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COMPUTER DICTIONARY

SECOND EDITION



THE COMPREHENSIVE
STANDARD FOR
BUSINESS, SCHOOL, TRANSFERRED
TO THE
STACKS
LIBRARY, AND HOME

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ber of bits used. *Compare* analog; *see also* digital-to-analog converter.

digital audio tape Abbreviated DAT. A magnetic tape storage medium for recording digitally encoded audio information.

digital camera A type of camera that uses either the body and lens of a conventional camera (such as a 35mm or larger camera) or a proprietary body and lens and that stores the photographed image electronically instead of on traditional film. A digital camera uses a CCD (charge-coupled device) element to capture the image through the lens when the operator releases the shutter in the camera; circuitry within the camera then stores the image captured by the CCD in a storage medium such as solid-state memory or a hard disk. After the image has been captured, most digital camera systems require that the camera be connected to a computer by a cable and the image downloaded to the computer using software supplied with the camera. Once stored in the computer, the image can be manipulated and processed much like the image from a scanner or related input device.

digital communications Exchange of communications in which all information is transmitted in binary-encoded (digital) form.

digital computer The type of electronic device considered a computer by most people. A digital computer is one in which operations are based on two or more discrete states. Binary digital computers are based on two states, logical ON and OFF, represented by two voltage levels, arrangements of which are used to represent all types of information—numbers, letters, graphics symbols, and program instructions. Within such a computer, the states of various circuit components change continuously to move, operate on, and save this information. *Compare* analog computer.

digital data transmission The transfer of information encoded as a series of bits rather than as a fluctuating (analog) signal in a communications channel.

digital display A video display capable of rendering only a fixed number of colors or gray

shades. Examples of digital displays include IBM's Monochrome Display, Color/Graphics Display, and Enhanced Color Display. *Compare* analog display.

digital line A communications line that carries information only in binary-encoded (digital) form. To minimize distortion and noise interference, a digital line uses repeaters to regenerate the signal periodically during transmission. *Compare* analog line.

digital photography The use of a digital camera to photograph an object. Digital photography differs from conventional photography in that a digital camera does not use a silver halide-based film to capture an image. Instead, a digital camera captures and stores each image electronically, bypassing conventional photography requirements such as film and developing. *See also* digital camera.

digital proof *See* direct digital color proof.

digital recording The storage of information in binary-encoded (digital) format. Digital recording involves the conversion of information—text, graphics, sound, or pictures—to strings of 1's and 0's that can be physically represented on a storage medium. In a computer, for example, a magnetic disk drive converts electric pulses representing 1's and 0's to magnetic flux changes in which magnetic particles on a disk are oriented in one of two possible directions. Taken together, the alignments of all the particles on the disk represent digitally recorded information. Digital recording media include computer disks and tapes, optical (or compact) discs, and ROM cartridges of the type used for some software and many computer games.

digital signal A signal, such as one transmitted within or between computers, in which information is represented by discrete states—for example, high voltages and low voltages—rather than by continuously variable levels in a continuous stream, as in an analog signal.

digital signal processor Abbreviated DSP. An integrated circuit designed for high-speed data manipulations, used in audio, communications,

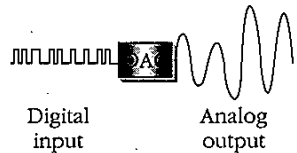


image manipulation, and other data-acquisition and data-control applications.

digital sort Also called radix sort. A type of ordering process in which record numbers or their key values are sorted digit by digit, beginning with the least significant (rightmost) digit in each.

digital speech See speech synthesis.

digital-to-analog converter A device that translates digital data to an analog signal. An analog signal consists of a voltage or current that varies continuously within a range of values, whereas a signal represented as digital information consists of discrete numeric values in binary patterns of 0's and 1's. A digital-to-analog converter takes a succession of discrete digital values as input and creates an analog signal whose amplitude corresponds, moment by moment, to each digital value. See the illustration. Compact disc players use a digital-to-analog converter to change the digital data read from the disc into the analog signal that is heard as music. Compare analog-to-digital converter.



Digital-to-analog converter.

digital video-interactive See DV-I.

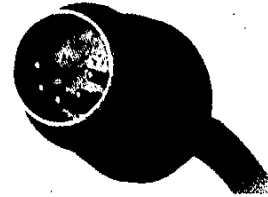
digitize To convert any continuously varying source of input, such as the lines in a drawing or a sound signal, into a series of discrete units represented (in a computer) by the binary digits 0 and 1. A drawing or photograph, for example, can be digitized by a scanner that converts lines and shading to combinations of 0's and 1's by sensing different intensities of light and dark. Analog-to-digital converters are commonly used to perform this translation. See also aliasing, analog-to-digital converter.

digitizing tablet See graphics tablet.

dimensioning In CAD programs, a means of specifying and possibly controlling the measurements and spatial relationships of elements in a

modeled object—for example, using lines, arrows, and text (that is, measurements) to indicate the length, height, and thickness of walls in a modeled room or house.

DIN connector A multipin connector conforming to the specification of the German national standards organization (Deutsch Industrie Norm). See the illustration. An 8-pin DIN connector is used as the serial port connector on the Macintosh Plus, Macintosh SE, and Macintosh II. On most IBM desktop PCs prior to the PS/2, 5-pin DIN connectors are used to connect keyboards to the system unit. On IBM PS/2's, 6-pin DW connectors are used to connect the keyboard and the pointing device.



DIN connector.

dingbat A small graphical element used for decorative purposes in a document. Some fonts, such as Zapf Dingbats, are designed to present sets of dingbats. The first line of the illustration shows the symbol equivalents of the lowercase alphabet in the Zapf Dingbats font, and the second line shows those of the uppercase letters. Compare bullet.



Dingbat.

Characters from the Zapf Dingbats font.

diode A device that passes current in only one direction. See the illustration. A diode is usually a semiconductor. See also semiconductor.

diode-transistor logic Abbreviated DTL. A type of circuit design that employs diodes, transistors, and resistors to perform logic functions.

DIP Acronym for dual in-line package. A standard for packaging integrated circuits, in which