

McGraw-Hill Dictionary of Electrical & Computer Engineering

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1 2 3 4 5 6 7 8 9 0 DOC/DOC 0 9 8 7 6 5 4

ISBN 0-07-144210-3



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This book was set in Helvetica Bold and Novarese Book by TechBooks, Fairfax, Virginia. It was printed and bound by RR Donnelley, The Lakeside Press.

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Library of Congress Cataloging-in-Publication Data

McGraw-Hill dictionary of electrical and computer engineering.

p. cm.

ISBN 0-07-144210-3

1. Computer engineering—Dictionaries. 2. Electric engineering—Dictionaries.

TK7885.A2M37 2004

004'.03—dc22

2004049888

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blind spot [ENCL] An area on a filter screen where no filtering occurs. Also known as dead area. { 'blɪnd,spɒt }

blind zone [COMMUN] Area from which echoes cannot be received; generally, an area shielded from the transmitter by some natural obstruction and therefore from which there can be no return. { 'blɪnd,zɒn }

B line Sæ index register. { 'bi,lɪn }

blinking [COMMUN] Method of providing information in pulse systems by modifying the signal at its source so that signal presentation on the display scope alternately appears and disappears; in loran, this indicates that a station is malfunctioning. [ELECTR] Electronic-attack technique employed by two aircraft separated by a short distance and not resolved in azimuth so as to appear as one target to a tracking radar; the two aircraft alternately spot-illuminate, causing the radar system to oscillate from one place to another, greatly degrading the fire-control accuracy. [NAV] Regular shifting right and left or alternate appearance and disappearance of a loran signal to indicate that the signals of a pair of stations are out of synchronization. { 'blɪp-kiŋ }

blip [ELECTR] The display of a received pulse on the screen of a cathode-ray tube. Also known as pip. { 'blɪp }

blip-scan ratio [ELECTR] The ratio of the number of times a target is detected (a contact generated, or a display clearly evident) to the number of times of opportunities to do so provided by the radar routine; provides a rough estimate of the probability of detection occurring during the detection process. { 'blɪp,skan'reɪʃəʊ }

bloatware Sæ fatware. { 'blɒt,wer }

BLOB Sæ binary large object. { 'blɒb }

block [COMMUN] An 8-by-8 array of pel values or discrete cosine transform coefficients representing luminance or chrominance information. [COMPUT SCI] A group of information units (such as records, words, characters, or digits) that are transported or considered as a single unit by virtue of their being stored in successive storage locations; for example, a group of logical records constituting a physical record. { 'blɒk }

block body [COMPUT SCI] A list of statements that follows the block head in a computer program with block structure. { 'blɒk,bɒdi }

block chaining Sæ chained block encryption. { 'blɒk,ʃeɪn-ɪŋ }

block check character [COMMUN] A character that is added to a block of data to check its accuracy, and consists of parity bits each of which is set by observing a specified set of bits in the block. { 'blɒk,ʃek,ʃk-ɪktər }

block cipher [COMMUN] A cipher that transforms a string of input bits of fixed length into a string of output bits of fixed length. { 'blɒk,ɪsɪfər }

block code [COMMUN] An error-correcting code generated by an encoder that produces a fixed-length code word with each incoming fixed-length message block. { 'blɒk,kɒd }

block data [COMPUT SCI] A statement in FORTRAN which declares that the program following is a data specification subprogram. { 'blɒk,dæd-ə }

block diagram [ENCL] A diagram in which the essential units of any system are drawn in the form of rectangles or blocks and their relation to each other is indicated by appropriate connecting lines. { 'blɒk,dɪ-ə,græm }

blocked F-format data set Sæ FB data set. { 'blɒk,ɛf,foɹmat'dæd-ə,seɪt }

blocked impedance [ELEC] The impedance at the input of a transducer when the impedance of the output system is made infinite, as by blocking or clamping the mechanical system. { 'blɒkɪm'pið-əns }

blocked impurity band detector [ELECTR] A detector of long-wavelength infrared radiation consisting of a heavily doped extrinsic photoconductor on which an undoped intrinsic layer is grown epitaxially to prevent dark current from flowing in the impurity band. { 'blɒkɪm'pjʊr-əd-ē'band,dɪ,tektər }

blocked process [COMPUT SCI] A program that is running on a computer but is temporarily prevented from making progress because it requires some resource (such as a printer or user input) that is not immediately available. { 'blɒkɪt'prɒses }

blocked resistance [ENG ACQUIS] Resistance of an audio-frequency transducer when its moving elements are blocked so they cannot move; represents the resistance due only to electrical losses. { 'blɒkɪt'rɪzɪstəns }

block encryption [COMMUN] The use of a block cipher, usually employing the data encryption standard (DES), in which each 64-bit block of data is enciphered or deciphered separately, and every bit in a given output block depends on every bit in its respective input block and on every bit in the key, but on no other bits. Also known as electronic codebook mode (ECB). { 'blɒk en'krɪp-shən }

block error rate [COMMUN] A ratio of the number of data blocks received with at least one uncorrectable bit to the total number of blocks received. Abbreviated BLER. { 'blɒk'er-ər,ræt }

blockette [COMPUT SCI] A subdivision of a group of consecutive machine words transferred as a unit, particularly with reference to input and output. { 'blɒkɪt }

block head [COMPUT SCI] A list of declarations at the beginning of a computer program with block structure. { 'blɒk,hed }

block identifier [COMPUT SCI] A means of identifying an area of storage in FORTRAN so that this area may be shared by a program and its subprograms. { 'blɒk'ɪden-tɪfɪ-ər }

block ignore character [COMPUT SCI] A character associated with a block which indicates the presence of errors in the block. { 'blɒk'ɪg'nɔr,ʃk-ɪktər }

blocking [COMPUT SCI] Combining two or more computer records into one block. [ELECTR] 1. Applying a high negative bias to the grid of

an electron tube to reduce its anode current to zero. 2. Overloading a receiver by an unwanted signal so that the automatic gain control reduces the response to a desired signal. 3. Distortion occurring in a resistance-capacitance-coupled electron tube amplifier stage when grid current flows in the following tube. { 'blɒk-ɪŋ }

blocking capacitor Sæ coupling capacitor. { 'blɒk-ɪŋ,kə'pəs-əd-ər }

blocking factor [COMPUT SCI] The largest possible number of records of a given size that can be contained within a single block. { 'blɒk-ɪŋ,fæktər }

blocking layer Sæ depletion layer. { 'blɒk-ɪŋ,lā-ər }

blocking oscillator [ELECTR] A relaxation oscillator that generates a short-time-duration pulse by using a single transistor or electron tube and associated circuitry. Also known as squegger; squegging oscillator. { 'blɒk-ɪŋ'əs-ə,lād-ər }

blocking oscillator driver [ELECTR] Circuit which develops a square pulse used to drive the modulator tubes, and which usually contains a line-controlled blocking oscillator that shapes the pulse into the square wave. { 'blɒk-ɪŋ'əs-ə,lād-ər'drɪvər }

block input [COMPUT SCI] 1. A block of computer words considered as a unit and intended or destined to be transferred from an internal storage medium to an external destination. 2. Sæ output area. { 'blɒk'ɪn,pʊt }

block length [COMPUT SCI] The total number of records, words, or characters contained in one block. { 'blɒk,leŋkθ }

block loading [COMPUT SCI] A program loading technique in which the control sections of a program or program segment are loaded into contiguous positions in main memory. { 'blɒk,lɒd-ɪŋ }

block mark [COMPUT SCI] A special character that indicates the end of a block. { 'blɒk,mɑrk }

block move Sæ cut and paste. { 'blɒk,mʊv }

block multiplexor channel [COMPUT SCI] A transmission channel in a computer system that can simultaneously transmit blocks of data from several high-speed input/output devices by interleaving the data. { 'blɒk'mʌltɪ-pleks-ər,ʃan-əl }

block operation [COMPUT SCI] An editing or formatting procedure that is carried out on a selected block of text in a word-processing document. { 'blɒk,əp-ər-ə-ʃən }

block parity [COMMUN] An error-checking technique involving the comparison of a transmitted block check character with one calculated by the receiving device. { 'blɒk'pær-əd-ē }

block protection [COMPUT SCI] An instruction in a word-processing or page-layout program that prevents a soft page break from being inserted in a specified block of text, ensuring against a bad page break. { 'blɒk'prə'tek-shən }

block protector [ELECTR] Rectangular piece of carbon, bakelite with a metal insert, or porcelain with a carbon insert which, in combination with

each other, make one element of a protector; they form a gap which will break down and provide a path to ground for excessive voltages. { 'blɒkprə'tektər }

block signal system [CONT SYS] An automatic railroad traffic control system in which the track is sectionalized into electrical circuits to detect the presence of trains, engines, or cars. { 'blɒk'sɪg-nəl,sɪs-təm }

block standby [COMPUT SCI] Locations always set aside in storage for communication with buffers in order to make more efficient use of such buffers. { 'blɒk'stænd-bɪ }

block structure [COMPUT SCI] In computer programming, a conceptual tool used to group sequences of statements into single compound statements and to allow the programmer explicit control over the scope of the program variables. { 'blɒk,strʌkt-ʃər }

block transfer [COMPUT SCI] The movement of data in blocks instead of by individual records. { 'blɒk'trans-fər }

blooming [ELECTR] 1. Defocusing of television picture areas where excessive brightness results in enlargement of spot size and halation of the fluorescent screen. 2. An increase in radar display spot size due to a particularly strong signal exciting the phosphorus material. 3. The wide spatial dispersion of chaff after being dispensed in small bundles. { 'blʊm-ɪŋ }

blow [COMPUT SCI] To write data or code into a programmable read-only memory chip by melting the fuse links corresponding to bits that are to be zero. { 'blɒ }

blow-lifting gripper [CONT SYS] A robot component that uses compressed air to lift objects. { 'blɒ,lɪft-ɪŋ,gɹɪp-ər }

blown-fuse indicator [ELECTR] A neon warning light connected across a fuse so that it lights when the fuse is blown. { 'blɒn'fju:z'ɪn-də,kæd-ər }

blowout [ELECTR] The melting of an electric fuse because of excessive current. { 'blɒ,aut }

blow up Sæ abend. { 'blɒ,ʌp }

blue glow [ELECTR] A glow normally seen in electron tubes containing mercury vapor, due to ionization of the mercury molecules. { 'blʊ,glə }

Bluetooth [COMMUN] A technical specification for the wireless connection over short distances of digital devices, such as cellular telephones, portable computers, and computer peripheral equipment, utilizing the unlicensed 2.4-GHz radio frequency spectrum. { 'blʊ,tʊ:θ }

BNC connector [ELECTR] A small device for connecting coaxial cables, used frequently in low-power, radio-frequency and test applications. Abbreviation for bayonet Neil-Concelman connector. { 'beɪn'sɛkənektər }

BNF Sæ Backus-Naur form.

Board of Trade unit Sæ kilowatt-hour. { 'bɔrd,əv'treɪd'yʊ-nɪt }

bobbing [ELECTR] Fluctuation of the strength of a radar echo and its display, due to alternate constructive and destructive interference of the

counter/frequency meter [ENGL] An instrument that contains a frequency standard and can be used to measure the number of events or the number of cycles of a periodic quantity that occurs in a specified time, or the time between two events. { 'kaunt-ər 'frē-kwən-sē ,mēd-ər }

countermeasures set [ELECTR] A complete electronic set specifically designed to provide facilities for intercepting and analyzing electromagnetic energy propagated by transmitter and to provide a source of radio-frequency signals which deprive the enemy of effective use of his electronic equipment. { 'kaunt-ər ,mez-əz 'set }

counterpoise [ELEC] A system of wires or other conductors that is elevated above and insulated from the ground to form a lower system of conductors for an antenna. Also known as antenna counterpoise. { 'kaunt-ər ,pōiz }

counter tube [ELECTR] An electron tube having one signal-input electrode and 10 or more output electrodes, with each input pulse serving to transfer conduction sequentially to the next output electrode; beam-switching tubes and cold-cathode counter tubes are examples. { 'kaunt-ər ,tüb }

counter voltage [ELEC] The reverse voltage that appears across an inductor when current through the inductor is shut off. { 'kaunt-ər ,vōl-tij }

counting circuit [ELECTR] A circuit that counts pulses by frequency-dividing techniques, by charging a capacitor in such a way as to produce a voltage proportional to the pulse count, or by other means. Also known as counter circuit. { 'kaunt-ij ,sə-kət }

counting-down circuit See frequency divider. { 'kaunt-ij ,daun ,sə-kət }

counting rate-voltage characteristic See plateau characteristic. { 'kaunt-ij ,rāt 'vōl-tij ,kə-ik-tə 'ris-tik }

couple [ELECTR] To connect two circuits so signals are transferred from one to the other. [ELECTR] Two metals placed in contact, as in a thermocouple. { 'kəp-əl }

coupled antenna [ELECTROMAG] An antenna electromagnetically coupled to another. { 'kəp-əld an'ten-ə }

coupled circuits [ELEC] Two or more electric circuits so arranged that energy can transfer electrically or magnetically from one to another. { 'kəp-əld 'sə-kəts }

coupled systems [COMPUT SCI] Computer systems that share equipment and can exchange information. { 'kəp-əld 'sis-təmz }

coupled transistors [ELECTR] Transistors connected in series by transformers or resistance-capacitance networks, in much the same manner as electron tubes. { 'kəp-əld tran'zis-tərz }

coupler [ELECTR] A component used to transfer energy from one circuit to another. [ELECTROMAG] 1. A passage which joins two cavities or wave-

guides, allowing them to exchange energy. 2. A passage which joins the ends of two waveguides, whose cross section changes continuously from that of one to that of the other. { 'kəp-lər }

coupling [ELEC] 1. A mutual relation between two circuits that permits energy transfer from one to another, through a wire, resistor, transformer, capacitor, or other device. 2. A hardware device used to make a temporary connection between two wires. { 'kəp-lɪŋ }

coupling aperture [ELECTROMAG] An aperture in the wall of a waveguide or cavity resonator, designed to transfer energy to or from an external circuit. Also known as coupling hole; coupling slot. { 'kəp-lɪŋ ,əp-ə-čər }

coupling capacitor [ELECTR] A capacitor used to block the flow of direct current while allowing alternating or signal current to pass; widely used for joining two circuits or stages. Also known as blocking capacitor; stopping capacitor. { 'kəp-lɪŋ kə'pas-əd-ər }

coupling coefficient [ELECTR] The ratio of the maximum change in energy of an electron traversing an interaction space to the product of the peak alternating gap voltage and the electronic charge. { 'kəp-lɪŋ ,kō-'fɪʃ-ənt }

coupling hole See coupling aperture. { 'kəp-lɪŋ ,hōl }

coupling loop [ELECTROMAG] A conducting loop projecting into a waveguide or cavity resonator, designed to transfer energy to or from an external circuit. { 'kəp-lɪŋ ,lup }

coupling probe [ELECTROMAG] A probe projecting into a waveguide or cavity resonator, designed to transfer energy to or from an external circuit. { 'kəp-lɪŋ ,prōb }

coupling slot See coupling aperture. { 'kəp-lɪŋ ,slɒt }

course programmer [COMT SVS] An item which initiates and processes signals in a manner to establish a vehicle in which it is installed along one or more projected courses. { 'kōrs 'prō-gram-ər }

courseware [COMPUT SCI] Computer programs designed to be used in computer-aided instruction or computer-managed instruction. { 'kōrs ,wer }

coverage [ELECTROMAG] A spatial account of the regions of useful sensitivity in a radar's surroundings that can be affected, for example, by multipath propagation or by obscuring terrain. { 'kəv-ərɪʃ }

COZI [COMMON] An ionospheric sounding system for determining propagation characteristics of the ionosphere at various angles at any instant; used to determine how well long-distance, high-frequency broadcasts are reaching their intended destinations. Derived from communications zone indicator. { 'kōzi }

CPA See color-phase alternation.

CPE See computer performance evaluation.

CPM See critical path method.

C power supply [ELECTR] A device connected in the circuit between the cathode and grid of a vacuum tube to apply grid bias. { 'sē 'paʊr sa-pli }

CPU See central processing unit.

CPU-bound program [COMPUT SCI] A computer program that involves a large amount of calculation and internal rearrangement of data, so that the speed of execution depends on the speed of the central processing unit (CPU) and memory. Also known as cycle-bound program; process-bound program. { 'sē ,pe'vɪ baʊnd ,prō-gram }

CPU fan [COMPUT SCI] A fan mounted directly over the integrated-circuit chip containing a computer's central processing unit to prevent overheating. { 'sē ,pe'vɪ 'fan }

crash [COMPUT SCI] 1. A breakdown, hardware failure, or software problem that renders a computer system inoperative. 2. Seeabend. { 'kræʃ }

crash locator beacon [COMMON] An automatic radio beacon carried in aircraft to guide searching forces in the event of a crash. { 'kræʃ 'lō ,kəd-ər ,bē-kan }

crater lamp [ELECTR] A glow-discharge tube used as a point source of light whose brightness is proportional to the signal current sent through the tube; used for photographic recording of facsimile signals. { 'krəd-ər ,læmp }

CRC See cyclic redundancy check.

creation operator [COMPUT SCI] The part of a data structure which allows components to be created. { 'kre-ə-'ʃən ,əp-ə-'rād-ər }

credence [ELECTROMAG] In radar, a measure of confidence in a target detection, generally proportional to target return amplitude. { 'kred-əns }

creep [ELECTR] A slow change in a characteristic with time or usage. { 'krep }

creepage [ELECTR] The conduction of electricity across the surface of a dielectric. { 'kre-'pij }

crest value See peak value. { 'krest ,væl-yü }

crest voltmeter [ELECTR] A voltmeter reading the peak value of the voltage applied to its terminals. { 'krest 'vōlt ,mēd-ər }

crimp contact [ELECTR] A contact whose back portion is a hollow cylinder that will accept a wire; after a bare wire is inserted, a swaging tool is applied to crimp the contact metal firmly against the wire. Also known as solderless contact. { 'krɪmp ,kæŋ ,tækt }

crippled leap-frog test [COMPUT SCI] A variation of the leap-frog test, modified so the computer tests are repeated from a single set of locations. { 'krɪp-əld 'lep 'fræg ,test }

crippled mode [COMPUT SCI] The operation of a computer at reduced capacity when certain parts are not working. { 'krɪp-əld ,mōd }

critical anode voltage [ELECTR] The anode voltage at which breakdown occurs in a gas tube. { 'krɪt-ə-kəl 'a,nōd ,vōl-tij }

critical area See picture element. { 'krɪt-ə-kəl 'er-ə }

critical coupling [ELEC] The degree of coupling that provides maximum transfer of signal energy from one radio-frequency resonant circuit to another when both are tuned to the same

frequency. Also known as optimum coupling. { 'krɪt-ə-kəl 'kəp-lɪŋ }

critical field [ELECTR] The smallest theoretical value of steady magnetic flux density that would prevent an electron emitted from the cathode of a magnetron at zero velocity from reaching the anode. Also known as cutoff field. { 'krɪt-ə-kəl 'fild }

critical frequency [ELECTR] See cutoff frequency. [ELECTROMAG] The limiting frequency below which a radio wave will be reflected by an ionospheric layer at vertical incidence at a given time. { 'krɪt-ə-kəl 'frē-kwən-sē }

critical grid current [ELECTR] Instantaneous value of grid current when the anode current starts to flow in a gas-filled vacuum tube. { 'krɪt-ə-kəl 'grɪd ,kə-'rɪnt }

critical grid voltage [ELECTR] The grid voltage at which anode current starts to flow in a gas tube. Also known as firing point. { 'krɪt-ə-kəl 'grɪd ,vōl-tij }

critical path method [SYS ENGL] A systematic procedure for detailed project planning and control. Abbreviated CPM. { 'krɪt-ə-kəl 'pæθ ,meth-əd }

critical potential [ELEC] A potential which results in sudden change in magnitude of the current. { 'krɪt-ə-kəl 'pɒtən-ʃəl }

critical voltage [ELECTR] The highest theoretical value of steady anode voltage, at a given steady magnetic flux density, at which electrons emitted from the cathode of a magnetron at zero velocity would fail to reach the anode. Also known as cutoff voltage. { 'krɪt-ə-kəl 'vōl-tij }

critical wavelength [COMMON] The free-space wavelength corresponding to the critical frequency. { 'krɪt-ə-kəl 'wæv ,lɛŋkθ }

CR law [ELEC] A law which states that when a constant electromotive force is applied to a circuit consisting of a resistor and capacitor connected in series, the time taken for the potential on the plates of the capacitor to rise to any given fraction of its final value depends only on the product of capacitance and resistance. { 'sē 'lɑː ,lɔː }

CRO See cathode-ray oscilloscope.

crocodile [ELEC] A unit of potential difference or electromotive force, equal to 10⁶ volts; used informally at some nuclear physics laboratories. { 'krɒk-ə-dɪl }

crocodile clip See alligator clip. { 'krɒk-ə-dɪl ,klɪp }

CROM See control and read-only memory. { 'sē ,rɒm }

Crookes dark space See cathode dark space. { 'krʊks 'dɑːk ,spes }

Crookes tube [ELECTR] An early form of low-pressure discharge tube whose cathode was a flat aluminum disk at one end of the tube, and whose anode was a wire at one side of the tube, outside the electron stream; used to study cathode rays. { 'krʊks ,tīb }

cross antenna [ELECTROMAG] An array of two or more horizontal antennas connected to a single feed line and arranged in the pattern of a cross. { 'krɒs an'ten-ə }