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the change with each sample as needed, thus increasing the effective bit resolution of the data. *Acronym:* ADPCM (A`D-P-C-M´). *See also* pulse code modulation. *Compare* adaptive differential pulse code modulation.

adaptive differential pulse code modulation \ə-dap`tiv dif-ər-en`shəl puls` kōd´ moj-ə-lā´shən, mo-dyə-lā´shən\ *n.* A digital audio compression algorithm that stores a sample as the difference between a linear combination of previous samples and the actual sample, rather than the measurement itself. The linear combination formula is modified every few samples to minimize the dynamic range of the output signal, resulting in efficient storage. *See also* pulse code modulation. *Compare* adaptive delta pulse code modulation.

adaptive system \ə-dap`tiv si`stəm\ *n.* A system that is capable of altering its behavior based on certain features of its experience or environment. *See also* expert system.

ADB \A`D-B\ *n.* *See* Apple Desktop Bus.

ADC \A`D-C\ *n.* *See* analog-to-digital converter.

A-D converter \A-D´ kən-vər`tər\ *n.* *See* analog-to-digital converter.

adder \ad`ər\ *n.* **1.** A CPU (central processing unit) component that adds two numbers sent to it by processing instructions. *See also* central processing unit. **2.** A circuit that sums the amplitudes of two input signals. *See also* full adder, half adder.

add-in \ad`in\ *n.* *See* add-on.

addition record \ə-dish`ən rek`ərd\ *n.* **1.** A file that describes new record entries (such as a new customer, employee, or product) in a database so that they can later be scrutinized and posted. **2.** A record in a change file specifying a new entry. *See also* change file.

add-on \ad`on\ *n.* **1.** A hardware device, such as an expansion board or chip, that can be added to a computer to expand its capabilities. *Also called* add-in. *See also* open architecture (definition 2). **2.** A supplemental program that can extend the capabilities of an application program. *See also* utility program.

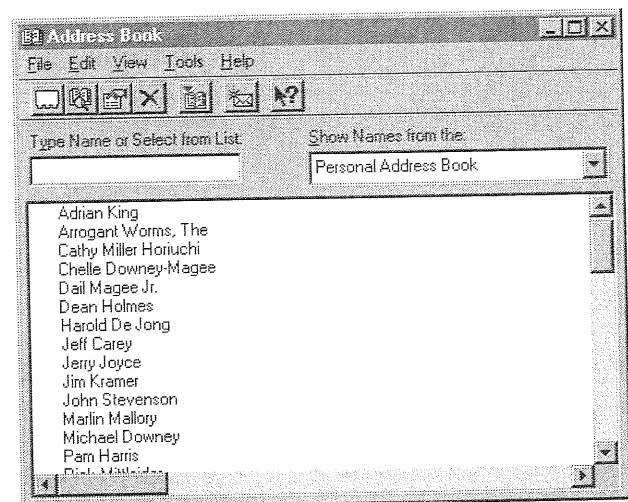
address¹ \a`dres, ə-dres\ *n.* **1.** A number specifying a location in memory where data is stored. *See also* absolute address, address space, physical address, virtual address. **2.** A name or token spec-

ifying a particular site on the Internet or other network. **3.** A code used to specify an e-mail destination.

address² \a`dres, ə-dres\ *vb.* To reference a particular storage location.

addressable cursor \ə-dres`ə-bl kur`sər\ *n.* A cursor programmed so that it can be moved to any location on the screen, as by means of the keyboard or a mouse.

address book \a`dres bōōk`, ə-dres\ *n.* **1.** In an e-mail program, a reference section listing e-mail addresses and individuals' names. **2.** As a Web page, an informal e-mail or URL phone book. *See* the illustration.



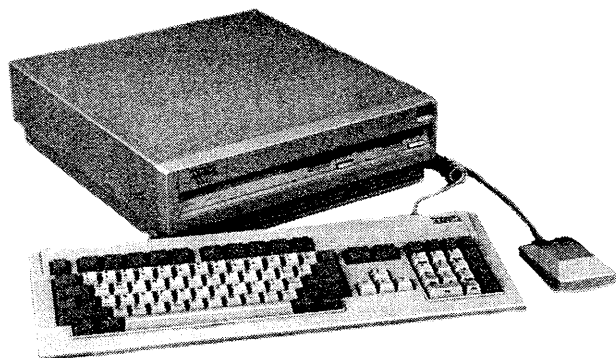
Address book.

address bus \a`dres bus`, ə-dres\ *n.* A hardware path usually consisting of 20 to 64 separate lines used to carry the signals specifying a memory location. *See also* bus.

address decoder \a`dres dē-kō`dər, ə-dres\ *n.* An electronic device that converts a numeric address so as to select a memory location on one or more RAM chips.

addressing \ə-dres`ēng, a`dres-ēng\ *n.* The process of assigning or referring to an address. In programming, the address is typically a value specifying a memory location. *See also* address¹.

address mapping table \a`dres map`ēng tā`bl, ə-dres\ *n.* A table used by routers or Domain Name System (DNS) servers to resolve Internet Protocol (IP) addresses from a text entry such as a name.

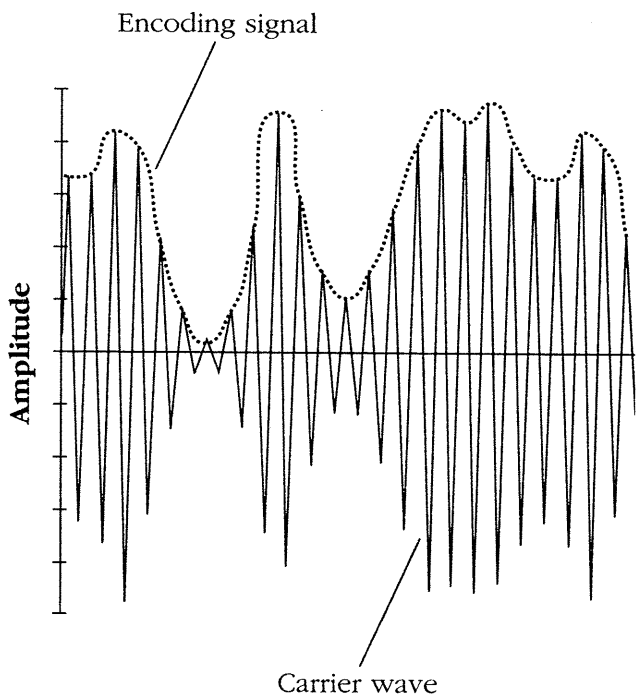


Amiga.

amplitude \am'plə-tōd' n. A measure of the strength of a signal, such as sound or voltage, determined by the distance from the baseline to the peak of the waveform. *See also* waveform.

amplitude modulation \am'plə-tōd' mɔj-ə-lā'shən, mod-yə-lā'shən n. A method of encoding information in a transmission, such as radio, using a carrier wave of constant frequency but of varying amplitude. *See the illustration. Acronym:* AM (A'M).

AMPS \A'M-P-S' n. Acronym for **A**dvanced **M**obile **P**hone **S**ervice. One of the original cellular phone services, relying on frequency-division multiplexing.



Amplitude modulation.

AMPS/NAMPS \amps`N'amps, A-M-P-S`N'A-M-P-S' n. *See* AMPS, NAMPS.

AMT \A`M-T' n. *See* address mapping table.

.an \dot`A-N' n. On the Internet, the major geographic domain specifying that an address is located in the Netherlands Antilles.

analog \an'ə-log' adj. Pertaining to or being a device or signal having the property of continuously varying in strength or quantity, such as voltage or audio. *Compare* digital (definition 2).

analog channel \an'ə-log chan'əl n. A communications channel, such as a voice-grade telephone line, carrying signals that vary continuously and can assume any value within a specified range.

analog computer \an'ə-log kəm-pyōō'tər n. A computer that measures data varying continuously in value, such as speed or temperature.

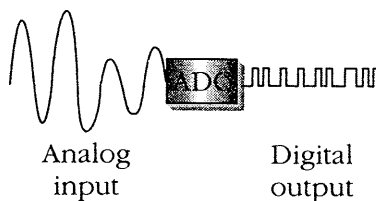
analog data \an'ə-log dā'tə, dat'əl n. Data that is represented by continuous variations in some physical property, such as voltage, frequency, or pressure. *Compare* digital data transmission.

analog display \an'ə-log dis-plā' n. A video display capable of depicting a continuous range of colors or shades rather than discrete values. *Compare* digital display.

analog line \an'ə-log līn' n. A communications line, such as a standard telephone line, that carries continuously varying signals.

analog signal generator \an'ə-log sig-nəl jen'er-ā-tər n. A device that generates continuously variable signals and is sometimes used to activate an actuator in a disk drive. *See also* actuator.

analog-to-digital converter \an'ə-log-tə-dij'i-təl kən-vər'tər n. A device that converts a continuously varying (analog) signal, such as sound or voltage, from a monitoring instrument to binary code for use by a computer. *See the illustration. Acronym:* ADC (A`D-C'). *Also called* A-D converter. *See also* modem. *Compare* digital-to-analog converter.



Analog-to-digital converter.

information (such as a memory address, a data type, or an actual value). *See also* binding time, dynamic binding, static binding.

binding time \bīnˈdēŋ tīm\ *n.* The point in a program's use at which binding of information occurs, usually in reference to program elements being bound to their storage locations and values. The most common binding times are during compilation (compile-time binding), during linking (link-time binding), and during program execution (run-time binding). *See also* bind, compile-time binding, link-time binding, run-time binding.

BinHex¹ \binˈheks\ *n.* **1.** A code for converting binary data files into ASCII text so they can be transmitted via e-mail to another computer or in a newsgroup post. This method can be used when standard ASCII characters are needed for transmission, as they are on the Internet. BinHex is used most frequently by Mac users. *See also* MIME. **2.** An Apple Macintosh program for converting binary data files into ASCII text and vice versa using the BinHex code. *Compare* uudecode¹, uuencode¹.

BinHex² \binˈheks\ *vb.* To convert a binary file into printable 7-bit ASCII text or to convert the resulting ASCII text file back to binary format using the BinHex program. *Compare* uudecode², uuencode².

binomial distribution \bī-nōˈmē-əl dis-trə-byōōˈshən\ *n.* In statistics, a list or a function that describes the probabilities of the possible values of a random variable chosen by means of a Bernoulli sampling process. A Bernoulli process has three characteristics: each trial has only two possible outcomes—success or failure; each trial is independent of all other trials; and the probability of success for each trial is constant. A binomial distribution can be used to calculate the probability of getting a specified number of successes in a Bernoulli process. For example, the binomial distribution can be used to calculate the probability of getting a 7 three times in 20 rolls of a pair of dice. *Also called* Bernoulli distribution.

bionics \bī-onˈiks\ *n.* The study of living organisms, their characteristics, and the ways they function, with a view toward creating hardware that can simulate or duplicate the activities of a biological system. *See also* cybernetics.

BIOS \bīˈōs, BˈI-O-S\ *n.* Acronym for **basic input/output system**. On PC-compatible computers, the set of essential software routines that test hardware at startup, start the operating system, and support the transfer of data among hardware devices. The BIOS is stored in read-only memory (ROM) so that it can be executed when the computer is turned on. Although critical to performance, the BIOS is usually invisible to computer users. *See also* AMI BIOS, CMOS setup, Phoenix BIOS, ROM BIOS. *Compare* Toolbox.

bipolar \bīˈpōˈlār\ *adj.* **1.** Having two opposite states, such as positive and negative. **2.** In information transfer and processing, pertaining to or characteristic of a signal in which opposite voltage polarities represent on and off, true and false, or some other pair of values. *See also* non-return to zero. *Compare* unipolar. **3.** In electronics, pertaining to or characteristic of a transistor having two types of charge carriers. *See also* transistor.

BIS \BˈI-S\ *n.* *See* business information system.

bistable \bīˈstāˈbl\ *adj.* Of, pertaining to, or characteristic of a system or device that has two possible states, such as on and off. *See also* flip-flop.

bistable circuit \bī-stāˈbl sərˈkət\ *n.* Any circuit that has only two stable states. The transition between them must be initiated from outside the circuit. A bistable circuit is capable of storing 1 bit of information.

bistable multivibrator \bī-stāˈbl mul-tī-vīˈbrā-tər, mul-tē-vīˈbrā-tər\ *n.* *See* flip-flop.

BISYNC \bīˈsēnk\ *n.* Short for **binary synchronous communications protocol**. A communications standard developed by IBM. BISYNC transmissions are encoded in either ASCII or EBCDIC. Messages can be of any length and are sent in units called frames, optionally preceded by a message header. BISYNC uses synchronous transmission, in which message elements are separated by a specific time interval, so each frame is preceded and followed by special characters that enable the sending and receiving machines to synchronize their clocks. STX and ETX are control characters that mark the beginning and end of the message text; BCC is a set of characters used to verify the accuracy of transmission. *See the illustration on the next page. Also called* BSC.

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