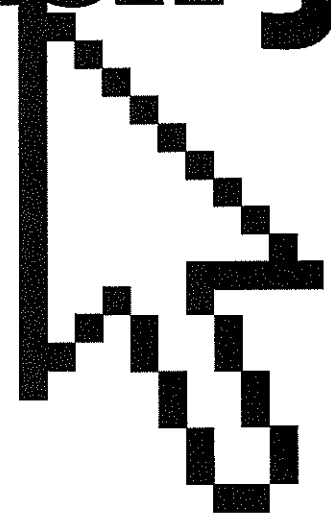


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Fourth
Edition



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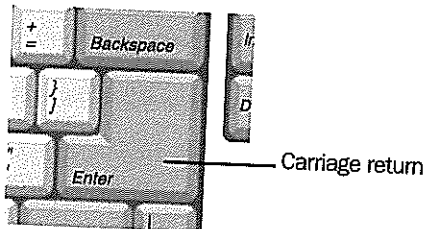
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carpal tunnel syndrome *n.* A form of repetitive strain injury to the wrist and hand. Making the same small motions over and over can cause swelling and scarring of the soft tissue of the wrist, which then compresses the main nerve leading to the hand. Symptoms of carpal tunnel syndrome include pain and tingling in the fingers, and in advanced cases, carpal tunnel syndrome can lead to loss of functionality of the hands. Typing at a computer keyboard without proper wrist support is a common cause of carpal tunnel syndrome. *Acronym:* CTS. *See also* repetitive strain injury, wrist support.

carriage *n.* The assembly that holds the platen of a typewriter or a typewriterlike printer. On a standard typewriter, the platen and carriage move past a fixed position within the typewriter housing, where the keys strike the paper; the platen rotates to advance the paper held in the carriage. On most impact printers for computers, however, the print head moves back and forth across a platen, which rotates but does not move horizontally; in such machines, the assembly that carries the print head is often called the print-head carriage assembly. *See also* carriage return, platen.

carriage return *n.* A control character that tells a computer or printer to return to the beginning of the current line. A carriage return is similar to the return on a typewriter but does not automatically advance to the beginning of a new line. For example, a carriage-return character alone, received at the end of the words *This is a sample line of text* would cause the cursor or printer to return to the first letter of the word *This*. In the ASCII character set, the carriage-return character has the decimal value of 13 (hexadecimal 0D). *See the illustration.*



Carriage return.

carrier *n.* 1. In communications, a specified frequency that can be modulated to convey information.
2. A company that provides telephone and other communications services to consumers.

Carrier Detect *n.* *See* CD (definition 2).

carrier frequency *n.* A radio-frequency signal, such as those used with modems and on networks, used to transmit information. A carrier frequency is a signal that vibrates at a fixed number of cycles per second, or hertz (Hz), and is modulated (changed) in either frequency or amplitude to enable it to carry intelligible information.

carrier sense multiple access with collision detection *n.* *See* CSMA/CD.

carrier system *n.* A communications method that uses different carrier frequencies to transfer information along multiple channels of a single path. Transmission involves modulating the signal on each frequency at the originating station and demodulating the signal at the receiving station.

carry *n.* In arithmetic, the process of moving a digit to the next higher position when the sum of two numbers is greater than the largest digit in the number system being used. Computers, based on logic circuits, and often able to add all digits in two numbers simultaneously (do parallel addition), perform carries in several exotic ways. For example, they perform complete carries, in which one carry is allowed to propagate—that is, to generate other carries in other digit positions. They can also perform partial carries, in which carries resulting from parallel addition are stored temporarily.

carry bit *n.* The bit, associated with an adder circuit, that indicates that an addition operation has produced a carry (as in $9 + 7$). *Also called* carry flag.

carry flag *n.* *See* carry bit.

Cartesian coordinates *n.* Points on a plane (two dimensions) or in space (three dimensions) that are located by their positions in relation to intersecting axes; named after the French mathematician René Descartes, who introduced the system in the seventeenth century. In two dimensions, points are described by their positions in relation to the two familiar axes, *x* (usually horizontal) and *y* (usually vertical). In three dimensions, a third axis, *z*, is added to the *x*- and *y*-axes. *See the illustration.* *See also* *x-y-z* coordinate system. *Compare* polar coordinates.

Cartesian product *n.* *See* product (definition 1).

cartridge *n.* Any of various container devices that usually consist of some form of plastic housing. *See also* disk cartridge, ink cartridge, memory cartridge, ribbon cartridge, ROM cartridge, tape cartridge, toner cartridge.



code conversion

press and uncompress audio or video data. *See also* compress², uncompress. **3.** Hardware that combines the functions of definitions 1 and 2.

code conversion *n.* **1.** The process of translating program instructions from one form into another. Code may be converted at the source-language level (for example, from C to Pascal), at the hardware-platform level (for example, from working on the IBM PC to working on the Apple Macintosh), or at the language level (for example, from source code in C to machine code). *See also* code¹ (definition 1). **2.** The process of transforming data from one representation to another, such as from ASCII to EBCDIC or from two's complement to binary-coded decimal.

Code Division Multiple Access *n.* A form of multiplexing in which the transmitter encodes the signal, using a pseudo-random sequence that the receiver also knows and can use to decode the received signal. Each different random sequence corresponds to a different communication channel. Motorola uses Code Division Multiple Access for digital cellular phones. *Acronym:* CDMA. *Also called* spread spectrum. *See also* multiplexing, transmitter.

code page *n.* In MS-DOS versions 3.3 and later, a table that relates the binary character codes used by a program to keys on the keyboard or to the appearance of characters on the display. Code pages are a means of providing support for character sets and keyboard layouts used in different countries. Devices such as the display and the keyboard can be configured to use a specific code page and to switch from one code page (such as United States) to another (such as Portugal) at the user's request.

code profiler *n.* A tool designed to aid developers in identifying and eliminating the code inefficiencies that cause bottlenecks and degrade performance in their applications. Code profilers analyze an executing application to determine both how long functions take to execute and how often they are called. Using a code profiler is a repetitive process in that the tool must be reused after each section of inefficient code has been found and corrected.

coder *n.* *See* programmer.

code segment *n.* **1.** A memory segment containing program instructions. **2.** A named and segregated portion of a program's code typically performing a specific class of operations. Code segments in this

cold link

sense are often loaded into memory as memory segments. The main program segment is kept in memory, and auxiliary segments are loaded only when they are required.

code snippet *n.* **1.** In a graphical user interface, programming instructions embedded in a menu option or button defined by the user. The snippet—consisting of one or more lines of source code—determines what the option or button does when chosen or clicked on. **2.** A small piece of programming code that is part of a larger program. Usually the code snippet performs a specific function or task.

coding form *n.* A sheet of paper ruled with horizontal and vertical lines to aid in writing source code for older languages that have position-dependent syntax (such as FORTRAN). Most programmers now use graph paper if they use paper at all.

coercion *n.* *See* cast.

coherence *n.* **1.** In raster-scan technology, the assignment of the value of one pixel to the pixel next to it. **2.** In optics, the property of some electromagnetic waves of being in phase with one another, as in light from a laser.

cold boot *n.* A startup process that begins with turning on the computer's power. Typically, a cold boot involves some basic hardware checking by the system, after which the operating system is loaded from disk into memory. *See also* boot¹. *Compare* warm boot.

cold fault *n.* A fatal error that occurs immediately upon or shortly after startup as a result of the misalignment of components in the system. The process of running and shutting down any computer induces a series of thermal expansions and contractions in its internal components. Over time, these changes in the dimensions of components can create a microscopic crack in a chip or loosen a pin in a socket; thus, the system crashes when cold, but the problem seems to disappear after the machine is warm. For this reason some users leave the system unit (but not the monitor) of a computer running from day to day, rather than turning the machine on only when needed.

cold link *n.* A link established upon a request for data. Once the request is filled, the link is broken. The next time data is required, a link from the client to the server must be reestablished. In a client/server architecture cold links are useful when the linked item consists of a large amount of data. Dynamic

cold start

Data Exchange (I Microsoft Excel, *See also* client/server hot link.

cold start *n.* *See* c

collaborative filter information from the e ber of people. Th Xerox PARC, wh ing users to annot and to choose wh not only on their wrote about them filtering is the cre pages of interest ing the experienc esting Web sites c filtering is also us keeping a databas several products, products the peop will like.

collapsed backbor

collate *vb.* In data or more similar s maintains the ord nal sets.

collating sort *n.* A merging of two o sequence of recor

collation sequenc (quence) among o collating sort. *See*

collector *n.* The re which charge car conditions. The o taken from the cc emitter, the collec and negative in a sistor, PNP transi emitter.

collision *n.* The re workstations tryi same time on the is a garbled trans

collision detection on a local area ne

C

ages on the Internet. colors, including a file depends on the file. LZW compression file size still further. graphics. 2. A format.

illion (1,000 million). 4 × 1,048,576 (2³⁰) gigabyte, gigaflops,

standard dubbed or transmission rates. 1,000 Mbps (megabit) network. The supports only up to 2.3.

ement of data in multiples of n: Gbps.

1,024 × 1,048,576 gigabytes (1,000 ×

iting performance: ping-point operations. See also floating-

variation for GHz. A on (1,000 million)

e out. tion system. ystem. disk placed over the duce or eliminate light

minor. 2. A brief surge

re document, file, or ted segment of it.

1 the Component Ob- code that identifies an l computers and net- ique because it con- based on the network

address hardwired on the host computer's LAN interface card. These identifiers are generated by a utility program. *Acronym:* GUID.

global operation *n.* An operation, such as a search and replace, that affects an entire document, program, or other object such as a disk.

global search and replace *n.* A search-and-replace operation that finds and changes all instances of the selected string throughout a document. *See also* search and replace.

Global System for Mobile Communications *n.* A digital cellular telephone technology widely used throughout Europe, in Australia, India, Africa, Asia, and the Middle East, and growing in use in the United States. Originating in 1982 with a European study group called the Groupe Spéciale Mobile, GSM is a wireless platform based on TDMA (Time Division Multiple Access) to digitize data; its features include not only telephony but also voice mail, call forwarding, fax, caller ID, Internet access, and e-mail. GSM operates at three frequency ranges: 900 MHz (GSM 900) in Europe and most of the world; 1800 MHz (GSM 1800) in a number of European countries; and 1900 MHz (GSM 1900—also called PCS 1900 or DCS 1900) in the United States and Canada. *Acronym:* GSM. *See also* SIM card, TDMA.

global universal identification *n.* An identification scheme in which only one name is associated with a particular object; this name is accepted across platforms and applications. *Acronym:* GUID. *See also* globally unique identifier.

global variable *n.* A variable whose value can be accessed and modified by any statement in a program, not merely within a single routine in which it is defined. *See also* global. *Compare* local variable.

GMR *n.* *See* giant magnetoresistive head.

gnomon \nɒˈmɒn\ *n.* In computer graphics, a representation of the three-dimensional (x-y-z) axis system.

GNU \nɒ\ *n.* Acronym for GNU's Not UNIX. A collection of software based on the UNIX operating system maintained by the Free Software Foundation. GNU is distributed under the GNU General Public License, which requires that anyone who distributes GNU or a program based on GNU may charge only for distribution and support and must allow the user to modify and redistribute the code on the same terms. *See also* Free Software Foundation, General Public License. *Compare* Linux.

Godwin's Law *n.* An observation originally propounded by Internet activist Michael Godwin that is usually stated along the lines of, "As an online discussion grows longer, the probability of a comparison involving Nazis or Hitler approaches one." When a participant in an online discussion resorts to invoking a comparison to Nazis or Hitler, other participants are likely to cite Godwin's Law as a means of saying that the person has lost the argument and the discussion has continued too long.

Good Times virus *n.* A purported e-mail virus alluded to in a warning that has been propagated widely across the Internet, as well as by fax and standard mail. The letter claims that reading an e-mail message with the subject "Good Times" will cause damage to the user's system. In fact, it is currently impossible to harm a system by reading an e-mail message, although it is possible to include a virus in a file that is attached to an e-mail message. Some consider the chain letter itself to be the "virus" that wastes Internet bandwidth and the reader's time. Information on such hoaxes and on real viruses can be obtained from CERT (<http://www.cert.org/>). *See also* urban legend, virus.

Gopher or **gopher** *n.* An Internet utility for finding textual information and presenting it to the user in the form of hierarchical menus, from which the user selects submenus or files that can be downloaded and displayed. One Gopher client may access all available Gopher servers, so the user accesses a common "Gopherspace." The name of the program is a three-way pun: it is designed to go for desired information; it tunnels through the Internet and digs the information up; and it was developed at the University of Minnesota (whose athletic teams are named the Golden Gophers). Gopher is being subsumed by the World Wide Web.

Gopher server *n.* The software that provides menus and files to a Gopher user. *See also* Gopher.

Gopher site *n.* A computer on the Internet on which a Gopher server runs. *See also* Gopher, Gopher server.

Gopherspace *n.* The total set of information on the Internet that is accessible as menus and documents through Gopher. *See also* Gopher.

GOSIP \ˈɡɒsˈɪp\ *n.* Acronym for Government Open Systems Interconnection Profile. A U.S. government requirement that all of its new network purchases comply with the ISO/OSI standards. GOSIP went

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