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computerized axial tomography scanner Same as **CT scanner**. Its acronym is **CAT scanner**.

computerized numerical control Same as **computer numerical control**.

computerized tomography Same as **computed tomography**. Its abbreviation is **CT**.

computerized tomography scan Same as **computed tomography**. Its abbreviation is **CT scan**.

computerized tomography scanner Same as **CT scanner**.

computing machine Same as **computer**.

computing platform A specific hardware and software configuration, including the operating system. When a program or hardware device will only function properly with a particular platform, it is called **platform-dependent**, while those which can work across multiple platforms are called **platform-independent**. Also called **computer platform**, or **platform**.

computing power A measure of the processing power of a computer. May be quantified, for instance, in terms of the floating-point operations per second, or FLOPS, it can perform. For example, a given supercomputer may be able to exceed a speed of 35 teraflops. Also called **computer power**.

comsat Abbreviation of **communications satellite**.

COMSEC Abbreviation of **communications security**.

concatenate To link together, as in a chain. May apply, for instance, to the linking of transmission channels end-to-end, or to connecting pieces of optical-fiber. Also called **catenate**.

concatenation A linking together, as in a chain. Also called **catenation**.

concave Having a surface, side, or boundary that curves inward, such as the inner surface of a sphere. This contrasts with **convex**, which has a surface or boundary that curves outward.

concave lens A lens which is thinner at the center than the edges. Such a lens causes parallel rays of light passing through it to bend away from one another. This contrasts with a **convex lens**, which is thicker at the center than the edges

concavo-convex **1.** Concave on one side or surface and convex on the other. Also called **convexo-concave (1)**. **2.** Having a curvature greater on the concave side than on the convex side.

concavo-convex lens **1.** A lens with one concave surface and one convex surface. Also called **convexo-concave lens (1)**. **2.** A lens with one concave surface and one convex surface, and whose concave surface has a greater curvature.

concentration cell A cell in which the electrodes are each immersed in a solution with a different concentration of the same salt of a metal. The electromotive force produced will depend on the metal and the concentrations of the solutions.

concentrator **1.** A device, such as a multiplexer, which combines multiple communications channels or signals. **2.** A device which provides a communications path that links many lower-speed channels to one or more higher-speed channels. A benefit of this arrangement is that it accommodates multiple-user connectivity with a reduced amount of circuit use. **3.** A device which utilizes optical elements to increase the amount of light, especially sunlight, incident upon a photovoltaic cell or panel.

concentric cable Same as **coaxial cable**.

concentric line Same as **coaxial cable**.

concentric windings Two or more windings, in which the core is surrounded by one winding, which is enclosed by the next winding, and so on. Used, for instance, in a transformer.

conceptual schema A detailed model of the overall structure of a database. This model does not factor in considerations such as how the information is stored or accessed. Also called **logical schema**.

concrete class In object-oriented programming, a class within which objects may be created. This contrasts with an **abstract class**, in which no objects may be created.

concurrency **1.** The simultaneous, or nearly simultaneous, accessing of the CPU by multiple computer operations. **2.** The ability of a computer to properly handle multiple tasks. **3.** The proper handling of multiple tasks by a computer.

concurrent **1.** Occurring or functioning at the same time, or in a parallel manner. **2.** Pertaining to **concurrent execution**.

concurrent execution Also called **concurrent operation**, **concurrent processing**, or **parallel execution**. **1.** The simultaneous execution of multiple computer operations by the CPU. Since microprocessors can work so quickly, it seems simultaneous, even though each operation is usually executed in sequence. **2.** The simultaneous execution of multiple computer operations by multiple CPUs. Such processors are usually linked by high-speed channels. Also called **multiprocessing**.

concurrent operation Same as **concurrent execution**.

concurrent processing Same as **concurrent execution**.

concurrent program execution The simultaneous running of multiple computer programs.

condenser **1.** A device which changes a gas into a liquid or a solid. **2.** A system of mirrors and/or lenses which collects light from a source, then directs it onto a surface. Used, for instance, in a microscope. **3.** A nearly obsolete term for **capacitor**.

condenser antenna Same as **capacitor antenna**.

condenser loudspeaker Same as **capacitor speaker**.

condenser microphone Same as **capacitor microphone**.

condenser speaker Same as **capacitor speaker**.

condition code A series of bits that identify a given status, which depends on previous operations. May be used, for instance, to communicate the current state of a device.

conditional Subject to a given circumstance or state. For instance, a conditional branch.

conditional branch In a computer program, an instruction that switches the CPU to another location in memory when a given condition is met. For example, if the result of a calculation has a specific result. Also called **conditional jump**, or **conditional transfer**.

conditional jump Same as **conditional branch**.

conditional stability For a given component, circuit, device, piece of equipment, or system, stability which is obtained only when a given parameter, such as the amplitude of its input signal, is within specified limits. Also called **limited stability**.

conditional statement In a computer program, a statement that is executed when a given condition is met.

conditional transfer Same as **conditional branch**.

conditioned circuit A telephone circuit which is modified so as to carry a digital data signal, instead of an analog voice signal. Such circuits feature noise-filtering components.

conditioning **1.** The modifying of devices or equipment, so as to make them compatible with other devices or equipment. Used, for instance, to match certain performance parameters. **2.** In telephony, the modifying of twisted pair wire so it can carry a digital data signal. Also called **line conditioning (1)**. **3.** The modification of a communications line so as to improve performance. Also called **line conditioning (2)**.

conductance A measure of the ability of a component, circuit, device, or system to conduct electricity. In a circuit with no reactance it is the reciprocal of resistance. It is the real part

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of admittance, its symbol is **G**, and is expressed in siemens. Also known as **electrical conductance**.

conducted interference Interference, such as RF noise, which is propagated by means of communications or power lines.

conducting direction For an electrical or electronic component or device, the direction in which there is lesser resistance to the flow of current. Used, for instance, in the context of semiconductors. This contrasts with **inverse direction**, where the converse is true. Also called **forward direction**.

conduction **1.** The transmission of energy through a medium without the medium itself moving as a whole. Electrical, acoustic, or heat energy may be propagated in this manner. For instance, the transmission of electrical energy through a metal entailing the migration of electrons through the conductor. This contrasts with **convection**, where the medium itself is moved, and with **radiation**, where waves or particles are emitted. **2.** The flow of electrical charge through a medium. This may entail, for instance the movement of electrons through a metal conductor, or the migration of ions in a gas. Also called **electrical conduction**.

conduction band A partially filled energy band in which electrons can move freely under the influence of an electric field, thus producing a net transport of electric charge.

conduction current Electric current which flows through a body by means of electrons present in a **conduction band**.

conduction electrons Electrons present in a **conduction band**. Also called **valence electrons**, **outer-shell electrons**, or **peripheral electrons**.

conduction field An energy field surrounding a conductor through which an electric current is flowing.

conductive Pertaining to, or capable of **conduction**.

conductive coating A coating which serves to facilitate conduction. For instance, an antistatic coating applied on a TV screen to prevent dust from adhering to the surface.

conductive coupling A direct connection between circuits, utilizing a wire, resistor, or another means of physical contact that passes both AC and DC. Also called **direct coupling**.

conductivity The ease with which an electric current can flow through a body. It is the reciprocal of **resistivity**. Its symbol is σ, and it is expressed in siemens per meter. Also called **electrical conductivity**, or **specific conductance**.

conductivity meter A device which measures and indicates **conductivity**.

conductivity modulation In a semiconductor, a variation in conductivity through the variation of charge-carrier concentration.

conductivity-modulation transistor A transistor whose active properties are achieved through **conductivity modulation**.

conductor **1.** A medium suitable for the conduction of electrical, acoustic, heat, or other form of energy. **2.** A medium which allows electric current to flow easily. Such a medium may be a metal wire, a dissolved electrolyte, or an ionized gas, among others. Among the elements, silver, copper, and gold are the best electric conductors. Also known as **electric conductor**.

conductor skin effect The tendency of AC to flow near the surface of a conductor. This effect becomes more pronounced as frequency rises, so losses due to resistance become greater with frequency increases. A conductor made from many separately-insulated wire strands which are woven together or braided in a manner that each strand regularly assumes each of the possible positions within the overall cross-section of the conductor minimizes this effect, providing for lower losses at radio frequencies. Also called **skin effect**.

conduit A pipe or tube through which cables or wires are run. A conduit may be made of metal, plastic, or another material which affords protection and/or shielding.

cone **1.** A geometric shape with a circular or other closed-plane base, whose sides taper off along a diagonal line to a common vertex. **2.** Anything resembling a **cone** (1). **3.** The cone-shaped diaphragm of a **cone speaker**.

cone antenna A wideband antenna whose radiating element is in the shape of a **cone** (1). Also called **conical antenna**.

cone loudspeaker Same as **cone speaker**.

cone of protection A cone-shaped zone below a lightning rod, which provides a region with a highly reduced probability of a lightning strike. This cone extends 45° from the tip of the rod, which is the vertex of the cone. Such a cone may be used to protect stationary or moving objects.

cone of silence A cone-shaped zone above a radio beacon transmitter, where the intensity of the signal is greatly reduced. This zone is in the form of an inverted cone extending from the antenna, which is the vertex of said cone.

cone resonance Resonance of a **cone speaker**. Such resonance occurs in specific frequency intervals, and produces excessive radiation from the cone. The proper design of the speaker and its enclosure help minimize this undesired vibration.

cone-resonance frequency The frequency at which **cone resonance** is greatest.

cone speaker A speaker utilizing one or more cone-shaped vibrating elements. Such cones may be made of paper, fiber, plastic, metal, or another material. The larger a cone, the better its output of lower frequencies, and the smaller a cone, the better its output of higher frequencies. Frequently, multiple cones are used in such speakers, for a more balanced reproduction of sound. Also called **cone loudspeaker**.

conference call A telephone call in which three or more separate lines are connected at once.

conferencing The holding or participating in a meeting utilizing computer and/or telecommunications technology. For instance, teleconferencing, videoconferencing, or data conferencing. Such conferencing usually includes participants in different locations.

confidence coefficient Same as **confidence level**.

confidence factor Same as **confidence level**.

confidence interval An interval or range of values within which the theoretical probability of an event occurring may be specified. For instance, the probability of a failure occurring within a given time period. The wider the interval, the greater the confidence that the event will occur.

confidence level The probability that a **confidence interval** will contain a given event. May be expressed, for instance, as a percentage. Also called **confidence coefficient**, or **confidence factor**.

confidence limits The upper and lower limits of a **confidence interval**.

confidentiality, integrity, and availability For a given entity, such as a business, procedures implemented to help insure that information is shared only with the intended individuals or entities, that the data transmitted, received, processed, or otherwise handled is complete and accurate, and that the pertinent systems and means are available when needed for delivery, reception, processing, storage and the like.

config.sys Same as **CONFIG.SYS**.

CONFIG.SYS A configuration file in some operating systems.

configuration The arrangement of the components of a circuit, device, piece of equipment, system, or network. For instance, the hardware and/or software setup a computer

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conservation of mass A law which states that mass, or matter, cannot be cannot be created nor destroyed in an isolated system. For instance, the mass remains constant when a substance changes form a solid to a gas in an isolated system. This law does not always hold true when dealing with subatomic particles. Also called **conservation of matter, law of mass conservation**, or **mass conservation**.

conservation of matter Same as **conservation of mass**.

console **1.** A control panel for electronic equipment, such as that at a TV station or radar station. Also known as **control desk**. **2.** A terminal utilized to control a computer and monitor its status. Also called **master console**. **3.** Same as **computer terminal (1)**. **4.** A display screen which presents the output of a computer. **5.** A cabinet, that houses a device such as a radio or TV, which is designed to stand on the floor.

console switch A switch in a **console (2)** which allows a user to control a computer while it executes instructions.

console terminal Same as **computer terminal (1)**.

constant Its abbreviation is **K**. **1.** A quantity, value, item, or state which remains the same during a given process. For instance, a fixed value in a computer program, or an attenuation constant. **2.** A value, quantity, item, or state which remains the same always. For instance, the rest mass of an electron.

constant-amplitude recording Sound recording in which all the frequencies of equal intensity are recorded with equal amplitude. In this manner, the recorded amplitude is independent of the frequency.

constant angular velocity In magnetic and optical storage, the rotating of a disk in a drive at a steady rate, regardless of what area of the disk is being accessed. Since the tracks on the disk are longer as the outer edge is approached, more information is available there. This contrasts with **constant linear velocity**, in which the disk rotates at a variable rate. Its abbreviation is **CAV**.

constant bit rate An ATM minimum continuous bit rate that is guaranteed to be maintained, for reliable time-sensitive transmissions, such as those including voice and video. Its abbreviation is **CBR**.

constant-conductance network A network having at least one input impedance which is a positive constant. Also called **constant-resistance network**.

constant current A current which is essentially constant, despite variations in variables such as load resistance, line voltage, or temperature, so long as they are within a prescribed range.

constant-current generator A generator whose output current is essentially constant, despite variations of the load resistance within a prescribed range.

constant-current modulation A system of amplitude modulation, in which the output circuits of the signal amplifier and the modulator are connected to a constant-current supply by means of a shared choke coil. Also called **choke-coupled modulation**, or **Heising modulation**.

constant-current power source Same as **constant-current source**.

constant-current power supply Same as **constant-current source**.

constant-current source A power supply whose output current is essentially constant, despite variations in variables such as load resistance, line voltage, and temperature, so long as they are within a prescribed range. Also called **constant-current supply, constant-current power supply, constant-current power source, current-regulated supply**, or **current-regulated power supply**.

constant-current supply Same as **constant-current source**.

constant-current transformer A transformer, which when supplied by an essentially constant voltage source, maintains an essentially constant current in its secondary circuit, despite variations of the load resistance within a prescribed range.

constant-k filter A filter whose product of the series and shunt element impedances is a constant that is independent of frequency.

constant-k network A ladder network whose product of the series and shunt element impedances is a constant that is independent of frequency.

constant linear velocity In magnetic and optical storage, the rotating of a disk in a drive at a varying rate, depending on the area of the disk which is being accessed. Since the tracks on the disk are longer as the outer edge is approached, the disk must be rotated more slowly when accessing there, to ensure a constant data read rate. This contrasts with **constant angular velocity**, in which the disk rotates at a steady rate. Its abbreviation is **CLV**.

constant-resistance network Same as **constant-conductance network**.

constant-speed motor A motor whose speed is essentially constant, despite variations of the load within a prescribed range.

constant voltage A voltage which is essentially constant, despite variations in variables such as load resistance, line voltage, or temperature, so long as they are within a prescribed range.

constant-voltage charge A battery charge in which the voltage at the terminals is essentially constant.

constant-voltage power supply Same as **constant-voltage source**.

constant-voltage source A power supply whose output voltage is essentially constant, despite variations in variables such as load resistance, line voltage, and temperature, so long as they are within a prescribed range. Also called **constant-voltage supply, constant-voltage power supply**, or **voltage-regulated power supply**.

constant-voltage supply Same as **constant-voltage source**.

constant-voltage transformer A transformer that delivers an essentially constant voltage when supplied with a primary voltage that is within a certain range.

constantan An alloy containing between 40 to 45% nickel, and between 55 to 60% copper. Used, for instance, in thermocouples and resistors.

constructive interference The interaction of two or more waves resulting an increase in amplitude. This contrasts with **destructive interference**, where there is a reduction in amplitude, or cancellation.

consumer appliance A powered device intended for home use, which is designed to help do work, perform tasks, or to assist in providing comfort or convenience. These usually use electrical energy, and include dryers, lamps, refrigerators, and microwave ovens. Precision electronics, such as high-fidelity audio components and computers are sometimes not included in this group.

consumer electronics Electronic products intended for purchase and use by consumers. Such products include TVs, computers, cellular phones, DVD players, high-fidelity audio components, and smart appliances. When referring specifically to products to be used in a home, also called **domestic electronics**.

contact **1.** The coming together, touching, union, or junction of surfaces or objects. **2.** The junction of two conductors, so that current may flow. Also called **electric contact (1)**. **3.** A part or device which serves to open or close an electric circuit. Such a part or device may or may not act with another part or device. For instance, a blade, metal strip, button,

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switch, or relay. Also called **electric contact** (2). **4.** The establishment of a communication. **5.** In radars, the initial detection of a scanned object.

contact arc An arc that forms between electric contacts when a circuit is opened.

contact arcing The formation of a **contact arc**.

contact area The surface area shared by electric contacts when a circuit is closed.

contact blade A flat moving conductor used as an electric contact.

contact bounce An undesired condition in which there is a spontaneous opening, or the intermittent opening or closing of contacts, when such contacts are moved to the open or closed position. Also called **bounce** (2).

contact button A button used as an electric contact.

contact chatter The continuous, rapid, and undesired opening and closing of electric contacts. May be caused, for instance, by contact bounce. Also called **chatter** (2).

contact clip A clip which grasps a **contact blade**, to close a circuit.

contact electromotive force Same as **contact emf**.

contact emf A potential difference that is developed between contacts that are made of two dissimilar materials. This potential difference may be a few tenths of a volt. Also known as **contact electromotive force, contact potential difference, contact potential**, or **Volta effect**.

contact erosion In electric contacts, the gradual loss of material due to sparks, arcs, and the such. The addition of cadmium to an alloy used in contacts may help reduce such erosion. Also called **electrical erosion**.

contact follow The additional distance that contacts travel together, after their initial contact. Also called **contact overtravel**.

contact force **1.** The force holding contacts together. **2.** The force a moving contact exerts on a stationary contact.

contact gap The maximum distance between contacts, when in the open position. Also called **contact separation**.

Contact Image Sensor A image sensor with limited resolution utilized in scanners which are smaller and less expensive than those utilizing CCDs. Its abbreviation is **CIS**.

contact material A material that can serve as an electric contact. Such materials may be metals such as copper, silver, gold, or palladium, or an alloy based on these or other suitable metals. Contact materials should have high thermal and electric conductivities, minimum sticking tendencies, and high resistance to corrosion, among other characteristics.

contact microphone A microphone, such as a throat microphone, which picks up vibrations by being in direct contact with the body producing them. Such microphones may be used, for instance, when extraneous noise is a problem.

contact noise A disturbance, due to fluctuating resistance, produced at the point where two metals or a metal and a semiconductor are joined.

contact overtravel Same as **contact follow**.

contact piston A piston, which as it slides, maintains contact with the inner walls of a waveguide at all times. Also called **contact plunger**.

contact plunger Same as **contact piston**.

contact potential Same as **contact emf**.

contact potential difference Same as **contact emf**.

contact pressure The pressure holding contacts together.

contact protection The use of a **contact protector**.

contact protector A component, device, or system utilized to suppress the arc that forms between electric contacts when a circuit is opened. A capacitor, for instance, may be used for this purpose.

contact rectifier A rectifier which utilizes one or more metal disks coated with a semiconductor layer. This layer may consist of selenium, copper oxide, or another suitable semiconductor. The rectification occurs as a result of the greater conductivity across the contact in one direction than the other. Also called **semiconductor rectifier (1), metallic-disk rectifier, dry rectifier**, or **dry-disk rectifier**.

contact resistance The resistance between two contacts when a circuit is closed. This resistance is very small, usually a fraction of an ohm.

contact sensor A device which detects objects through physical contact with them. These sensors may be used in robots, for example, to determine the location, identity, and orientation of parts to be assembled.

contact separation Same as **contact gap**.

contact spark A spark that forms between electric contacts when a circuit is opened.

contact sparking The formation of a **contact spark**.

contact wire **1.** A thin and flexible wire utilized to make electric contact. Used, for instance, to make electric contact on the surface of a semiconductor. **2.** A wire utilized to make electric contact.

contactless smart card A smart card, such as a proximity card, which does not have to come into contact with the device reading it.

contactless smart card reader A reader, such as a proximity card reader, utilized to detect data contained in **contactless smart cards**.

contactor **1.** A heavy-duty relay utilized to control and/or switch electric circuits, such as power circuits. Also called **power relay** (2). **2.** In a control system, a device utilized to connect and disconnect a component, circuit, device, piece of equipment, mechanism, or system from a source of power.

contaminant An undesired material or substance that can adversely affect the properties of a component, circuit, device, piece of equipment, system, material, or medium.

content Information, especially that which is available online, which may be any combination of text, audio, video, files, or the like.

content-addressable memory Computer memory which is accessed by content rather than by address. It is often used in memory-management units, and comparison logic is included with each bit of storage. Its acronym is **CAM**. Also known as **content-addressable storage, active memory, active storage, associative storage**, or **associative memory**.

content-addressable storage Same as **content-addressable memory**.

content aggregator An entity that gathers Information from multiple Web sites and provides said content to others. Such content, for instance, can help keep users more time at a the collector's site, might be offered as a premium service, or may be sold to content providers.

content filter A program or utility which seeks to detect advertising and other bothersome or undesirable content before its loaded onto a Web page being accessed. Such a program, for instance, can filter Web page content, protect privacy, prevent pop-up ads from appearing, avert banner ads, eliminate certain JavaScript, stop animated GIFs, turn off ActiveX, disable Web bugs, and so on. Also called **Web filter, Web content filter, Internet filter**, or **blocking software**.

content provider An entity that provides information content for the Internet, or for software-based products, such as CD-ROMs. Such information may be any combination of text,