

DICTIONARY OF
INFORMATION
TECHNOLOGY

信息技术词典 [英]



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DICTIONARY OF INFORMATION TECHNOLOGY

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PREFACE

This dictionary provides the user with the basic vocabulary used in information technology. It covers computers, programming, telecommunications, electronics, graphics, desktop publishing and many other applications.

The 5,000 main words are each explained in simple English, using a limited vocabulary of about 500 words, over and above those words which appear in the dictionary as main words. Very many examples are given to show how the words and phrases can be used in context. Words which pose particular problems of grammar have short grammatical notes attached.

General comments about particular items of hardware or particular applications of software are given in separate boxes. Quotations from current magazines and journals are given to show how the words are used in real text. The supplement at the back of the book gives a note on numbers and their use, and lists of ASCII and EBCDIC codes, SI measurements and other information useful for computing and communications studies.

Aa

A = AMPERE

A Programming Language (APL) high-level programming language used in scientific and mathematical work

◇ **A1, A2, A3, A4, A5** *noun* ISO recommended international standard sizes of paper or sizes of screen; **you must photocopy the spreadsheet on A3 paper; we must order some more A4 headed notepaper; a standard 300 d.p.i. black and white A4 monitor** ◇ APPENDIX

A to D or A/D = ANALOG TO DIGITAL change a signal from an analog form to a digitally coded form; **A to D converter** = analog to digital converter or device used to convert an analog input to a digital output form which can be understood by a computer; **the audio signal was first passed through an A to D converter before being stored on disk; compare DIGITAL TO ANALOG**

abbreviation *noun* short form of a word or command or instruction; **use the abbreviation TV for "television"; abbreviated addressing or abb. add.** = use of a smaller computer address word than normal which provides faster decoding operations

abend *noun* = ABNORMAL END unexpected stoppage of a program being run, due to a fault or power failure

aberration *noun* (a) distortion of a light beam or image due to defects in the optical system (b) distortion of a television picture caused by a corrupt signal or incorrect adjustment; *see also* SPHERICAL

abnormal *adjective* not normal; **abnormal end or abend or abnormal termination** = unexpected stoppage of a program being run, caused by a fault or power failure

◇ **abnormally** *adverb* not as normal or not as usual; **the signal is abnormally weak; the noise level on the line is abnormally high**

abort *verb* to end a process (when a malfunction occurs), by switching the computer off manually or by an internal feature; **the program was aborted by**

pressing the red button; abort the program before it erases any more files

above-the-line costs *plural noun* variable costs involved in making TV films (such as scriptwriters, actors, sets, etc.) as opposed to below-the-line costs (film crew, technicians, etc.)

absolute address or actual address *noun* (a) computer storage address that directly, without any modification, accesses a location or device; *compare* INDEXED ADDRESS (b) computer storage address that can only access one location; **absolute addressing** = locating a word of data in memory by the use of its absolute address; **absolute assembler** = type of assembly language program designed to produce code which uses only absolute addresses and values; **absolute code** = binary code which directly operates the central processing unit, using only absolute addresses and values (this is the final form of a program after a compiler or assembler pass); *see also* OBJECT CODE; **absolute loader** = program that loads a section of code into main memory; **absolute program** = computer program written in absolute code; **absolute value** = size or value of a number, regardless of its sign; **the absolute value of -62.34 is 62.34**

absorb *verb* to take in (light or liquid)

◇ **absorbance** *noun* percentage of light that is absorbed by a material instead of reflecting it NOTE: the opposite is **reflectance**

◇ **absorption** *noun* power loss of a signal when travelling through a medium, due to its absorbance; **absorption filter** = filter that blocks certain colours of light

abstract 1 *noun* short version of a book or article; in our library, abstracts are gathered together in separate volumes allowing an easy and rapid search for a particular subject 2 *verb* (a) to remove something from something (b) to make a summary of an article

AC = ALTERNATING CURRENT electric current whose value varies with time in a regular, sinusoidal way

COMMENT: the mains electricity supply uses alternating current to minimize transmission power loss, with a frequency of 50Hz in UK, 60Hz in the USA

ACC *noun* = ACCUMULATOR most important internal CPU storage register, containing the data word that is to be processed

accent *noun* small sign placed on or above a printed or written character to show that it is pronounced in a different way; **acute** **accent** = accent above a character, which slopes upwards to the right; **circumflex** **accent** = accent above a character, shaped like an upside down 'v'; **grave** **accent** = accent above a character, which slopes upwards to the left; *see also* CEDILLA, TILDE, UMLAUT

◇ **accented** *adjective* (letter) with an accent on it

accept *verb* (a) to agree to do something; he **accepted** the quoted price for printing; she **has accepted** our terms; he **did not accept** the job which he was offered; to **accept a book for publication** = to agree to publish a book (b) to take something which is being offered; the laser printer will **accept a card as small as a business card**; the multi-disk reader will **accept 3.5 inch disks as well as 5.25 inch formats**

◇ **acceptable** *adjective* which can be accepted; the error rate was very low, and is **acceptable**

◇ **acceptance** *noun* action of accepting something; **acceptance angle** = angle of total field of view of a lens or optic fibres; a light beam at an angle greater than the **acceptance angle** of the lens will not be transmitted; **acceptance sampling** = testing a small random part of a batch to see if the whole batch is up to standard; **acceptance test** or **testing** = method of checking that a piece of equipment will perform as required or will reach required standards

access 1 *noun* being allowed to use a computer and read or alter files held in it (this is usually controlled by a security device such as a password); to **have access to something** = to be able to get or examine or reach something; to **have access to a file of data**; he **has access to large amounts of capital**; to **bar access to a system** = to prevent a person from using a system; **access arm** = mechanical device in a disk drive used to position the read/write head over the disk; **access charge** = cost due when logging onto a system or viewing special pages on a bulletin board; **access**

code = series of characters or symbols that must be entered to identify the user; *see also* PASSWORD; **access line** = permanently connected communications line between a terminal and a DSE; **access method** = means used for the internal transfer of data between memory and display or peripheral devices (differences in the methods used cause compatibility problems); **access point** = test point on a circuit board or software, allowing an engineer to check signals or data; **public access terminal** = terminal which can be used by anyone 2 *verb* to call up (data) which is stored in a computer; to obtain data from a storage device; she **accessed the employee's file stored on the computer**

◇ **access control** *noun* security device (such as a password) that only allows selected users into a computer system

COMMENT: a good access control system should allow valid users to operate the computer easily with the minimum of checks, while barring entry to hackers or unauthorized users

◇ **accessible** *adjective* which can be reached or accessed; details of customers are **easily accessible from the main computer files**

◇ **access time** *noun* (a) total length of time which a storage device takes between the moment the data is requested and the data being returned; the **access time of this dynamic RAM chip is around 200ns** - we have faster versions if your system clock is running faster (b) length of time required to find a file or program, either in main memory or a secondary memory source

accessions *plural noun* new books which are added to a library; **accession number** = serial number used in a library indexing system

accessory *noun* useful device which is attached to or used with another; the printer comes with several **accessories**, such as a soundproof hood; this popular computer has a large range of **accessories**

accidental *adjective* which happens by accident; always **keep backup copies in case of accidental damage to the master file**

accordion fold or **fanfold** *noun* method of folding continuous paper, one sheet in one direction, the next sheet in the opposite direction, allowing the paper to be fed into a printer continuously with no action on the part of the user

accumulate *verb* to gather several things together over a period of time; we have gradually accumulated a databank of names and addresses

◇ **accumulator** *noun* most important internal CPU storage register, containing the data word that is to be processed

accurate *adjective* correct; without any errors; the printed bar code has to be accurate to within a thousandth of a micron

◇ **accurately** *adverb* correctly or with no errors; the OCR had difficulty in reading the accents accurately; the error was caused because the data had not been accurately keyed

◇ **accuracy** *noun* total number of bits used to define a number in a computer, the more bits allocated the more accurate the definition

acetate *noun* sheet of transparent plastic used for making overlays; the graphs were plotted on acetate, for use on an overhead projector

achieve *verb* to succeed in doing something; the hardware designers are trying to achieve compatibility between all the components of the system

achromatic *adjective* (an optical device) that has been corrected for chromatic aberration

ACIA = ASYNCHRONOUS COMMUNICATIONS INTERFACE ADAPTER

ACK = ACKNOWLEDGE signal that is sent from a receiver to indicate that a transmitted message has been received and that it is ready for the next one

acknowledge 1 *noun* signal that is sent from a receiver to indicate that a transmitted message has been received and that it is ready for the next one 2 *verb* (i) to tell a sender that a message or letter has been received; (ii) to send a signal from a receiver to show that a transmitted message has been received; **acknowledge character** = special code sent by a receiver to indicate to the transmitter that the message has been correctly received

◇ **acknowledgements** *noun* text printed at the beginning of a book, where the author or publisher thanks people who have helped

acoustic *adjective* referring to sound; **acoustic delay line** = device that will delay an audio signal for special effects; **acoustic**

hood = soundproof hood placed over a printer to reduce the noise

◇ **acoustic coupler** *noun* device that connects to a telephone handset, converting binary computer data into sound signals to allow data to be transmitted down a telephone line

COMMENT: the acoustic coupler also converts back from sound signals to digital signals when receiving messages; it is basically the same as a modem but uses a loudspeaker on which a handset is placed to send the signals rather than direct connection to the phone line. It is portable, and clips over both ends of a normal telephone handset; it can be used even in a public phone booth

◇ **acoustical feedback** *noun* distortion in an audio signal, due to a part of an amplified signal being picked up by the microphone and amplified again until the amplifier is overloaded

◇ **acoustics** *noun* study and science of sound waves

ACR = AUDIO CASSETTE RECORDER; **ACR interface** = interface which allows a cassette recorder to be linked to a computer

acronym *noun* abbreviation, formed from various letters, which makes up a word which can be pronounced; the acronym FORTRAN means Formula Translator; the acronym RAM means Random Access Memory

actinic light *noun* light which is able to cause chemical change in a material, such as film

action *noun* (a) thing which has been done; to take action = to do something; **action message** = prompt given for a required user input (b) movement; **action field** = area to be photographed by a camera; **action frame** = camera field of view where the filmed action is taking place; **action shot** = still photograph showing action taking place (such as a person running)

◇ **activate** *verb* to start a process or to make a device start working; **pressing CR activates the printer**

◇ **active** *adjective* busy or working or being used; **active device** = electronic component that provides gain; compare with **PASSIVE DEVICE**; **active file** = file which is being worked on; **active state** = electronic state that causes an action to occur; **active window** = area of display screen where you are currently working; see also **WINDOW**

◇ **activity** *noun* (a) being active or busy; **activity loading** = method of organizing disk contents so that the most often accessed files or programs can be loaded quickly; **activity ratio** = number of files currently in use compared to the total stored (b) **activities** = jobs or tasks which are being performed on a computer

actual address or **absolute address** *noun* computer storage address that directly, without any modification, accesses a location or device

actuator *noun* mechanical device that can be controlled by an external signal (such as the read/write head in a disk drive)

ACU = AUTOMATIC CALLING UNIT

acuity *noun* (a) ability of the eye to define between shades and shapes of an object (b) ability of the ear to detect frequency or volume changes

acute *adjective* (a) very sharp or clear (b) **acute accent** = accent above a character, which slopes upwards to the right

acutance *noun* ability of a lens to produce clear edges

A/D = ANALOG TO DIGITAL change a signal from an analog form to a digitally coded form

AD = ASSISTANT DIRECTOR, ASSOCIATE DIRECTOR

ADA *noun* high-level programming language that is used mainly in military, industrial and scientific fields of computing

adapt *verb* to change to fit; can this computer be adapted to take 5.25 inch disks?

◇ **adapter** or **adaptor** *noun* device that allows two or more incompatible devices to be connected together; the cable adapter allows attachment of the scanner to the SCSI interface; the cable to connect the scanner to the adapter is included in the package; **adapter card** = add-on interface board that allows incompatible devices to communicate; **adapter plug** = plug which allows devices with different plugs (two-pin, three-pin, etc.) to be fitted into the same socket

◇ **adaptation** *noun* ability of a device to adjust its sensitivity range according to

various situations; the adaptation of the eye to respond to different levels of brightness

◇ **adaptive channel allocation** *noun* providing communications channels according to demand rather than a fixed allocation; **adaptive routing** = ability of a system to change its communications routes according to situations such as line failure; **adaptive systems** = ability of a system to alter its responses and processes according to situations

adaptor *see* ADAPTER

ADC *noun* = ANALOG TO DIGITAL CONVERTER device used to convert analog input to a digital output form, that can be understood by a computer

add *verb* (a) to put figures together to make a total; in the spreadsheet each column should be added to make a subtotal (b) to put things together to form a larger group; the software house has added a new management package to its range of products; adding or deleting material from the text is easy using the edit program

◇ **added entry** *noun* secondary file entry in a library catalogue

◇ **addend** *noun* number added to the augend in an addition sum

◇ **adder** *noun* device or routine that provides the sum of two or more digital inputs; **full adder** or **three input adder** = binary addition circuit which can produce the sum of two inputs, and can also accept a carry input, producing a carry output if necessary; **half adder** or **two input adder** = binary addition circuit which can produce the sum of two inputs and a carry output if necessary, but will not accept a carry input

◇ **add-in** *noun & adjective* (something) which is added; the first method is to use a page description language, the second is to use an add-in processor card; can you explain the add-in card method? processing is much faster with add-in cards

◇ **additional** *adjective* which is added or which is extra; can we add three additional workstations to the network?

◇ **additive colour mixing** *verb* to mix different coloured lights to produce the colour which is wanted

◇ **add-on** *noun & adjective* piece of software or hardware that is added to a computer system to improve its performance; the add-on hard disk will boost the computer's storage capabilities; the new add-on board allows colour graphics to be displayed

address 1 *noun* (a) details of number, street and town where an office is or a person lives; **my business address** and **phone number** are printed on the card; **cable address** = short address for sending cables; **home address** = address of a house or flat where someone lives; **please send the documents to my home address**; **address list** = list of addresses; **we keep an address list of two thousand businesses in Europe** (b) number allowing a central processing unit to reference a physical location in a storage medium in a computer system; **each separate memory word has its own unique address**; **this is the address at which the data starts**; **address bus** = physical connection that carries the address data in parallel form from the central processing unit to external devices; **address field** or **operand field** = part of a computer instruction that contains the operand or address data; **address modification** = changing the address field, so that it can refer to a different location; **address register** = register in a computer that is able to store all the bits of an address which can then be processed as a single unit; *see also* **MAR**; **address track** = track on a magnetic disk containing the addresses of files, etc., stored on other tracks; **address word** = computer word, usually made up of two data words that contain address data 2 *verb* (a) to write the details of an address on an envelope, etc.; **to address a letter or a parcel**; **please address your reply to the manager**; **a letter addressed to the managing director**; **an incorrectly addressed package** (b) to put the location data onto an address bus to identify which word in memory or storage device is to be accessed; **a larger address word increases the amount of memory a computer can address**

◇ **addressability** *noun* the control available over pixels on screen

◇ **addressable** *adjective* which can be addressed; **all the 5Mb of RAM is addressable**; **addressable cursor** = cursor which can be programmed to be placed in a certain position

◇ **addressee** *noun* person to whom a letter or package or communication is addressed

◇ **addressing** *noun* process of accessing a location in memory; **addressing method** = manner in which a section of memory is located; **direct addressing** = method of addressing where the storage location address given in the instruction is the location to be used; **immediate addressing** = accessing data immediately because it is held in the address field itself; **indexed addressing** = way of addressing where the storage location is addressed with a start

address and an offset word, which is added in to give the destination address; **indirect addressing** = way of addressing data, where the first instruction refers to an address which contains a second address

◇ **addressing machine** *noun* machine which puts addresses on envelopes automatically

adjacent *adjective* which is near or next to something; **the address is stored adjacent to the customer name field**

adjust *verb* to change something to fit new conditions or so that it works better; **you can adjust the brightness and contrast by turning a knob**

◇ **adjustment** *noun* slight change made to something so that it works better; **the brightness needs adjustment**; **I think the joystick needs adjustment as it sometimes gets stuck**

ADP - AUTOMATIC DATA PROCESSING

advance *verb* to move forward; **to make something move forward**; **the paper is advanced by turning this knob**; **advance the cursor two spaces along the line**

◇ **advanced** *adjective* more complicated or more difficult to learn; **advanced version** = program with more complex features for use by an experienced user

adventure game *noun* game played on a computer, where the user pretends to be a hero in an imaginary land and has to get through various dangerous situations, fight monsters, etc.

serial 1 *noun* device for receiving or sending radio transmissions by converting electromagnetic impulses into electrical signals and vice-versa; **serial cable** = wire stretched between poles which acts as an aerial 2 *adjective* in the air; **aerial image** = a view from high above a scene

affect *verb* to touch or to influence or to change something; **changes in voltage will affect the way the computer functions**

affiliate *verb* to connect or join with

◇ **affiliated** *adjective* connected with or owned by another company; **one of our affiliated companies**

affirmative *adjective* meaning "yes"; **the answer was in the affirmative** = the answer was yes; **affirmative acknowledgement** = acknowledge signal from the receiver that

it has accepted the message and is ready for the next one

AFNOR *in France* Association Française de Normalisation (the French standards organization)

afterglow *see* PERSISTENCE

AGC = AUTOMATIC GAIN CONTROL electronic device that provides a constant amplitude output signal from a varying input signal by changing its gain

agenda *noun* list of things to be discussed at a meeting; the conference agenda or the agenda of the conference; after two hours we were still discussing the first item on the agenda; the secretary put finance at the top of the agenda; the chairman wants two items removed from or taken off the agenda; agenda item = topic on an agenda to be discussed

AI = ARTIFICIAL INTELLIGENCE the design and development of computer programs that imitate human intelligence, providing basic reasoning and other human characteristics

A & I = ABSTRACTING AND INDEXING making summaries and indexes for articles and books

aid 1 *noun* help; the computer is a great aid to rapid processing of large amounts of information **2** *verb* to help; industrial design is aided by computers; *see also* COMPUTER-AIDED

air gap *noun* narrow gap between a recording or playback head and the magnetic medium

◇ **air circuit breaker** *noun* mechanical device that has an electrical or manual switched circuit isolator

alarm *noun* ringing or other sound which warns of a danger; all staff must leave the building if the alarm sounds; an alarm rings when the printer has run out of paper

albumen plate *noun* photographic plate, with a light-sensitive coating

ALC = AUTOMATIC LEVEL CONTROL *see* AGC

algebra *noun* use of letters in certain mathematical operations to represent unknown numbers or a range of possible

numbers; **Boolean algebra** = rules set down to define, simplify and manipulate logical functions, based on statements that are true or false ◇ APPENDIX

ALGOL = ALGORITHMIC LANGUAGE high level programming language using algorithmic methods for mathematical and technical applications

algorithm *noun* rules used to define or perform a specific task or to solve a specific problem

◇ **algorithmic** *adjective* expressed using algorithms; **algorithmic language** = computer language designed to process and express algorithms, such as ALGOL

QUOTE image processing algorithms are step by step procedures for performing image processing operations

Byte

QUOTE the steps are: acquiring a digitized image, developing an algorithm to process it, processing the image, modifying the algorithm until you are satisfied with the result

Byte

QUOTE the complex algorithms needed for geometrical calculations make heavy demands on the processor

PC Business World

alien *adjective* different or not fitting the usual system; **alien disk** = disk formatted on another system or containing data in a format which cannot be read; **alien-disk reader** = add-on device which allows a computer to read from disks from other computers or systems; when you have an alien disk select the multi-disk option to allow to turn the disk drive into an alien disk reader

align *verb* (a) to make sure that the characters to be printed are spaced and levelled correctly (b) to tune two or more radio circuits together (c) to ensure that a read/write head is correctly positioned over the recording medium

◇ **aligner** *noun* device used to make sure that the paper is straight on a typewriter

◇ **aligning edge** *noun* edge of a optical character recognition system used to position a document

◇ **alignment** *noun* correct spacing and levelling of printed characters; in alignment = correctly aligned; out of alignment = not aligned correctly; alignment pin = peg that fits in a hole to ensure that two devices are correctly aligned

allocate *verb* to divide (a sum of money or a period of time or a piece of work or a frequency band) in various ways and share

it out between users; **this frequency band has been allocated to the police**

◇ **allocation** *noun* dividing something in various ways; **allocation of time or capital to a project**; **band allocation** = range of frequencies allocated to various users or for various purposes; **the new band allocation means we will have more channels**

allophone *noun* smallest unit of sound from which speech can be formed

alpha beta technique *noun* technique used in Artificial Intelligence for solving game and strategy problems by tree structures

alpha wrap *noun* method used for feeding tape into a helical scan video recorder to make sure the alignment is correct

alphabet *noun* the 26 letters used to make words

◇ **alphabetic character set** *noun* characters (capitals and small letters) that make up the alphabet

◇ **alphabetical order** *noun* arrangement of records (such as files, index cards) in the order of the letters of the alphabet (A,B,C,D, etc.)

◇ **alphabetically** *adverb* in alphabetical order; **the files are arranged alphabetically under the customer's name**

◇ **alphabetize** *verb* to put into alphabetical order; **enter the bibliographical information and alphabetize it**

alphanumeric *adjective* (set of codes) that instruct a teletext terminal to display various graphics modes

alphameric *US* = ALPHANUMERIC

alphamosaic *adjective* (character set) used in teletext to provide alphanumeric and graphics characters

alphanumeric *adjective* alphanumeric characters or alphanumerics = roman letters and arabic numerals (and other signs such as punctuation marks); **alphanumeric data** = data shown by the letters of the alphabet and the arabic numerals; **alphanumeric display** = display device able to show characters as well as numbers; **alphanumeric keyboard** = keyboard containing character keys as well as numerical keys

QUOTE geometrical data takes up more storage space than alphanumeric data

PC Business World

alphaphotographic *adjective* which represents pictures using predefined characters, for teletext services

◇ **alphasort** *verb* to sort data into alphabetical order

alter *verb* to change; **to alter the terms of a contract**; **the program specifications have just been altered**

◇ **alterable** *adjective* which can be altered; **see EPROM, EAROM**

◇ **alteration** *noun* change which has been made; **he made some alterations to the terms of a contract**; **the agreement was signed without any alterations**; **the new version of the software has many alterations and improvements**

alternate 1 *verb* to change from one to another over and over again **2** *adjective* which change from one to another; **alternate mode** = application for multi-user use, where two operators can access and share a single set of files; **alternate route** = backup method for communications systems

◇ **alternately** *adverb* switching from one to the other

◇ **alternating current** or **AC** *noun* electric current whose value varies with time in a regular, sinusoidal way (changing direction of flow each half cycle)

◇ **alternator** *noun* device which produces an alternating current

alternative 1 *noun* thing which can be done instead of another; **what is the alternative to rekeying all the data?**; **we have no alternative** = there is nothing else we can do **2** *adjective* other or which can take the place of something; **to find someone alternative employment** = to find someone another job

ALU - ARITHMETIC LOGIC UNIT section of the CPU that performs all arithmetic and logical functions

AM - AMPLITUDE MODULATION

A-MAC low bandwidth variation of MAC

ambient *adjective* normal background (conditions); **ambient noise level** = normal background noise level; **the ambient noise level in the office is greater than in the library**; **ambient temperature** = normal

average temperature of the air around a device

ambiguous *adjective* which has two possible meanings; **ambiguous filename** = filename which is not unique to a single file, making it difficult to locate the file

ambisonics *noun* recording more than one audio signal to give the effect of being surrounded by sound

AMM = ANALOG MULTIMETER multimeter that uses a graduated scale and a moving needle as a readout for voltage, current and impedance levels; *compare with* DMM

American National Standards Institute (ANSI) organization which specifies computer and software standards including those of high-level programming languages

American Standard Code for Information Interchange (ASCII) coding system for characters \square APPENDIX

amount 1 *noun* quantity of money or data on paper, etc.; what is the largest amount of data which can be processed in one hour? **2** *verb* to amount to = to make a total of; their debts amount to over £1m; the total keyboarded characters amount to ten million

amp or ampere (A) *noun* base SI unit of electrical current; defined as the current flowing through an impedance of one ohm which has one volt across it \square APPENDIX
NOTE: used with figures: a 13-amp plug

ampersand *noun* printing sign (&) which means "and"

amplifier *noun* electronic circuit that magnifies the power of a signal; **audio amplifier** = domestic amplifier that handles frequencies in the human hearing range; **low noise amplifier** = high-quality amplifier placed very close to a receiving aerial to amplify the received signals before they are corrupted by noise; **amplifier class** = way of classifying the design of amplifiers meant for different jobs; **amplified telephone** = system to allow hands-off telephone conversations

\diamond **amplification** *noun* the output-to-input signal strength ratio; increase the amplification of the input signal; the amplification is so high, the signal is distorting

\diamond **amplify** *verb* to magnify a signal power or amplitude; the received signal needs to be amplified before it can be processed

amplitude *noun* strength of a signal; **amplitude distortion** = distortion of a signal due to uneven (non-linear) amplification (high levels amplified less than low); **amplitude modulation (AM)** = system that varies the amplitude of a constant carrier signal according to an external signal

analog or analogue *noun* representation and measurement of numerical data by continuously variable physical quantities, such as: size of electrical voltages, volume of gas or gear ratio; *compare with* DIGITAL; **analog channel** = communications line that carries analog signals such as speech; **analog computer** = computer which processes data in analog form (that is, data which is represented by a continuously varying signal - as opposed to digital data); **analog multimeter** = multimeter that uses a graduated scale and a moving needle as a readout for voltage, current and impedance levels; *compare with* DMM; **analog recording** = storing signals in their natural form, without conversion to digital form; **analog signal** = continuously varying signal; **analog to digital (A to D or A/D)** = change a signal from an analog form to a digitally coded form; **analog to digital converter (ADC or A to D converter)** = device used to convert an analog input signal to a digital output form, that can be understood by a computer

analyse or analyze *verb* to examine in detail; to analyse a computer printout; to analyse the market potential for a new computer

\diamond **analysis** *noun* detailed examination and report; market analysis; sales analysis; to carry out an analysis of the market potential; to write an analysis of the sales position; **cost analysis** = examination in advance of the costs of a new product; **systems analysis** = analysing a process or system to see if it could be more efficiently carried out by computer NOTE: plural is analyses

\diamond **analyst** *noun* person who carries out an analysis of a problem; **systems analyst** = person who specializes in systems analysis

\diamond **analyzer** *noun* electronic test equipment that displays various features of a signal; **frequency analyzer** = test equipment that displays the amplitudes of the various frequency components of a signal

anamorphic image *noun* image which has been distorted in one direction

ANAPROP - ANOMALOUS
PROPAGATION distortion of transmitted television signals due to atmospheric conditions

anastigmatic *noun* lens or optical device that has been corrected for astigmatism

ancestral file *noun* system of backing up files (son to father to grandfather file), where the son is the current working file

ancillary equipment *noun* equipment which is used to make a task easier, but which is not absolutely necessary

AND function *noun* logical function whose output is true if both its inputs are true; **AND gate** = gate that performs a logical AND function on electrical signals
⇨ APPENDIX

COMMENT: if both inputs are 1, results of the AND will be 1; if one of the input digits is 0, then AND will produce a 0

anechoic *adjective* (room) that produces no echoes, used for testing audio equipment

angstrom *noun* unit of measurement equal to one thousand millionth of a metre

angle *noun* measure of the change in direction, usually as the distance turned from a reference line; **wide-angle lens** = lens which has a large acceptance angle

animate *verb* to make a series of drawings which, when filmed, will create moving images

◇ **animation** *noun* drawing images on film, especially using a computer to create moving graphical images, such as cartoons

annotation *noun* comment or note in a program which explains how the program is to be used; **annotation symbol** = symbol used when making flowcharts, to allow comments to be added

annunciator *noun & adjective* signal that can be heard or seen that is used to attract attention

anode *noun* positive electrical terminal of a device

anomalistic period *noun* time taken for a satellite to travel between consecutive maximum points in its orbit

ANSI US - AMERICAN NATIONAL STANDARDS INSTITUTE organization which specifies computer and software standards, including those of high-level programming languages

answer 1 *noun* reply or letter or conversation coming after someone has written or spoken; I am writing in answer to your letter of October 6th; my letter got no answer or there was no answer to my letter; I tried to phone his office but there was no answer 2 *verb* (a) to speak or write after someone has spoken or written to you; to answer a letter = to write a letter in reply to a letter which you have received; to answer the telephone = to lift the telephone when it rings and listen to what the caller is saying (b) to reply to a signal and set up a communications link; the first modem originates the call and the second answers it; answer back = signal sent by the receiving end of a communications system to identify itself or to transmit a message; answer time = time taken for a receiving device to respond to a signal

◇ **answering** *noun* answering machine = machine which answers the telephone automatically when someone is not in the office; **answering service** = office which answers the telephone and takes messages for someone or for a company

◇ **answerphone** *noun* cassette recorder attached to a telephone, which plays a prerecorded message and records messages from people dialling the number

antenna *noun* aerial or device for receiving or sending radio transmissions by converting electromagnetic impulses into electrical signals and vice-versa; **antenna array** = series of small transmitting or receiving elements connected in parallel, that make up a complex antenna; **antenna gain** = transmitted signal power increase due to using a certain type of antenna

anti- *prefix* meaning against

◇ **anti-tinkle suppression** *noun* (in a modem) switch which prevents other telephones on a line ringing when a modem dials out

APD - AVALANCHE PHOTODIODE

aperture *noun* opening in a device that allows a certain amount of light or a signal to pass through it; **aperture card** = method of storing microfilmed information with a card surround, that can contain punched information; **aperture illumination** = pattern generated from an aperture

antenna; **aperture mask** = mask used in colour televisions to separate the RGB beams

APL = A PROGRAMMING LANGUAGE high-level programming language used in scientific and mathematical work

apochromatic lens *noun* optical lens that has been corrected for chromatic aberration

apogee *noun* point in a satellite's orbit where it is at its maximum distance from the earth

apostrophe *noun* printing sign ('), which generally indicates that a letter is missing or used in ('s), to indicate possession

NOTE: so **computer's** can mean 'belonging to a computer' or 'the computer is'; **the computer's casing is blue**; **the computer's broken and has to be repaired**. Note that this is different from **it's** = 'it is' as opposed to **its** = 'belonging to it': **it's easy to program**; you cannot edit a disk when **its** write protect tag is closed

append *verb* to add data to an existing file or record

◇ **appendix** *noun* section at the back of a book, containing additional information; for further details see the **appendices**; a complete list is printed in the **appendix**

NOTE: plural is **appendices**

appliance *noun* machine, especially one used in the home; all electrical **appliances** should be properly earthed

◇ **appliance computer** *noun* ready to run computer system that can be bought in a shop, taken home and used immediately for a particular purpose

applicant *noun* person who applies for something; **applicant for a job or job applicant**; there were thousands of applicants for shares in the new company

◇ **application** *noun* (a) asking for something, usually in writing; **application for a job or job application**; **application form** = form to be filled in when applying; to fill in an **application (form)** for a job or a job **application (form)**; letter of **application** = letter in which someone applies for a job (b) task which a computer performs or problem which a computer solves (as opposed to an operating system which is the way in which a computer works); **application layer** = top layer in an ISO/OSI network, which requests a transmission (from a users program); **application orientated language** = programming language that provides functions that allow

the user to solve certain application problems; **applications package** = set of computer programs and manuals that cover all aspects of a particular task (such as payroll, stock control, tax, etc.); **applications software** or **applications program** = programs which are used by a user to make the computer do what is required, designed to allow a particular task to be performed; the **multi-window editor** is used to create and edit **applications programs**; **applications specific integrated circuits (ASIC)** = specially designed ICs for one particular function or to special specifications; **applications terminal** = terminal (such as at a sales desk) which is specially configured to carry out certain tasks

QUOTE they have announced a fourth generation application development tool which allows users of PCs and PC networks to exchange data with mainframe databases

Minicomputer News

apply *verb* (a) to ask for something, usually in writing; to **apply for a job**; to **apply in writing**; to **apply in person** (b) to affect or to touch; **this law applies only to sales outside the EEC**

appoint *verb* to choose someone for a job; to **appoint James Smith (to the post of) manager**; we have **appointed a new computer services manager** NOTE: you appoint a person to a job

◇ **appointee** *noun* person who is appointed to a job

◇ **appointment** *noun* (a) arrangement to meet; to **make or to fix an appointment for two o'clock**; to **make an appointment with someone for two o'clock**; he was late for his **appointment**; she had to **cancel her appointment**; **appointments book** = desk diary in which appointments are noted (b) being appointed to a job; on his **appointment as manager** = when he was made manager; letter of **appointment** = letter in which someone is appointed to a job (c) job; **staff appointment** = job on the staff; **computer appointments vacant** = list (in a newspaper) of jobs which are available in the computer industry

approve *verb* (a) to approve of = to think something is good; the chairman **approves of the new company letter heading**; the sales staff do not **approve of interference from the accounts division** (b) to agree to something; to **approve the terms of a contract**; the software has to be **approved by the board**; an **approved modem** should carry a label with a green circle and the words "Approved by"

◇ **approval** *noun* (a) agreement that something can be used; a **BABT approval** is needed for modems; **certificate of approval** = document showing that an item has been approved officially (b) **on approval** = sale where the buyer only pays for goods if they are satisfactory; to buy a photocopier on approval

NOTE: no plural

approximate *adjective* not exact, but almost correct; we have made an approximate calculation of the time needed for keyboarding

◇ **approximately** *adverb* almost correctly; processing time is approximately 10% lower than during the previous quarter

◇ **approximating** *adjective* which is nearly correct; using approximating A to D

◇ **approximation** *noun* rough calculation; approximation of keyboarding time; the final figure is only an approximation; approximation error = error caused by rounding off a real number

Arabic *adjective* Arabic numbers or figures = figures such as 1, 2, 3, 4, etc. (as opposed to the Roman numerals I, II, III, IV, etc.); the page numbers are written in Arabic figures

arcade game *noun* computer game played on a machine in a public place

archetype *noun* document or book that illustrates the styles of a particular time and subject

architecture *noun* layout and interconnection of a computer's internal hardware and the logical relationships between CPU, memory and I/O devices; onion skin architecture = design of a computer system in layers, according to function or priority; the onion skin architecture of this computer is made up of a kernel at the centre, an operating system, a low-level language and then the user's programs

archive 1 *noun* storage of data over a long period; **archive file** = file containing data which is out of date, but which is kept for future reference **2 verb** to put data in storage; **archived copy** = copy kept in storage

◇ **archival quality** *noun* length of time that a copy can be stored before it becomes illegible

QUOTE on-line archiving is also used to keep down the interruption needed for archiving to seconds

Computer News

area *noun* (a) measurement of the space taken up by something (calculated by multiplying the length by the width); the area of this office is 3,400 square feet; we are looking for a shop with a sales area of about 100 square metres; type area = space on a page which is taken up by printed characters; **area composition** = organizing and setting up pages before photocomposition (b) section of memory or code that is reserved for a certain purpose; **area search** = search for specific data within a certain section of memory or files (c) part of a country or town; his sales area is the centre of the town; he finds it difficult to cover all his area in a week; **area code** = part of a telephone number that allows the exchange to identify the part of the country required; the area code for London is 01; **area exchange** = central point in a part of a country where telephone calls are directed to their correct destination inside the area or to another exchange

◇ **area manager** *noun* manager who deals with a certain part of the country

argue *verb* to discuss something about which you do not agree; they argued over or about the design of the cover; we spent hours arguing with the managing director about the layout of the new factory NOTE: you argue with someone about or over something

◇ **argument** *noun* (a) discussing something without agreeing; they got into an argument with the customs officials over the documents; he was sacked after an argument with the managing director (b) variable acted upon by an operator or function; see also OPERAND

arithmetic *noun* concerned with mathematical functions such as addition, subtraction, division and multiplication; **arithmetic capability** = ability of a device to perform mathematical functions; **arithmetic functions** = calculations carried out on numbers, such as addition, subtraction, multiplication, division; **arithmetic logic unit (ALU)** or **arithmetic unit** = hardware section of a CPU that performs all the mathematical and logical functions; **arithmetic operators** = symbol which indicates an arithmetic function (such as + for addition, x for multiplication); **arithmetic register** = memory location which stores operands; **arithmetic shift** = word or data moved one bit to the left or right inside a register, losing

the bit shifted off the end; *compare with* LOGICAL SHIFT

array *noun* ordered structure containing individually accessible elements referenced by numbers, used to store tables or sets of related data; **array bounds** = limits to the number of elements which can be stored in an array; **array element** = one individual piece of data within an array; **array processor** = computer that can act upon several arrays of data simultaneously, for very fast mathematical applications

arsenide *see* GALLIUM ARSENIDE

article *noun* (a) section of a newspaper or magazine; he wrote an article about the user group for the local newspaper (b) section of an agreement; see article 8 of the contract

artificial intelligence (AI) *noun* the design and device of computer programs that imitate human intelligence, providing basic reasoning and other human characteristics

artwork *noun* graphical work or images which are to be printed; the artwork has been sent for filming

NOTE: no plural

ASA American Standards Association; **ASA exposure index** = one standard method used to code the sensitivity of film

ascender *noun* part of a character that rises above the main line of printed characters (as the 'tail' of a 'b', 'd', etc)

ASCII - AMERICAN STANDARD CODE FOR INFORMATION INTERCHANGE code which represents alphanumeric characters in binary code □ **APPENDIX ASCII character** = character which is in the ASCII list of codes; **ASCII file** = stored file containing only ASCII coded character data; use a word processor or other program that generates a standard ASCII file; **ASCII keyboard** = keyboard which gives all the ASCII characters NOTE: when speaking say 'as-key'

ASIC - APPLICATION SPECIFIC INTEGRATED CIRCUITS specially designed ICs for one particular function or to special specifications

aspect *noun* way in which something appears; **aspect card** = card containing information on documents in an information retrieval system; **aspect ratio** =

ratio of the width to the height of a TV or cinema screen or of pixel shapes; **aspect system** = method of storing and indexing documents in a retrieval system

ASR - AUTOMATIC SEND/RECEIVE device or terminal that can transmit or receive information; *compare* KSR

COMMENT: an ASR terminal can input information via a keyboard or via a tape cassette or paper tape. It can receive information and store it in internal memory or on tape

assemble *verb* (a) to put a product together from various parts; the parts for the disk drive are made in Japan and assembled in France (b) to translate assembly code into machine code

◇ **assembler** *noun* assembly program or program which converts a program written in assembly language into machine code; **absolute assembler** = type of assembler designed to produce code which uses only absolute addresses; **cross-assembler** = assembler that produces machine-code code for one computer while running on another

◇ **assembly** *noun* (a) putting an item together from various parts; there are no assembly instructions to show you how to put the computer together; **assembly plant** = factory where units are put together from parts made in other factories (b) converting a program into machine code; **assembly code** = mnemonics which are used to represent machine code instructions in an assembler program; **assembly language** or **assembler language** = programming language used to code information which will then be converted to machine code; **assembly listing** = display of an assembly program ordered according to memory location; **assembly program** = number of assembly code instructions which perform a task; **assembly time** = (i) time taken by an assembler program to translate a program; (ii) period during which an assembler is converting a program from assembly language into machine code

assertion *noun* program statement of a fact or rule

assign *verb* (a) to give a computer or someone a job of work; he was assigned the job of checking the sales figures; two PCs have been assigned to outputting the labels (b) (i) to set a variable equal to a string of characters or numbers; (ii) to keep part of a computer system for use while a program is

running; **assigned frequency** = frequency reserved for one user or application

◇ **assignment** *noun* (a) transfer of a property or of a right; **assignment of a copyright** (b) particular job of work; he was appointed managing director with the assignment to improve the company's profits; the oil team is on an assignment in the North Sea (c) setting a variable equal to a string of characters or a value

◇ **assignor** *noun* person who assigns something to someone

assist *verb* to help; can you assist the stock controller in counting the stock? he assists me with my income tax returns NOTE: you assist someone in doing something or with something

◇ **assistance** *noun* help; **financial assistance** = help in the form of money NOTE: no plural

◇ **assistant** *noun* person who helps or an ordinary employee; **personal assistant** = secretary who also helps the boss in various ways; **shop assistant** = person who serves the customers in a shop; **assistant manager** = person who helps a manager

associate 1 *adjective* linked; **associate company** = company which is partly owned by another 2 *noun* person who works in the same business as someone; she is a business associate of mine

◇ **associational editing** *noun* way of editing a film or video so as to present together scenes which are similar to others

◇ **associative processor** *noun* processor that uses associative storage; **associative storage** or **content-addressable storage** = method of data retrieval that uses part of the data rather than an address to locate the data

astable multivibrator *noun* electronic current that repeatedly switches an output between two voltage levels

astigmatism *noun* optical lens disorder which prevents the light beams from converging properly

async (*informal*) = ASYNCHRONOUS

asynchronous *adjective* serial data or equipment which does not depend on being synchronized with another piece of equipment; **asynchronous access** = communications using handshaking to synchronize data transmission; **asynchronous communications interface adapter (ACIA)** = circuit that allows a computer to transmit and receive serial

data using asynchronous access; **asynchronous mode** = terminal linked to another piece of equipment in a way where the two need not be synchronized; **asynchronous port** = connection to a computer allowing asynchronous data access; since asynchronous ports are used no special hardware is required; **asynchronous transmission** = data transmission that uses handshaking signals rather than clock signals to synchronize data pulses

QUOTE each channel handles two forms of communication: asynchronous communication is mainly for transferring data between computers and peripheral devices, while character communication is for data transfer between computer

Electronics & Power

ATC = AUTHORIZATION TO COPY

COMMENT: some companies have introduced ATC schemes which allow users of certain software to make duplicates of the companies' programs for a fee

ATM = AUTOMATED TELLER MACHINE

atmosphere *noun* gas which surrounds the earth

◇ **atmospheric** *adjective* referring to the atmosphere; **atmospheric absorption** = energy loss of a radio signal due to atmospheric conditions causing dispersion of the signal; **atmospheric conditions** = state of the atmosphere (including clouds, pressures, etc.)

atom *noun* smallest particle of an element that has the same properties as the element

◇ **atomic** *adjective* referring to atoms; **atomic clock** = very accurate clock which uses changes in energy of atoms as a reference

attach *verb* to fasten or to link; I am attaching a copy of my previous letter; please find attached a copy of my letter of June 24th; the machine is attached to the floor so it cannot be moved; **attached processor** = separate microprocessor in a system that performs certain functions under the control of a central processor

◇ **attachment** *noun* device which is attached to a machine for a special purpose; there is a special single sheet feed attachment

attack *noun* start of a sound; **attack envelope** = shape of the initial section of a signal