The IEEE Standard Dictionary of Electrical and Electronics Terms

Sixth Edition

Standards Coordinating Committee 10, Terms and Definitions
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demand register—single-pointer form An indicating demand register from which the demand is obtained by reading the position of a pointer relative to the markings on a scale. The single pointer is resettable to zero.
(ELM) C12.1-1988

demand-totalizing relay A device designed to receive and to-talize electric pulses from two or more sources for transmission to a demand meter or to another relay. *See also:* demand meter. (ELM) C12.1-1982s

demarcation strip (data transmission) The terminals at which the telephone company's service ends and the customer's equipment is connected. (PE) 599-1985w

demineralization The process of removing dissolved minerals (usually by chemical means). (Std100) [71]

demodulate To receive signals transmitted over a communications computer; and to convert them into electrical pulses that can serve as inputs to a computer system. *Contrast:* modulate. (C) 610.7-1995

demodulation (1) A modulation process wherein a wave resulting from previous modulation is employed to derive a wave having substantially the characteristics of the original modulating wave. *Note:* The term is sometimes used to describe the action of a frequency converter or mixer, but this practice is deprecated except in the case of shifting a single-sideband signal to baseband. (IT) [123]
(2) (data transmission) A modulation process wherein a wave resulting from previous modulation is employed to derive a wave substantial to the characteristics of the original modulating wave. *Note:* The term is sometimes used to describe the action of a frequency converter or mixer, but this practice is deprecated. (PE) 599-1985w
(3) (overhead power lines) The process by which the signal is recovered from a modulated carrier.
(PE/T&D) 539-1990
(4) The reconversion of a modulated signal back into its original form by extracting the data from the modulated carrier. *Contrast:* modulation. (C) 610.7-1995

demodularization In software design, the process of combining related software modules, usually to optimize system performance. *See also:* downward compression; lateral compression; upward compression. (C) 610.12-1990

demodulator A device to effect the process of demodulation. *See also:* demodulation. (Std100) 270-1964w

demodulator-modulator *See:* modem.

demonstration (1) (safety systems equipment in nuclear power generating stations) The provision of evidence to support the conclusion derived from assumed premises.
(PE) 627-1980r
(2) (Class 1E battery chargers and inverters) A course of reasoning showing that a certain result is a consequence of assumed premises; an explanation or illustration, as in teaching by use of examples. (PE) 650-1979s
(3) (software) A dynamic analysis technique that relies on observation of system or component behavior during execution, without need for post-execution analysis, to detect errors, violations of development standards, and other problems. *See also:* testing. (C) 610.12-1990

demultiplexer An electronic switch with one input and several outputs. Encoded selection signals control which output is connected to the input. *Contrast:* multiplexer.
(C) 610.7-1995

demultiplexing The separation from a common input into several outputs. For example, hardware may demultiplex signals from a transmission line based on time or carrier frequency to allow multiple, simultaneous transmissions across a single physical cable. *Contrast:* multiplexing. (C) 610.7-1995

denary *See:* decimal.

denial of message service Preventing or delaying the perform-

transport, application), and could result in denial of ser... conditions. (BA/C) 896.3-...

denormalized number (1) (mathematics of computing ... nonzero floating-point number whose exponent has a reser... value, usually the format's minimum, and whose explicit ... implicit significand digit is zero. (C) 1084-1986...
(2) (binary floating-point arithmetic) A nonzero floating-point number whose exponent has a reserved value, usuall... the format's minimum, and whose explicit or implicit leading significand bit is zero. (C/MM) 754-1985...

dense binary code A binary code in which all possible bit combinations are used. (C) 1084-1986w

dense list *See:* packed array.

densitometer (illuminating engineering) A photometer for measuring the optical density (common logarithm of the reciprocal of the transmittance or reflectance) of materials.
(EEC/IE) [126]

density (1) (facsimile) A measure of the light-transmitting or reflecting properties of an area. *Notes:* 1. It is expressed by the common logarithm of the ratio of incident to transmitted or reflected light flux. 2. There are many types of density that will usually have different numerical values for a given material; for example, diffuse density, double diffuse density, specular density. The relevant type of density depends upon the geometry of the optical system in which the material is used. *See also:* scanning. (COM) 168-1956w
(2) (electron or ion beam) The density of the electron or ion current of the beam at any given point. (Std100) [84]
(3) (computers) *See also:* packing density.
(4) (A) On an integrated circuit, the number of logic gates per unit area of usable surface. *See also:* chip density; surface density. **(B)** A measure of the number of characters per inch on an output medium such as paper. *See also:* recording density. (C) 610.10-1994

density coefficient *See:* environmental coefficient.

density-modulated tube (microwave tubes) (space-charge-control tube) Microwave tubes or valves characterized by the density modulation of the electron stream by a gating electrode. *Note:* The electron stream is collected on those electrodes that form a part of the microwave circuit, principally the anode. These electrodes are often small compared to operating wavelength so that for this reason space-charge-control tubes or valves are often not considered to be microwave tubes even though they are used at microwave frequencies. (ED) [45]

density modulation (electron beams) The process whereby a desired time variation in density is impressed on the electrons of a beam. *See also:* velocity-modulated tube.
(Std100) [84]

density-tapered array antenna *See:* space-tapered array antenna.

denuder That portion of a mercury cell in which the metal is separated from the mercury. (EEC/PE) [119]

dependability (of a relay or relay system) The facet of reliability that relates to the degree of certainty that a relay or relay system will operate correctly.
(PE/SWG) C37.100-1992, C37.90-1978s

dependable capability (power operations) The maximum generation, expressed in kilowatt-hours per hour (kWh/h) which a generating unit, station, power source, or system can be depended upon to supply on the basis of average operating conditions. (PE) 858-1987s

dependable capacity The maximum capacity modified for ambient limitations that a generating unit, power plant, item of electrical equipment, or system can sustain over a specified period of time. (PE) 762-1987r, 858-1993

dependency (1) A logical relationship between two tests or be-