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$$F(z, m) = \sum_{n=0}^{\infty} f[nT - (1 - m)T]u[nT - (1 - m)T]z^{-n}$$

$$0 < m < 1$$

(IM) [52]

modify (A) To change the contents of a database. (B) To change the logical structure of a database. *See also:* alter. (C) 610.5-1990

Modula 2 *See:* MODUlar LAnguage II.

MODULA II *See:* MODUlar LAnguage II.

modular (software) Composed of discrete parts. *See also:* modular decomposition; modular programming. (C) 610.12-1990

modular assembly A circuit breaker element consisting of sealed interrupters, mechanism, and connecting terminals. (SWG/PE) C37.59-1996

modular constraint *See:* grid constraint.

modular decomposition (software) The process of breaking a system into components to facilitate design and development; an element of modular programming. *Synonym:* modularization. *See also:* factoring; hierarchical decomposition; demodularization; cohesion; coupling; packaging; functional decomposition. (C) 610.12-1990

modularity (software) The degree to which a system or computer program is composed of discrete components such that a change to one component has minimal impact on other components. *See also:* cohesion; coupling. (C) 610.12-1990

modularization *See:* modular decomposition.

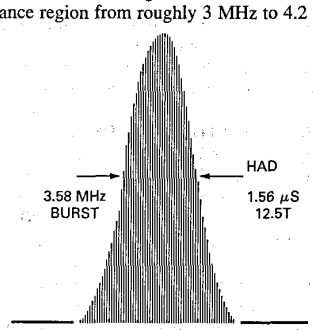
MODUlar LAnguage II (MODULA II) A programming language developed, as an expanded version of Pascal, to support modular design, structured programs, and mathematical calculations. *See also:* block-structured language. (C) 610.13-1993w

modular programming (software) A software development technique in which software is developed as a collection of modules. *See also:* stepwise refinement; data structure-centered design; transaction analysis; rapid prototyping; modular decomposition; input-process-output; structured design; transform analysis; object-oriented design. (C) 610.12-1990

MODULAR II *See:* MODUlar LAnguage II.

modulate (A) To convert voice or data signal for transmission over a communications network. *Contrast:* demodulate. (B) To vary one or more attributes of a carrier (amplitude, frequency, phase) such that the frequency information in the modulating signal can be recovered by its inverse process. (C) 610.7-1995

modulated 12.5T pulse (linear waveform distortion) A burst of color subcarrier frequency of nominally 3.58 MHz. The envelope of the burst is $\sin^2$ shaped with a HAD of nominally 1.56 μs. The MOD 12.5T pulse consists of a luminance and a chrominance component. The envelope of the frequency spectrum consists of two parts, namely signal energy concentrated in the luminance region below 0.6 MHz and in the chrominance region from roughly 3 MHz to 4.2 MHz.



Envelope of frequency spectrum of modulated 12.5T pulse

modulated 12.5T pulse

(BT) 511-1979w

modulation (1) (A) (data transmission) *(Carrier).* (i) The process by which some characteristic of a carrier is varied in accordance with a modulating wave. (ii) The variation of some characteristic of a carrier. *See also:* angle modulation; modulation index. **(B) (data transmission)** *(Signal transmission system).* (i) A process whereby certain characteristics of a wave, often called the carrier, are varied or selected in accordance with a modulating function. (ii) The result of such a process. *See also:* angle modulation; modulation index. (PE) 599-1985

(2) (diode-type camera tube) The ratio of the difference between the maximum and minimum signal currents divided by the sum. To avoid ambiguity, the optical input image intensity shall be assumed to be sinusoidal in the direction of scan. (ED) 503-1978w

(3) (fiber optics) A controlled variation with time of any property of a wave for the purpose of transferring information. (Std100) 812-1984w

(4) (overhead-power-line corona and radio noise) The process by which some characteristic of a carrier is varied in accordance with a modulating signal. (T&D/PE) 539-1990

(5) (broadband local area networks) The method whereby information is superimposed onto a RF carrier to transport signals through a communications channel. (LM/C) 802.7-1989r

(6) The process of changing or regulating the characteristics of a carrier that is vibrating at a certain amplitude and frequency so that the variations represent meaningful information. *Contrast:* demodulation. (C) 610.7-1995

modulation contrast (diode-type camera tube) The ratio of the difference between the peak and the minimum values of irradiance to the sum of the peak and the minimum value of irradiance of an image or specified portion of an image. (ED) 503-1978w

modulation index (angle modulation with a sinusoidal modulating function) (data transmission) The ratio of the frequency deviation of the modulated wave to the frequency of the modulating function. *Note:* The modulation index is numerically equal to the phase deviation expressed in radians. (PE) 599-1985w

modulation threshold (illuminating engineering) In the case of a square wave or sine wave grating, manipulation of luminance differences can be specified in terms of modulation and the threshold may be called the modulation threshold.

$$\text{modulation} = \frac{L_{max} - L_{min}}{L_{max} + L_{min}}$$

Periodic patterns that are not sine wave can be specified in terms of the modulation of the fundamental sine wave component. The number of periods or cycles per degree of visual angle represents the spatial frequency. (EEC/IE) [126]

modulator A device that converts a signal into a modulated signal that is suitable for transmission. (C) 610.7-1995

modulation transfer function (diode-type camera tube) $R_o(N)$, the modulus of the optical transfer function (OTF), is synonymous with the sine amplitude response. That is, the response of the imaging sensor to sinewave images. When the modulation transfer functions or MTFs of a linear sensor's components are known, the overall system MTF can be found by multiplying the individual component MTFs together. (ED) 503-1978w

modulator-demodulator *See:* modem.

module (1) (cable penetration fire stop qualification test) An opening in a fire resistive barrier so located and spaced from adjacent modules (openings) that its respective cable penetration fire stop's performance will not affect the performance of cable penetration fire stops in any adjacent module. A module may take on any shape to permit the passage of cables from one or any number of raceways. (ED) 581-1978w

(2) (A) (software) A program unit that is discrete and identifiable with respect to compiling, combining with other units, and loading; for example, the input to, or output from, an