WEBSTER'S NEW WORLD™

COMPUTER DICTIONARY

NINTH EDITION

The Best Computer Dictionary in Print

Completely revised and updated

Contains extensive coverage of Internet and multimedia terms

More than 4,500 words, phrases, abbreviations, and acronyms

BRYAN PFAFFENBERGER

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hard disk A secondary storage medium that uses several rigid disks coated with a magnetically sensitive material and housed together with the recording heads in a hermetically sealed mechanism. Hard drive performance is measured in terms of access time, seek time, rotational speed (measured in revolutions per minute), and data transfer rate. Hard drive interface standards—the means by which hard drives transmit their contents to other parts of a computer—include ST506/ST-412, IDE, EIDE, ESDI, SCSI, and Wide SCSI. IDE and SCSI are most common today. See *EIDE, IDE, SCSI.*

hard disk backup program A utility program that backs up hard disk data and programs onto floppy disks. See *backup utility.*

hard disk controller The circuitry, usually mounted on the hard disk itself, that controls the spindle motor and the head actuator of a hard disk. Under instructions from the host adapter, the hard disk controller searches for needed information and communicates it to the rest of the computer. IDE hard disk controllers must be configured in different ways, depending on whether they are master or slave drives.

hard disk drive See *hard disk.*

hard disk interface An electronic standard for connecting a hard disk to the computer. See *ESDI, IDE, SCSI.*

hard drive See *hard disk.*

hard hyphen In word processing programs, a special hyphen that acts as a regular character so that text cannot word wrap at this hyphen. Synonymous with nonbreaking hyphen. See *soft hyphen.*

hard page break A page break inserted by the user that remains in effect even after the user later adds or deletes text above the break. In contrast, the soft page break inserted by the program moves automatically as one adds and deletes text. Synonymous with forced page break.

hard return In word processing programs, a line break created by pressing the Enter key, as opposed to a soft return, which a program creates automatically at the end of a line. Unlike a soft return, a hard return stays in place when one inserts and deletes text.

hard space In word processing programs, a space specially formatted as a regular character so that the text cannot start a new line, breaking the phrase at the space's location. Hard spaces often are used to keep two-word proper nouns or month and date together on the same line, such as Key Biscayne,[hard space]West Point, and January[hard space]25.

hardware The electronic components, boards, peripherals, and equipment that make up a computer system; distinguished from the programs (software) that tell these components what to do. See *firmware, software.*

hardware cache A buffer on a disk drive controller or a disk drive. The buffer stores frequently accessed program instructions and data, as well as additional tracks of data that a program might need next. A computer can access required data much more quickly from the hardware cache than from the disk. The data is then delivered as fast as the expansion bus can carry it. Both 32-bit and 16-bit cached disk controller cards are available. See *disk drive controller.*

hardware conflict A computer malfunction caused by two peripheral devices attempting to access the same interrupt line or input/output channel. See *IRQ conflict.*

hardware flow control Physical modem circuits that implement an error-correction protocol, such as MNP4 or V.42.

memory The computer's primary storage, such as random access memory (RAM), as distinguished from its secondary storage, such as disk drives.

memory address A code number that specifies a specific location in a computer's random access memory (RAM).

memory cache See *cache memory.*

memory card See *flash memory card.*

memory check Part of the Power-On Self-Test (POST) that verifies that the computer's random access memory (RAM) is properly plugged in and is functioning well. As the computer goes through its boot routine, the user can often see the progress of the memory check on the display. If there is a problem in memory, be sure to record the memory address of the error and give it to a computer repair technician.

memory controller gate array Alternative term for Multi-color Graphics Array (MCGA), a video standard once used in the low-end models of IBM's Personal System/2 computers.

memory leak A programming flaw that causes a program to use new portions of memory instead of rewriting previously used portions. A program with a memory leak (a common flaw of beta software) will consume additional memory as it is used; in the worst case, the program will consume all the available memory and eventually cause the computer to stop operating.

memory management Collective term for a variety of strategies for ensuring that programs have sufficient available memory to function correctly. See *memory-management program, virtual memory.*

memory-management program A utility program that increases the apparent size of random access memory (RAM) by making expanded memory, extended memory, or virtual memory available for the execution of programs.

memory management unit (MMU) In a computer equipped with virtual memory, a chip (integrated circuit) that enables the computer to use a portion of the hard disk as if it were an extension of the computer's random access memory (RAM). See *virtual memory.*

memory map An arbitrary allocation of portions of a computer's random access memory (RAM), defining which areas the computer can use for specific purposes.

memory protection See *protected memory.*

memory-resident program See *terminate-and-stay-resident (TSR) program.*

memory word See *word.*

menu An onscreen display that lists available command choices. See *menu bar, pull-down menu.*

menu bar In a graphical user interface (GUI), a bar stretching across the top of the screen (or the top of a window) that contains the names of available pull-down menus.

menu-driven program A program that provides menus for choosing program options so that the user does not need to memorize commands. See *command-driven program.*

merge printing See *mail merge.*

message queue In Microsoft Windows, a special space in the memory that is set aside to list the messages that applications send each other. In Microsoft Windows 3.1, there is only one message queue. If an application hangs and prevents other applications from checking the queue, the entire system is frozen beyond recovery. In

so that this information is available for processing purposes. See *primary storage, secondary storage.*

storage device   Any optical or magnetic device capable of information storage functions in a computer system. See *secondary storage.*

storage medium   In a storage device, the material that retains the stored information (such as the magnetic material on the surface of a floppy disk).

store-and-forward network   A wide area network (WAN) created by means of the telephone system. Each computer in the network stores messages received during the day. At night, when telephone rates are low, the computer's automatic software dials a central distribution site. The computer uploads those messages addressed to other computers on the system and downloads messages from other computers. Store-and-forward technology is the basis of the Unix-to-Unix Copy Program (UUCP), a Unix network, and FidoNet, one of several wide area networks that link computer bulletin board systems (BBS).

stored program concept   The idea, which underlies the architecture of all modern computers, that programs should be stored in memory with data. This concept suggests that a program can jump back and forth through instructions instead of executing them sequentially. This insight launched virtually the entire world of modern computing, but it also introduced a known limitation. See *von Neumann bottleneck, parallel processing.*

storefront   In the World Wide Web (WWW), a Web document that establishes a commercial enterprise's presence on the Web. Typically, a storefront does not attempt to provide a complete catalog, but instead illustrates a few items or services that typify what the firm has to offer. Web marketing experience demonstrates that

the most successful storefronts are those that offer some interesting freebies, such as information or downloadable software. As security protocols become more widely used, customers will be able to use their credit cards safely to place orders. See *S-HTTP, SSL.*

stream   A continuous flow of data through a channel, in contrast to data delivery by means of packets (fixed, numbered, and addressed units of data that may arrive out of order).

streaming audio   On a computer network, a method of sending audio data as a continuous, compressed stream that is played back on the fly. In contrast to downloaded sounds, which may not begin playing for several minutes, streaming audio begins almost immediately. There is no universally supported streaming audio standard; the de facto standard is Real Audio.

streaming SIMD extensions (SSE)   A set of 3D graphics instructions incorporated into Intel microprocessors, beginning with the Pentium III. Also known as Katmai New Instructions (KNI). See *SIMD.*

streaming tape drive   A secondary storage device that uses continuous tape, contained in a cartridge, for backup purposes.

streaming video   On a computer network, a method of sending video data as a continuous, compressed stream that is played back on the fly. Like streaming audio, streaming videos begin playing almost immediately.

stress test   An alpha test procedure in which the manufacturer tries to determine how a program will behave under heavy demands. By pushing lots of data into a program, a manufacturer can determine whether, when, and how the program will fail under real-life conditions.

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