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Hertzian magnetic dipole A fictitious elementary source consisting of a time-harmonic magnetic current element of specified direction and infinitesimal length. *Notes:* 1. The continuity equation relating current to charge requires that opposite ends of the current element be terminated by equal and opposite amounts of magnetic charge, these amounts also varying harmonically with time. 2. As its length approaches zero, the current must approach infinity in such a manner that the product of current and length remains finite. 3. A magnetic dipole has the same radiation pattern as an infinitesimally small electric current loop. (AP/ANT) 145-1993

heterodyne (nonlinear, active, and nonreciprocal waveguide components) The process occurring in a frequency converter by which the signal input frequency is changed by superimposing a local oscillation to produce an output having the same modulation information as the original signal but at a frequency which is either the sum or the difference of the signal and local oscillator frequencies. (MTT) 457-1982w

heterodyne conversion transducer (converter) A conversion transducer in which the useful output frequency is the sum or difference of the input frequency and an integral multiple of the frequency of another wave usually derived from a local oscillator. *Note:* The frequency and voltage or power of the local oscillator are parameters of the conversion transducer. Ordinarily, the output-signal amplitude is a linear function of the input-signal amplitude over its useful operating range. (ED) 161-1971w

heterodyne frequency *See:* beats.

heterodyne reception (beat reception) The process of reception in which a received high-frequency wave is combined in a nonlinear device with a locally generated wave, with the result that in the output there are frequencies equal to the sum and difference of the combining frequencies. *Note:* If the received waves are continuous waves of constant amplitude, as in telegraphy, it is customary to adjust the locally generated frequency so that the difference frequency is audible. If the received waves are modulated the locally generated frequency is generally such that the difference frequency is superaudible and an additional operation is necessary to reproduce the original signal wave. *See also:* superheterodyne reception. (PE/EEC) [119]

heterogeneous computer network A computer network of different host computers, such as those of different manufacturers. *Contrast:* homogeneous computer network. (C) 610.7-1995

heterogeneous LAN A network of interconnected LANs of mixed media access control types. *Contrast:* homogeneous local area network. (C) 610.7-1995

heterojunction (fiber optics) A junction between semiconductors that differ in their doping level conductivities, and also in their atomic or alloy compositions. *See also:* homojunction. (Std100) 812-1984w

heteropolar machine (rotating machinery) A machine having an even number of magnetic poles with successive (effective) poles of opposite polarity. *See also:* asynchronous machine; direct-current commutating machine. (PE) [9]

heuristic (1) Pertaining to exploratory methods of problem solving in which solutions are discovered by evaluation of the progress made toward the final result. *See also:* algorithm. (MIL/C) [2], [85], [20]

(2) (modeling and simulation) Pertaining to experimental, especially trial-and-error, methods of problem-solving. *Note:* The resulting solution may not be the most desirable solution to the problem. (C) 610.3-1989w

Hevea rubber Rubber from the *Hevea brasiliensis* tree. *See also:* insulation.

Hewlett-Packard Graphics Language (HPGL) A page description language used by many laser printers. (C) 610.13-1993w

Hewlett-Packard Printer Control Language A page description language used in many laser printers. (C) 610.13-1993w

hex *See:* hexadecimal.

hexadecimal (A) (mathematics of computing) Pertaining to a selection in which there are sixteen possible outcomes. *Synonym:* sexadecimal. **(B) (mathematics of computing)** Pertaining to the numeration system with a radix of 16. *Synonym:* sexadecimal. (C) 1084-1986

hexadecimal character string A sequence of characters from the set of hexadecimal digits, preceded by the two characters 0x (zero followed by a lowercase "x"). Hexadecimal character strings shall consist only of the following characters:

0 1 2 3 4 5 6 7 8 9 A B C D E F x

Within software definition files of exported catalogs, all such strings shall be encoded using IRV. (C/PA) 1387.2-1995

hexadecimal digit A numeral used to represent one of the 16 digits in the hexadecimal numeration system; 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D, E, or F. (C) 1084-1986w

hexadecimal notation Any notation that uses the hexadecimal digits and the radix 16. (C) 1084-1986w

hexadecimal number (A) A quantity that is expressed using the hexadecimal numeration system. **(B)** Loosely, a hexadecimal numeral. (C) 1084-1986

hexadecimal number system* *See:* hexadecimal numeration system.

* Deprecated.

hexadecimal numeral A numeral in the hexadecimal numeration system. For example, the hexadecimal numeral 17 is equivalent to the decimal numeral 23. (C) 1084-1986w

hexadecimal numeration system The numeration system that uses the hexadecimal digits and the radix 16. *Synonym:* hexadecimal system. (C) 1084-1986w

hexadecimal point The radix point in the hexadecimal numeration system. (C) 1084-1986w

hexadecimal system *See:* hexadecimal numeration system.

hexadecimal-to-decimal conversion The process of converting a hexadecimal numeral to an equivalent decimal numeral. For example, hexadecimal 8B.4 is converted to decimal 139.25. (C) 1084-1986w

hexlet (1) Sixteen bytes (128 bits) of data.

(C/MM) 1754-1994

(2) A 16-byte data format or data type. The name hexadelet would more accurately describe these 16-byte formats, but for notational convenience this abbreviated term is used throughout this standard. (C/MM) 1596.5-1993

hexode A six-electrode electron tube containing an anode, a cathode, a control electrode, and three additional electrodes that are ordinarily grids. (ED) 161-1971w

HF *See:* high frequency.

HFC *See:* horizontal footcandles.

HF radar *See:* high-frequency radar.

H-frame *See:* crossing structure.

HH *See:* header hub.

hickey (A) A fitting used to mount a lighting fixture in an outlet box or on a pipe or stud. *Note:* It has openings through which fixture wires may be brought out of the fixture stem. **(B)** A pipe-bending tool. (EEC/PE) [119]

HID Abbreviation for high-intensity discharge. *See also:* high-intensity discharge lamp; high-intensity discharge lamps.

HIDAM *See:* hierarchical indexed direct access method.

hidden A general term covering both private and protected. *Contrast:* public. *See also:* private; protected. (C/SE) 1320.2-1998

hidden line A line or line segment in a three-dimensional display image that is not visible because of the presence of surfaces closer to the viewer. *Note:* Such a line may be left invisible or may be displayed as a dashed or dotted line to enhance the realism of the image. (C) 610.6-1991w

hidden line/hidden surface removal A process of detecting hidden lines and hidden surfaces in an image and removing them from the rendering of that image before it is rendered. (C) 610.6-1991w