offshoot of a widely recognized graphics standard called GKS (Graphical Kernel System), which provides applications programmers with standard methods of creating, manipulating, and displaying or printing computer graphics. Acronym: CGI. See also Graphical Kernel System.

Computer Graphics Metafile *n.* A software standard related to the widely recognized GKS (Graphical Kernel

C

well as to control screen colors, mouse movements, and other parameters. *Acronym:* DA. *Also called:* desktop accessory. *See also* control panel.

D

desktop *n.* An on-screen work area that uses icons and menus to simulate the top of a desk. A desktop is characteristic of the Apple Macintosh and of windowing programs such as Microsoft Windows. Its intent is to make a computer easier to use by enabling users to move pictures of objects and to start and stop tasks in much the same way as they would if they were working on a physical desktop. *See also* graphical user interface.

desktop accessory *n.* *See* desk accessory.

Desktop Color Separation *n.* *See* DCS.

desktop computer *n.* A computer that fits conveniently on the surface of a business desk. Most personal computers as well as some workstations can be considered desktop computers. *Compare* portable computer.

desktop conferencing *n.* The use of computers for simultaneous communication among geographically separated participants in a meeting. This communication may include input to and display from application programs as well as audio and video communication. *See also* data conferencing, teleconferencing, video conferencing.

desktop enhancer *n.* Software that adds functionality to a windows-based operating system such as Microsoft Windows or Mac OS—for example, an enhanced file browser, clipboard, or multimedia player.

desktop environment *n.* The appearance and user interface of a computer operating system (OS). An OS may offer the user opportunities to customize the desktop environment, or sometimes a choice of alternate desktop environments, with the OS underneath remaining the same.

Desktop file *n.* A hidden file maintained on a particular volume (roughly equivalent to a disk) by the Macintosh operating system for storing information about the files on it, such as version data, lists of icons, and file references.

Desktop Management Interface *n.* *See* DMI.

desktop publishing *n.* The use of a computer and specialized software to combine text and graphics to create a document that can be printed on either a laser printer or a typesetting machine. Desktop publishing is a multiple-step process involving various types of software and equipment. The original text and illustrations are generally produced with software such as word processors and drawing and painting programs and with photograph-scanning

equipment and digitizers. The finished product is then transferred to a page-makeup program, which is the software most people think of as the actual desktop publishing software. This type of program enables the user to lay out text and graphics on the screen and see what the results will be; for refining parts of the document, these programs often include word processing and graphics features in addition to layout capabilities. As a final step, the finished document is printed either on a laser printer or, for the best quality, by typesetting equipment.

desktop video *n.* The use of a personal computer to display video images. The video images may be recorded on video tape or on a laser disc or may be live footage from a video camera. Live video images can be transmitted in digital form over a network in video conferencing. *Acronym:* DTV.

destination *n.* The location (drive, folder, or directory) to which a file is copied or moved. *Compare* source.

destructive read *n.* An attribute of certain memory systems, notably core systems. In a destructive read of a memory location, the data is passed on to the processor, but the copy in memory is destroyed by the process of reading. Destructive memory systems require special logic to rewrite data back to a memory location after it is read. *Also called:* destructive readout. *See also* core. *Compare* nondestructive readout.

detail file *n.* *See* transaction file.

detection *n.* Discovery of a certain condition that affects a computer system or the data with which it works.

determinant *n.* In database design theory, any attribute or combination of attributes on which any other attribute or combination of attributes is functionally dependent.

determinism *n.* In computing, the ability to predict an outcome or to know in advance how data will be manipulated by a processing system. A deterministic simulation, for example, is one in which a certain input always produces the same output.

developer *n.* 1. One who designs and develops software. 2. *See* programmer.

developer's toolkit *n.* A set of routines (usually in one or more libraries) designed to allow developers to more easily write programs for a given computer, operating system, or user interface. *See also* library (definition 1), toolbox.

development cycle *n.* The process of application development from definition of requirements to finished product.

DRDW *n.* Acronym for direct read during write. A technique used with optical discs to verify the accuracy of information at the time it is being recorded on the disc. *Compare* DRAW.

Dreamcast *n.* A console game system designed by the Sega corporation. It features a Hitachi 128-bit graphics engine with an on-board SH-4 RISC processor (operating frequency of 200 MHz 360 MIPS/1.4 GFLOPS) and a customized OS using Windows CE as its base (supporting DirectX). Game developers for the Dreamcast platform use an environment supported by Microsoft Visual Studio and refined Visual C++. *See also* computer game, console game, DirectX, gigaflops, MIPS, OS, RISC, Visual C++. *Compare* GameCube, PlayStation, Xbox.

dribbleware *n.* Updates, patches, and new drivers for a software product that are released one at a time, as they become available, rather than being issued together in a new version of the product. A company using the dribbleware technique might distribute new and replacement files on diskette or CD-ROM, or make them available for download through the Internet or a private network. *See also* driver, patch¹.

drift *n.* The movement of charge carriers in a semiconductor caused by an applied voltage. The term is also used to refer to any slow, unwanted change in a parameter; for example, the value of a resistor might change, or drift, slightly as the resistor warms or cools.

drill down *vb.* To start at a top-level menu, directory, or Web page and pass through several intermediate menus, directories, or linked pages, until the file, page, menu command, or other item being sought is reached. Drilling down is common practice in searching for files or information on the Internet, where high-level Gopher menus and World Wide Web pages are frequently very general and become more specific at each lower level. *See also* Gopher, menu, Web page.

drive *n.* *See* disk drive.

drive bay *n.* A hollow, rectangular area in a computer chassis designed to hold a disk drive. A drive bay always has side walls, usually made of metal, that generally contain holes to facilitate installation of a disk drive. Some drive bays, such as those intended to hold hard disks, are not visible to the user. Most drives are located on the front of the chassis so that the user can interact with the drive.

drive letter *n.* The naming convention for disk drives on IBM and compatible computers. Drives are named by letter, beginning with A, followed by a colon.

drive mapping *n.* The assignment of a letter or name to a disk drive so that the operating system or network server can identify and locate it. For example, in PCs, the primary drive mappings are A: and B: for floppy disk drives and C: for the hard disk. *See also* A:, disk drive, hard disk.

drive number *n.* The naming convention for Macintosh disk drives. For example, a two-drive system calls its drives 0 and 1.

driver *n.* A hardware device or a program that controls or regulates another device. A line driver, for example, boosts signals transmitted over a communications line. A software driver is a device-specific control program that enables a computer to work with a particular device, such as a printer or a disk drive. Because the driver handles device-specific features, the operating system is freed from the burden of having to understand—and support—the needs of individual hardware devices. *See also* device driver.

Driver Development Kit *n.* *See* DDK.

DRM *n.* Acronym for Digital Rights Management. A group of technologies developed to protect intellectual property from online piracy by controlling who can view protected content and in what form. A DRM package may allow the purchaser to view protected content, but prevent printing or forwarding. Content may also be set to expire after a set amount of time or if distributed to multiple users. DRM technology is meant to protect multiple forms of digital and analog content, and includes encryption, digital watermarking, and content tracking software.

DRO *n.* Acronym for destructive read out. *See* destructive read.

drop cable *n.* A cable, also known as a transceiver cable, that is used to connect a network interface card (NIC) to a Thick Ethernet network.

drop cap *n.* A large capital letter at the beginning of a text block that occupies the vertical depth of two or more lines of regular text. *See* the illustration.

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Drop cap.

drop-dead halt *n.* *See* dead halt.

D

full-motion video, audio, graphics, and other data on a computer or on a CD-ROM. DVI technology was developed by RCA in 1987 and acquired by Intel in 1988. Intel has since developed a software version of DVI, called Indeo. *Also called:* digital video-interactive.

DVI-I *n.* See digital video-interactive.

DVMRP *n.* See Distance Vector Multicast Routing Protocol.

Dvorak keyboard *n.* A keyboard layout developed by August Dvorak and William L. Dealey in 1936 as an alternative to the overwhelmingly popular QWERTY keyboard. The Dvorak keyboard was designed to speed typing by placing the characters on the keyboard for easiest access to the most frequently typed letters. In addition, pairs of letters that often occur sequentially were separated so that the hands could alternate typing them. See the illustration. *See also* ergonomic keyboard, keyboard. *Compare* QWERTY keyboard.



Dvorak keyboard.

DVR *n.* Acronym for Digital Video Recording. Technology allowing broadcast television programming to be digitized and played back immediately. Television signals are routed through a hard drive, converted to a digital format and displayed in real-time or, at the viewer's option, on a delayed basis. DVR technology can be used like a VCR to record favorite programs in advance, with the user picking the programs to be recorded from an online programming guide. DVR capabilities can also be added to products that have related digital technologies and components, such as set-top boxes and digital TV converters.

DVST *n.* See direct view storage tube.

DWDM *n.* See dense wavelength division multiplexing.

DXF *n.* Short for drawing interchange format. A computer-aided design file format originally developed by Autodesk; for use with the AutoCAD program to facilitate transfer of graphics files between different applications

dyadic *adj.* Of, pertaining to, or characteristic of a pair—for example, a dyadic processor, which contains two processors controlled by the same operating system. The term is usually limited to describing a system with two microprocessors. Dyadic Boolean operations are those such as AND and OR in which the outcome depends on both values. *See also* Boolean algebra, operand. *Compare* unary.

dye-diffusion printer *n.* See continuous-tone printer.

dye-polymer recording *n.* A recording technology used with optical discs in which dye embedded in a plastic polymer coating on an optical disc is used to create minute bumps on the surface that can be read by a laser. Dye-polymer bumps can be flattened and re-created, thus making an optical disc rewritable.

dye-sublimation printer *n.* See continuous-tone printer.

Dylan *n.* Short for Dynamic Language. An object-oriented programming language developed by Apple Computer in the mid-1990s for application and systems development. It includes garbage collection, type-safety, error recovery, a module system, and programmer control over runtime extensibility of programs.

dynalink *n.* Short for dynamic link. *See* dynamic-link library.

Dynaload drivers *n.* Device drivers that are supported by Dynaload. Dynaload is a command that can be run from a DOS prompt under IBM's PC DOS 7 and will load compliant device drivers without modification of the CONFIG.SYS file. *See also* CONFIG.SYS.

dynamic *adj.* Occurring immediately and concurrently. The term is used in describing both hardware and software; in both cases it describes some action or event that occurs when and as needed. In dynamic memory management, a program is able to negotiate with the operating system when it needs more memory.

dynamic address translation *n.* On-the-fly conversion of memory-location references from relative addresses (such as "three units from the beginning of X") to absolute addresses (such as "location number 123") when a program is run. *Acronym:* DAT.

D

Dynamic Shared Object *n.* See DSO.

dynamic SLIP *n.* Short for **dynamic Serial Line Internet Protocol**. Internet access under SLIP in which the user's IP address is not permanent but is reassigned from a pool each time the user connects. The number of IP addresses an Internet service provider needs to offer is reduced to the number of connections that can be in use at once, rather than the total number of subscribers. *See also* IP address, ISP, SLIP. *Compare* DHCP.

dynamic storage *n.* 1. Information storage systems whose contents will be lost if power is removed from the

system. RAM (random access memory) systems are the most common form of dynamic storage, and both dynamic RAM (DRAM) and static RAM (SRAM) are considered forms of dynamic storage. *See also* dynamic RAM, static RAM. *Compare* permanent storage. 2. In programming, blocks of memory that can be allocated, deallocated, or freely changed in size.

dynamic Web page *n.* A Web page that has fixed form but variable content, allowing it to be tailored to a customer's search criteria.

D

fixed-word-length computer *n.* A description that applies to almost all computers and refers to the uniform size of the data units, or words, that are processed by the microprocessor and shuttled through the system over the hardware lines composing the main data bus. Fixed-word-length computers, including IBM and Macintosh personal computers, commonly work with 2 or 4 bytes at a time.

F keys *n.* See function key.

F

flag *n.* 1. Broadly, a marker of some type used by a computer in processing or interpreting information; a signal indicating the existence or status of a particular condition. Flags are used in such areas as communications, programming, and information processing. Depending on its use, a flag can be a code, embedded in data, that identifies some condition, or it can be one or more bits set internally by hardware or software to indicate an event of some type, such as an error or the result of comparing two values. 2. In the HDLC communications protocol, a flag is the unique series of bits 01111110, used to start and end a transmission frame (message unit). *See also* HDLC.

flame¹ *n.* An abusive or personally insulting e-mail message or newsgroup posting.

flame² *vb.* 1. To send an abusive or personally insulting e-mail message or newsgroup posting. 2. To criticize personally by means of e-mail messages or newsgroup postings.

flame bait *n.* A posting to a mailing list, newsgroup, or other online conference that is likely to provoke flames, often because it expresses a controversial opinion on a highly emotional topic. *See also* flame¹, flame war. *Compare* troll.

flamefest *n.* A series of inflammatory messages or articles in a newsgroup or other online conference.

flamer *n.* A person who sends or posts abusive messages via e-mail, in newsgroups and other online forums, and in online chats. *See also* chat¹ (definition 1), newsgroup.

flame war *n.* A discussion in a mailing list, newsgroup, or other online conference that has turned into a protracted exchange of flames. *See also* flame¹.

Flash *n.* A vector graphics file format (extension .swf) developed by Macromedia to enable designers to add animation and interactivity to multimedia Web pages. Flash files can be played back with a downloadable Shockwave plug-in or a Java program. The file format has been released by Macromedia as an open standard for the Internet.

flash *vb.* *See* burn.

flash memory *n.* A type of nonvolatile memory. Flash memory is similar to EEPROM memory in function but it must be erased in blocks, whereas EEPROM can be erased one byte at a time. Because of its block-oriented nature, flash memory is commonly used as a supplement to or replacement for hard disks in portable computers. In this context, flash memory either is built into the unit or, more commonly, is available as a PC Card that can be plugged into a PCMCIA slot. A disadvantage of the block-oriented nature of flash memory is that it cannot be practically used as main memory (RAM) because a computer needs to be able to write to memory in single-byte increments. *See also* EEPROM, nonvolatile memory, PC Card, PCMCIA slot.

flash ROM *n.* *See* flash memory.

flat address space *n.* An address space in which each location in memory is specified by a unique number. (Memory addresses start at 0 and increase sequentially by 1.) The Macintosh operating system, OS/2, and Windows NT use a flat address space. MS-DOS uses a segmented address space, in which a location must be accessed with a segment number and an offset number. *See also* segmentation. *Compare* segmented address space.

flatbed plotter *n.* A plotter in which paper is held on a flat platform and a pen moves along both axes, traveling across the paper to draw an image. This method is slightly more accurate than that used by drum plotters, which move the paper under the pen, but requires more space. Flatbed plotters can also accept a wider variety of media, such as vellum and acetate, because the material does not need to be flexible. *See also* plotter. *Compare* drum plotter, pinch-roller plotter.

flatbed scanner *n.* A scanner with a flat, transparent surface that holds the image to be scanned, generally a book or other paper document. A scan head below the surface moves across the image. Some flatbed scanners can also reproduce transparent media, such as slides. *See the illustration.* *Compare* drum scanner, handheld scanner, sheet-fed scanner.

G

G prefix *See* giga-.

G3 n. *See* PowerPC 750.

G4 n. *See* Power Macintosh.

GaAs n. *See* gallium arsenide.

gain n. The increase in the amplitude of a signal, as of voltage, current, or power, that is produced by a circuit. Gain can be expressed as a factor or in decibels. *See also* decibel.

gallium arsenide n. A semiconductor compound used in place of silicon to make devices that perform faster, require less power, and are more tolerant of temperature changes and radiation than those made with silicon. *Also called:* GaAs.

game n. *See* computer game.

Game Boy n. Nintendo Corporation's popular battery-powered, portable handheld gaming system first introduced in 1990 and updated frequently. Games are supplied on cartridges. The latest Game Boy, Game Boy Advance, features a 32-bit ARM CPU with embedded memory and a 2.9-inch TFT reflective screen with 240x160 resolution. *See also* computer game, TFT.

game card n. *See* ROM card.

game cartridge n. *See* ROM cartridge.

game console n. *See* console game.

Game Control Adapter n. In IBM personal computers and compatibles, a circuit that processes input signals at a game port. Devices such as joysticks and game paddles use potentiometers to represent their positions as varying voltage levels; the Game Control Adapter converts these levels to numbers using an analog-to-digital converter (ADC). *See also* analog-to-digital converter, game port, potentiometer.

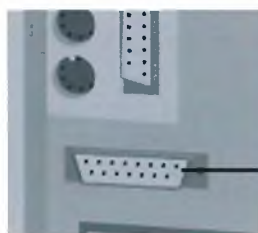
GameCube n. Nintendo Corporation's console gaming system. It features a developer-friendly format and introduces 1T-RAM technology, which reduces delays to the main memory and the graphics LSI mixed memory. The

microprocessor is a custom IBM Power PC "Gekko" featuring a secondary cache (Level One: Instruction 32 KB, Data 32 KB (8-way); Level Two: 256 KB (2-way)).

Games are supplied on a GameCube game disc. *See also* computer game, console game. *Compare* Dreamcast, PlayStation, Xbox.

game pad n. An action-control input device used with arcade-type games played on PCs and game consoles such as Microsoft's Xbox, Nintendo's GameCube, Sega's Dreamcast, and Sony's PlayStation. A game pad, unlike a joystick, is meant to be held in a player's hands. Buttons on the game pad allow a player to control direction, speed, and other screen actions. *Also called:* joypad. *Compare* joystick.

game port n. In IBM personal computers and compatibles, an I/O port for devices such as joysticks and game paddles. The game port is often included with other I/O ports on a single expansion card. *See the illustration. See also* Game Control Adapter.



Game port.

gamer n. Refers to a person who plays games, sometimes role-playing games or trading card games; often a person who plays computer, console, arcade, or online games as a primary hobby or avocation.

game theory n. A mathematical theory, ascribed to John von Neumann, that considers strategy and probability in terms of competitive games in which all players have partial control and each seeks the most advantageous moves in relation to the others.

G

graph is weighted if each edge has some value associated with it. *See also* node (definition 3), tree. 2. *See* chart.

Graphical Device Interface *n.* *See* GDI.

graphical interface *n.* *See* graphical user interface.

Graphical Kernel System *n.* A computer graphics standard, recognized by ANSI and ISO, that specifies methods of describing, manipulating, storing, and transferring graphical images. It functions at the application level rather than the hardware level and deals with logical workstations (combinations of input and output devices such as keyboard, mouse, and monitor) rather than with individual devices. Graphical Kernel System was developed in 1978 to handle two-dimensional graphics; the later modification, GKS-3D, extended the standard to three-dimensional graphics. *Acronym:* GKS. *See also* ANSI, ISO.

graphical user interface *n.* A visual computer environment that represents programs, files, and options with graphical images, such as icons, menus, and dialog boxes, on the screen. The user can select and activate these options by pointing and clicking with a mouse or, often, with the keyboard. A particular item (such as a scroll bar) works the same way for the user in all applications, because the graphical user interface provides standard software routines to handle these elements and report the user's actions (such as a mouse click on a particular icon or at a particular location in text, or a key press); applications call these routines with specific parameters rather than attempting to reproduce them from scratch. *Acronym:* GUI.

graphic character *n.* Any character that is represented by a visible symbol, such as an ASCII character. A graphic character is not the same as a graphics character. *Compare* graphics character.

graphic limits *n.* On a computer screen, the boundary of a graphical image in a graphics software program, including all the area enclosed within the graphic. In some graphics environments the limits of a graphic consist of the smallest rectangle that can completely enclose it, called its *bounding rectangle* or *bounding box*.

graphics accelerator *n.* A video adapter that contains a graphics coprocessor. A graphics accelerator can update the video display much more quickly than the CPU can, and it frees the CPU for other tasks. A graphics accelerator is a necessity for modern software such as graphical user interfaces and multimedia applications. *See also* graphics coprocessor, video adapter.

graphics adapter *n.* A video adapter capable of displaying graphics as well as alphanumeric characters. Almost all video adapters in common use today are graphics adapters.

graphics card *n.* *See* video adapter.

graphics character *n.* A character that can be combined with others to create simple graphics, such as lines, boxes, and shaded or solid blocks. *See* the illustration. *Compare* graphic character.



Graphics character. Box built up from line graphics characters.

graphics controller *n.* The part of the EGA and VGA video adapters that allows the computer to access the video buffer. *See also* EGA, VGA.

graphics coprocessor *n.* A specialized microprocessor, included in some video adapters, that can generate graphical images such as lines and filled areas in response to instructions from the CPU, freeing the CPU for other work.

graphics data structure *n.* A data structure that is designed specifically for representing one or more elements of a graphical image.

graphics engine *n.* 1. A display adapter that handles high-speed graphics-related processing, freeing the CPU for other tasks. *Also called:* graphics accelerator, video accelerator. 2. Software that, based on commands from an application, sends instructions for creating graphic images to the hardware that actually creates the images. Examples are Macintosh QuickDraw and Windows Graphics Device Interface (GDI).

graphics export component *n.* A technology developed by Apple for creating, editing, publishing, and viewing multimedia content. The graphics export component provides an application programming interface that enables a QuickTime player to export still images into a variety of file formats.

graphics import component *n.* A technology developed by Apple for creating, editing, publishing, and viewing multimedia content. The graphics import component provides an application programming interface that enables a QuickTime player to import still images from a variety of file formats.

G

kern *vb.* To alter selectively the distance between pairs of letters for readability and to make the type spacing more balanced and proportional. See the illustration.

AWAKE AWAKE

Kern. The first three letters of the second example are kerned.

kernel *n.* The core of an operating system—the portion of the system that manages memory, files, and peripheral devices; maintains the time and date; launches applications; and allocates system resources.

Kernel Extension *n.* See KEXT.

kernel panic *n.* In Mac OS X and UNIX-based systems, a type of error that occurs when the core level of the operating system is unable to properly handle an instruction. A kernel panic appears to the user as a text screen containing information about the nature of the error, which often can be corrected with a system reboot.

KEXT *n.* Acronym for Kernel Extension. In Mac OS X, an extension mechanism created to expand the functionality of the operating system kernel. KEXTs are modular and dynamic loading, and they may be created for any service that requires access to kernel internal interfaces. Creation of a KEXT allows the loading of pieces of code into the kernel without the need to recompile.

key *n.* 1. On a keyboard, the combination of a plastic keycap, a tension mechanism that suspends the keycap but allows it to be pressed down, and an electronic mechanism that records the key press and key release. 2. In database management, an identifier for a record or group of records in a datafile. See also B-tree, hash², index¹ (definition 1), inverted list, key field. 3. In encryption and digital signatures, a string of bits used for encrypting and decrypting information to be transmitted. Encryption commonly relies on two different types of keys, a public key known to more than one person (say, both the sender and the receiver) and a private key known only to one person (typically, the sender). 4. A metal object used with a physical lock to disable a computer system.

key binary large object *n.* A key binary large object (BLOB) provides a way to store keys outside of the cryptographic service provider (CSP) and is used to transfer

keys securely from one CSP to another. A key BLOB consists of a standard header followed by data representing the key. *Acronym:* key BLOB.

key BLOB *n.* See key binary large object.

keyboard *n.* A hardware unit with a set of switches that resembles a typewriter keyboard and that conveys information from a user to a computer or data communications circuit. See also Alt key, Apple key, arrow key, Backspace key, Break key, Caps Lock key, character code, Clear key, Command key, control character, Control key, Delete key, Dvorak keyboard, End key, enhanced keyboard, Enter key, ergonomic keyboard, Escape key, function key, Help key, Home key, Insert key, keyboard buffer, keyboard controller, keyboard enhancer, keycap, key code, numeric keypad, Num Lock key, Option key, original Macintosh keyboard, Page Down key, Page Up key, Pause key, PC/XT keyboard, Power-on key, Print Screen key, QWERTY keyboard, Return key, scan code, Scroll Lock key, Shift key, Sys Req key, Tab key.

keyboard buffer *n.* A small amount of system memory that stores the most recently typed characters. This buffer is used to store typed characters that have not yet been processed. *Also called:* type-ahead buffer.

keyboard controller *n.* A microprocessor installed in a keyboard whose primary function is to wait for and report on keystrokes.

keyboard enhancer *n.* A program that monitors keystrokes as they are typed and that can be used to redefine the meaning of certain keys or key combinations. Keyboard enhancers are used to create and store macros—sets of keystrokes, mouse actions, menu selections, or other instructions—that are then assigned to keys. *Also called:* macro program.

keyboard layout *n.* The key arrangement used for a particular keyboard, including such factors as the number of keys (101 is the current standard) and the configuration of the keys (QWERTY is the United States standard). Some proprietary systems use different layouts, and many allow you to map the keys to characters according to your preferences.

keyboard port *n.* The connector on a computer that receives data from the keyboard. See also port¹ (definition 1).

keyboard processor *n.* See keyboard controller.

keyboard repeat *n.* See typematic.

LLC *n.* Acronym for Logical Link Control. In the IEEE 802.x specifications, the higher of two sublayers that make up the ISO/OSI data link layer. The LLC is responsible for managing communications links and handling frame traffic. *See also* IEEE 802.x, MAC.

Lmhosts file *n.* A local text file that lists the names of network hosts (sometimes called NetBIOS names) to IP addresses for hosts that are not located on the local subnet. *See also* IP address, systemroot.

load¹ *n.* 1. The total computing burden a system carries at one time. 2. In electronics, the amount of current drawn by a device. 3. In communications, the amount of traffic on a line.

load² *vb.* To place information from storage into memory for processing, if it is data, or for execution, if it is program code.

load-and-go *adj.* In reference to a routine, able to begin execution immediately, once loaded. The term is commonly used in reference to compilers and the machine code they generate.

load balancing *n.* 1. In distributed processing, the distribution of activity across two or more servers in order to avoid overloading any one with too many requests from users. Load balancing can be either static or dynamic. In the former, the load is balanced ahead of time by assigning different groups of users to different servers. In the latter, software refers incoming requests at runtime to whichever server is most capable of handling them. 2. In client/server network administration, the process of reducing heavy traffic flows either by dividing a busy network segment into multiple smaller segments or by using software to distribute traffic among multiple network interface cards working simultaneously to transfer information to a server. 3. In communications, the process of routing traffic over two or more routes rather than one. Such load balancing results in faster, more reliable transmissions.

loaded line *n.* A transmission cable fitted with loading coils, usually spaced about a mile apart, that reduce amplitude distortion in a signal by adding inductance (resistance to changes in current flow) to the line. Loaded lines minimize distortion within the range of frequencies affected by the loading coils, but the coils also reduce the bandwidth available for transmission.

loader *n.* A utility that loads the executable code of a program into memory for execution. On most microcomputers, the loader is an invisible part of the operating system

and is automatically invoked when a program is run. *See also* loader routine, load module.

loader routine *n.* A routine that loads executable code into memory and executes it. A loader routine can be part of an operating system or it can be part of the program itself. *See also* loader, overlay¹ (definition 1).

load module *n.* An executable unit of code loaded into memory by the loader. A program consists of one or more load modules, each of which can be loaded and executed independently. *See also* loader.

load point *n.* The beginning of the valid data area on a magnetic tape.

load sharing *n.* A method of managing one or more tasks, jobs, or processes by scheduling and simultaneously executing portions of them on two or more microprocessors.

load shedding *n.* In electrical systems, the process of turning off power to some electronic equipment in order to maintain the integrity of the power supply to other connected devices. *See also* UPS.

lobby page *n.* A page of information about the broadcast that is displayed in the viewer's browser before the broadcast begins. It can contain a title, subject, host's name, information about the broadcast, and a countdown to the time of the broadcast.

local *adj.* 1. In general, close at hand or restricted to a particular area. 2. In communications, a device that can be accessed directly rather than by means of a communications line. 3. In information processing, an operation performed by the computer at hand rather than by a remote computer. 4. In programming, a variable that is restricted in scope, that is, used in only one part (subprogram, procedure, or function) of a program. *Compare* remote.

local area network *n.* *See* LAN.

local bus *n.* A PC architecture designed to speed up system performance by allowing some expansion boards to communicate directly with the microprocessor, bypassing the normal system bus entirely. *See also* PCI local bus, VL bus.

local bypass *n.* A telephone connection used by some businesses that links separate buildings but bypasses the telephone company.

locale identifier *n.* A 32-bit value that consists of a language identifier and a sort identifier. In code, a locale

L

on-board computer *n.* A computer that resides within another device.

on-chip cache *n.* *See* L1 cache.

on-demand publishing point *n.* A type of publishing point that streams content in such a way that the client can control (start, stop, pause, fast-forward, or rewind) the content. Typically, the on-demand content is a Windows Media file or a directory of files. Content streamed from an on-demand publishing point is always delivered as a unicast stream. Formerly called a station.

one-off *n.* 1. A product that is produced one at a time, instead of being mass produced. 2. A CD-ROM created on a CD-R machine, which can create only one copy of a CD-ROM at a time.

one-pass compiler *n.* A compiler that needs to read through a source file only once to produce the object code. The syntax of some languages makes it impossible to write a one-pass compiler for those languages. *See also* compiler (definition 2).

one's complement *n.* A number in the binary (base-2) system that is the complement of another number. *See also* complement.

one-to-many relationship *n.* An association between two tables in which the primary key value of each record in the primary table corresponds to the value in the matching field or fields of many records in the related table.

one-to-many replication *n.* A server configuration allowing replication of data from one or more large servers to a greater number of smaller servers.

one-to-one relationship *n.* An association between two tables in which the primary key value of each record in the primary table corresponds to the value in the matching field or fields of one and only one record in the related table.

one-way trust *n.* A type of trust relationship in which only one of the two domains trusts the other domain. For example, domain A trusts domain B and domain B does not trust domain A. All one-way trusts are nontransitive. *See also* transitive trust, two-way trust.

onion routing *n.* An anonymous communication technique first developed by the U.S. Navy, in which a message is wrapped in layers of encryption and passed through several intermediate stations to obscure its point of origin. In onion routing, data packets are sent through a complex network of routers, each of which opens an anon-

ymous connection to the next, until it reaches its destination. When the packet is received by the first onion router, it is encrypted once for each additional router it will pass through. Each subsequent onion router unwraps one layer of encryption until the message reaches its destination as plain text.

online *adj.* 1. In reference to a computing device or a program, activated and ready for operation; capable of communicating with or being controlled by a computer. *Compare* offline (definition 1). 2. In reference to one or more computers, connected to a network. *Compare* offline (definition 2). 3. In reference to a user, currently connected to the Internet, an online service, or a BBS or using a modem to connect to another modem. 4. In reference to a user, being able to connect to the Internet, an online service, or a BBS by virtue of having an account that gives one access.

online analytical processing *n.* *See* OLAP database.

online community *n.* 1. All users of the Internet and World Wide Web collectively. 2. A local community that places political forums on line for the discussion of local government or issues of public concern. 3. Members of a specific newsgroup, mailing list, MUD, BBS, or other online forum or group. *See also* BBS (definition 1), mailing list, MUD, newsgroup.

online game *n.* A game that is meant to be played while connected to the Internet, intranet, or other network, with one or more other people simultaneously connected. Online games allow gamers to interact with other players without having their physical presence necessary. *See also* computer game.

online help *n.* *See* help.

online information service *n.* A business that provides access to databases, file archives, conferences, chat groups, and other forms of information through dial-up, or dedicated communications links, or through the Internet. Most online information services also offer access to the Internet connections along with their own proprietary services. The largest consumer online information services in the U.S. are America Online, CompuServe, and MSN.

Online Privacy Alliance *n.* *See* OPA.

online service *n.* *See* online information service.

online state *n.* The state of a modem when it is communicating with another modem. *Compare* command state.

drum, and pinch roller. Flatbed plotters hold the paper still and move the pen along both *x* and *y* axes. Drum plotters roll the paper over a cylinder. The pen moves along one axis while the drum, with the paper attached, moves along the other. Pinch-roller plotters are a hybrid of the two, in which the pen moves only along one axis while the paper is moved back and forth by small rollers.

PL/SQL *n.* Short for Procedural Language Extension to SQL. Oracle's data manipulation language that allows sequenced or grouped execution of SQL statements and is commonly used to manipulate data in an Oracle database. The syntax is similar to the Ada programming language.

plug *n.* A connector, especially a male connector, one that fits into a socket. *See also* male connector.

plug and play *n.* 1. Generally, a reference to the ability of a computer system to automatically configure a device added to it. Plug and play capability exists in Macintoshes based on the NuBus and, since Windows 95, on PC-compatible computers. 2. When capitalized and, especially, when abbreviated PnP, a set of specifications developed by Intel and Microsoft that allows a PC to configure itself automatically to work with peripherals such as monitors, modems, and printers. A user can plug in a peripheral and "play" it without manually configuring the system. A Plug and Play PC requires both a BIOS that supports Plug and Play and a Plug and Play expansion card. *Abbreviation:* PnP. *See also* BIOS, expansion board, peripheral.

plugboard *n.* A board that permits users to control the operation of a device by plugging cables into sockets.

plug-compatible *adj.* Equipped with connectors that are equivalent both in structure and in usage. For example, most modems having DB-25 connectors on their rear panels are plug-compatible—that is, one can be replaced by another without the cable having to be rewired. *Compare* pin-compatible.

plug-in *n.* 1. A small software program that plugs into a larger application to provide added functionality. 2. A software component that plugs into the Netscape Navigator. Plug-ins permit the Web browser to access and execute files embedded in HTML documents that are in formats the browser normally would not recognize, such as many animation, video, and audio files. Most plug-ins are devel-

oped by software companies who have proprietary software in which the embedded files are created. *Compare* helper application.

p-machine *n.* *See* pseudomachine.

PMML *n.* Acronym for Predictive Model Markup Language. An XML-based language that enables sharing of defined predictive models between compliant vendor applications.

PMMU *n.* *See* paged memory management unit.

PMOS *n.* Acronym for P-channel metal-oxide semiconductor. A MOSFET semiconductor technology in which the conduction channel is formed by the movement of holes (electron "vacancies" created as electrons move from atom to atom) rather than electrons. Because holes move more slowly than electrons do, PMOS is slower than NMOS, but it is also easier and less expensive to fabricate. *See also* MOS, MOSFET, P-type semiconductor. *Compare* CMOS, NMOS.

PMS *n.* *See* PANTONE MATCHING SYSTEM.

PNG *n.* Acronym for Portable Network Graphics. A file format for bitmapped graphic images, designed to be a replacement for the GIF format, without the legal restrictions associated with GIF. *See also* GIF.

PNNI *n.* Short for Private Network-to-Network Interface. A routing protocol used in ATM networks that provides switches with the ability to communicate changes in the network. Through PNNI, switches can be informed of changes to the network as they occur and can then use the information to make appropriate routing decisions. *See also* ATM.

PnP *n.* *See* plug and play (definition 2).

PNP *n.* *See* PNP transistor.

PNP transistor *n.* A type of bipolar transistor in which a base of N-type material is sandwiched between an emitter and a collector of P-type material. The base, emitter, and collector are the three terminals of the transistor through which current flows. In a PNP transistor, holes (electron "vacancies") are the majority of the charge carriers, and they flow from the emitter to the collector. *See the illustration.* *See also* N-type semiconductor, P-type semiconductor. *Compare* NPN transistor.

P

save or print a document, a translucent sheet emerges from the window title bar and remains attached to that window even if it is moved to the background. The sheet allows the user to continue working in the window, or in other windows, without closing the sheet.

sheet-fed scanner *n.* A scanner with a single-sheet feed mechanism, in which sheets of paper are pulled in by the scanner and scanned as they pass over a stationary scanning mechanism. Sheet-fed scanners allow for automatic scanning of multiple-sheet documents. *See also* scanner. *Compare* drum scanner, flatbed scanner, handheld scanner.

sheet feeder *n.* A device that accepts a stack of paper and feeds it to a printer one page at a time.

shelfware *n.* Software that has been unsold or unused for a long time, and so has remained on a retailer's or user's shelf.

shell¹ *n.* A piece of software, usually a separate program, that provides direct communication between the user and the operating system. Examples of shells are Macintosh Finder and the MS-DOS command interface program COMMAND.COM. *See also* Bourne shell, C shell, Finder, Korn shell. *Compare* kernel.

shell² *vb.* *See* shell out.

shell account *n.* A computer service that permits a user to enter operating-system commands on the service provider's system through a command-line interface (usually one of the UNIX shells) rather than having to access the Internet through a graphical user interface. Shell accounts can provide Internet access through character-based tools such as Lynx for browsing the World Wide Web. *See also* shell¹.

shell archive *n.* In UNIX and GNU, a collection of compressed files that has been prepared for transmission by an e-mail service using the shar command.

shell out *vb.* To obtain temporary access to the operating-system shell without having to shut down the current application and return to that application after performing the desired shell function. Many UNIX programs allow the user to shell out; the user can do the same in windowing environments by switching to the main system window.

shell script *n.* A script executed by the command interpreter (shell) of an operating system. The term generally refers to scripts executed by the Bourne, C, and Korn shells on UNIX platforms. *Also called:* batch file. *See also* batch file, script, shell¹.

Shell sort *n.* A programming algorithm used for ordering data in which data are sorted in subsets so that the process works its way from unsorted to progressively more sorted. Named after its inventor, Donald Shell, it is faster than the bubble sort and the insertion sort. *See also* algorithm. *Compare* bubble sort, insertion sort.

Sherlock *n.* An advanced search mechanism included with the Macintosh OS. Sherlock provides the ability to search multiple Internet search engines simultaneously and incorporates the Macintosh Find File interface for searches of local volumes. Additional plug-ins can expand the number of search engines available for access and increase search options.

shielded twisted-pair wiring *n.* *See* twisted-pair wiring.

shift *vb.* In programming, to move the bit values one position to the left or right in a register or memory location. *See also* end-around shift. *Compare* rotate (definition 2).

Shift+click or **Shift click** *vb.* To click the mouse button while holding down the Shift key. Shift-clicking performs different operations in different applications, but its most common use in Windows is to allow users to select multiple items in a list, for example, to select a number of files for deletion or copying.

Shift key *n.* A keyboard key that, when pressed in combination with another key, gives that key an alternative meaning; for example, producing an uppercase character when a letter key is pressed. The Shift key is also used in various key combinations to create nonstandard characters or to perform special operations. The term is adapted from usage in relation to manual typewriters, in which the key physically shifted the carriage to print an alternative character. *See also* Caps Lock key.

Shift-PrtSc *n.* *See* Print Screen key.

shift register *n.* A circuit in which all bits are shifted one position at each clock cycle. It can be either linear (a bit is inserted at one end and "lost" at the other during each cycle) or it can be cyclic or looped (the "lost" bit is inserted back at the beginning). *See also* register, shift.

Shockwave *n.* A format for multimedia audio and video files within HTML documents, created by Macromedia, which markets a family of Shockwave servers and plug-in programs for Web browsers. *See also* HTML.

shopping cart *n.* In e-commerce programs, a file in which an online customer stores information on potential purchases until ready to order. Usually represented on

user interface *n.* The portion of a program with which a user interacts. Types of user interfaces, or UIs, include command-line interfaces, menu-driven interfaces, and graphical user interfaces. *Acronym:* UI.

User Interface Toolbox *n.* See Toolbox.

username *n.* The name by which a user is identified to a computer system or network. During the logon process, the user must enter the username and the correct password. If the system or network is connected to the Internet, the username generally corresponds to the leftmost part of the user's e-mail address (the portion preceding the @ sign, as in username@company.com). See also e-mail address, logon.

user name *n.* The name by which a person is known and addressed on a communications network. See also alias (definition 2).

user profile *n.* A computer-based record maintained about an authorized user of a multiuser computer system. A user profile is needed for security and other reasons; it can contain such information as the person's access restrictions, mailbox location, type of terminal, and so on. See also user account.

user state *n.* The least privileged of the modes in which a Motorola 680x0 microprocessor can operate. This is the mode in which application programs are run. See also 68000. Compare supervisor state.

USnail *n.* 1. Slang for the United States Postal Service. USnail, a term used on the Internet, is a reference to how slow the postal service is in comparison to e-mail. 2. Mail delivered by the United States Postal Service. See also snail mail.

/usr *n.* A directory in a computer system that contains subdirectories owned or maintained by individual users of the computer system. These subdirectories can contain files and additional subdirectories. Typically, /usr directories are used in UNIX systems and can be found on many FTP sites. See also FTP site.

USRT *n.* Acronym for universal synchronous receiver-transmitter. A module, usually composed of a single integrated circuit, that contains both the receiving and transmitting circuits required for synchronous serial communication. Compare UART.

UTC *n.* See Universal Time Coordinate.

UTF-8 *n.* Acronym for UCS Transformation Format 8. A character set for protocols evolving beyond the use of ASCII. The UTF-8 protocol provides for support of extended ASCII characters and translation of UCS-2, an international 16-bit Unicode character set. UTF-8 enables a far greater range of names than can be achieved using ASCII or extended ASCII encoding for character data. See also ASCII, Unicode.

utility *n.* A program designed to perform a particular function; the term usually refers to software that solves narrowly focused problems or those related to computer system management. See also application.

utility program *n.* A program designed to perform maintenance work on the system or on system components (for example, a storage backup program, disk and file recovery program, or resource editor).

UTP *n.* Acronym for unshielded twisted pair. A cable containing one or more twisted pairs of wires without additional shielding. UTP is more flexible and takes up less space than shielded twisted-pair (STP) cable but has less bandwidth. See the illustration. See also twisted-pair cable. Compare STP.



UTP

.uu *n.* The file extension for a binary file that has been translated into ASCII format using uuencode. Also called: .uud. See also ASCII, binary file, uuencode¹. Compare .uue.

UUCP *n.* Acronym for UNIX-to-UNIX Copy. A set of software programs that facilitates transmission of information between UNIX systems using serial data connec-

higher quality audio output than FM (frequency modulation) techniques.

WBEM *n.* Acronym for Web-Based Enterprise Management. A protocol that links a Web browser directly to a device or an application that monitors a network. *See also* communications protocol.

WDEF *n.* *See* window definition function.

WDL *n.* *See* Windows Driver Library.

WDM *n.* *See* dense wavelength division multiplexing, Windows Driver Model.

weak typing *n.* A characteristic of a programming language that allows the program to change the data type of a variable during program execution. *See also* data type, variable. *Compare* strong typing.

wearable computer *n.* A portable personal computer that its user wears like eyeglasses, clothing, or a wrist-watch but which, unlike those items, is interactive, responds to commands, and carries out instructions. A wearable computer may be used like a conventional computer for data collection, storage, and retrieval, but without tying the user to a stationary location while operating the computer. The earliest wearable computers were clandestine devices used in the mid-1960s to predict the performance of roulette wheels. Today, wearable computers are used for such applications as inventory and express package tracking.

web *n.* A set of interlinked documents in a hypertext system. The user enters the web through a home page. *See also* World Wide Web.

Web *n.* *See* World Wide Web.

Web Accessibility Initiative *n.* *See* WAI.

Web address *n.* *See* URL.

Web application *n.* A set of clients and servers that cooperate to provide the solution to a problem.

Web architect *n.* An individual who analyzes the purpose of a Web site and forms a plan for assembling and integrating the hardware, software, and other technical resources necessary to make the site function properly.

Web author *n.* A person who creates content for the World Wide Web. A Web author might be a writer who produces text for a designer to include in a Web page, or a Web designer who writes the text and also adds graphic elements and prepares the HTML code.

Web-Based Enterprise Management *n.* *See* WBEM.

Web browser *n.* Software that lets a user view HTML documents and access files and software related to those documents. Originally developed to allow users to view or browse documents on the World Wide Web, Web browsers can blur the distinction between local and remote resources for the user by also providing access to documents on a network, an intranet, or the local hard drive. Web browser software is built on the concept of hyperlinks, which allow users to point and click with a mouse in order to jump from document to document in whatever order they desire. Most Web browsers are also capable of downloading and transferring files, providing access to newsgroups, displaying graphics embedded in the document, playing audio and video files associated with the document, and executing small programs, such as Java applets or ActiveX controls included by programmers in the documents. Helper applications or plug-ins are required by some Web browsers to accomplish one or more of these tasks. *Also called:* browser. *See also* ActiveX control, helper application, hyperlink, Internet Explorer, Java applet, Lynx, Mosaic, Netscape Navigator, plug-in.

Web bug *n.* A small, nearly undetectable graphic that links to a Web page and is embedded in a document for use as an eavesdropping device. A Web bug usually takes the form of a 1-by-1-pixel transparent GIF file, so it is nearly invisible. This file is placed in a Web page, Microsoft Word file, or other document that users will access. The application in which the document is opened immediately links to the Web to download and display the embedded graphic. Information about the user, including IP address, browser, referrer, and time viewed, is passed to the author of the file when the application retrieves the invisible graphic information.

Webby Award *n.* Award bestowed annually by the International Academy of Digital Arts and Sciences to Web sites. The academy bestows awards to Web sites in more than 20 categories, which include technical achievement, humor, and best community site.

Web cam or webcam *n.* A video camera whose output appears on a Web page, usually updated on a regular and frequent schedule. Web cams are used to display weather and traffic conditions, to allow customers and other users to observe current activities at the site owner's business or home (for example, at a day care center), for promotional purposes, and as a form of "gee whiz, look at this!" entertainment.