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IEEE Standards Terms

Seventh Edition

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How to Use This Dictionary

The terms defined in the Dictionary are listed in *letter-by-letter* alphabetical order. Spaces are ignored in this style of alphabetization, so *cable value* will come before *cab signal*. Descriptive categories associated with the term in earlier editions of the Dictionary will follow the term in parentheses. New categories appear after the definitions (see Categories, below), followed by the designation of the standard or standards that include the definition. If a standard designation is followed by the letter *s*, it means that edition of the standard was superseded by a newer revision and the term was not included in the revision. If a designation is followed by the letter *w*, it means that edition of the standard was withdrawn and not replaced by a revision. A bracketed number refers to the non-IEEE standard sources given in the back of the book.

Abstracts of the current set of approved IEEE standards are provided in the back of the book. It should be noted that updated information about IEEE standards can be obtained at any time from the IEEE Standards World Wide Web site at <http://standards.ieee.org/>.

Categories

The category abbreviations that are used in this edition of the Dictionary are defined below. This information is provided to help elucidate the context of the definition. Older terms for which no category could be found have had the category *Std100* assigned to them. Note that terms from sources other than IEEE standards, such as the National Electrical Code® (NEC®) or the National Fire Protection Association, may not be from the most recent editions; the reader is cautioned to check the latest editions of all sources for the most up-to-date terminology.

Categories sorted by abbreviation

AES	aerospace and electronic systems
AHDL	computer—Analog Hardware Descriptive Language
AMR	automatic meter reading and energy management
AP	antennas and propagation
ATL	computer—Abbreviated Test Language for All Systems
BA	computer—bus architecture
BT	broadcast technology
C	computer
CAS	circuits and systems
CE	consumer electronics
CHM	components, hybrids, and manufacturing technology
COM	communications
CS	control systems
DA	computer—design automation
DEI	dielectrics and electrical insulation
DESG	dispersed energy storage and generation
DIS	computer—distributed interactive simulation
ED	electron devices
EDU	education
EEC	electrical equipment and components
ELM	electricity metering
EM	engineering management
EMB	engineering in medicine and biology
EMC	electromagnetic compatibility
GRS	geoscience and remote sensing
GSD	graphic symbols and designations
IA	industry applications
IE	industrial electronics
II	information infrastructure
IM	instrumentation and measurement
IT	information theory

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IVHS	intelligent vehicle highway systems
LEO	lasers and electro-optics
LM	computer—local and metropolitan area networks
MAG	magnetics
MIL	military
MM	computer—microprocessors and microcomputers
MTT	microwave theory and techniques
NEC	National Electrical Code
NESC	National Electrical Safety Code
NFPA	National Fire Protection Association
NI	nuclear instruments
NIR	non-ionizing radiation
NN	neural networks
NPS	nuclear and plasma sciences
ODM	computer—optical disk and multimedia platforms
OE	oceanic engineering
PA	computer—portable applications
PE	power engineering
PEL	power electronics
PQ	power quality
PSPD	power surge protective devices
PV	photovoltaics
QUL	quantities, units, and letter symbols
R	reliability
RA	robotics and automation
REM	rotating electrical machinery
RL	roadway lighting
S&P	computer—security and privacy
SB	stationary batteries
SE	computer—software engineering
SMC	systems, man, and cybernetics
SP	signal processing
Std100	Standard 100 legacy data
SUB	substations
SWG	power switchgear
T&D	transmission and distribution
TF	time and frequency
TRR	transformers, regulators, and reactors
TT	test technology
UFFC	ultrasonics, ferroelectrics, and frequency control
VT	vehicular technology

Categories sorted by name

aerospace and electronic systems
antennas and propagation
automatic meter reading and energy management
broadcast technology
circuits and systems
communication
components, hybrids, and manufacturing technology
computer
computer—Abbreviated Test Language for All Systems
computer—Analog Hardware Descriptive Language
computer—bus architecture
computer—design automation
computer—distributed interactive simulation
computer—local and metropolitan area networks
computer—microprocessors and microcomputers
computer—optical disk and multimedia platforms
computer—portable applications
computer—security and privacy
computer—software engineering
consumer electronics

AES
AP
AMR
BT
CAS
COM
CHM
C
ATL
AHDL
BA
DA
DIS
LM
MM
ODM
PA
S&P
SE
CE

horn-gap switch A switch provided with arcing horns.

(SWG/PE) C37.36b-1990r, C37.100-1992

horn mouth Normally the opening, at the end of a horn, with larger cross-sectional area. (SP) [32]

horn reflector antenna (1) (communication satellite) A form of reflector antenna, where the energy coming from the throat of a horn is reflected by a segment of a paraboloid. This type of antenna has a very low backlobe. *See also:* Cassegrainian feed. (COM) [24]

(2) An antenna consisting of a portion of a paraboloidal reflector fed with an offset horn that physically intersects the reflector, part of the wall of the horn being removed to form the antenna aperture. *Note:* The horn is usually either pyramidal or conical, with an axis perpendicular to that of the paraboloid. (AP/ANT) 145-1993

horn throat (audio and electroacoustics) Normally the opening, at the end of a horn, with the smaller cross-sectional area. (SP) [32]

horsepower rating, basis for single-phase motor A system of rating for single-phase motors, whereby horsepower values are determined, for various synchronous speeds, from the minimum value of breakdown torque that the motor design will provide. (PE) [9]

hose (1) (liquid cooling) (rotating machinery) The flexible insulated or insulating hydraulic connections applied between the conductors and either a central manifold or coolant passage. (PE) [9]

(2) *See also:* conductor cover. (PE/T&D) 516-1987s

hose clamp *See:* strand restraining clamp.

hoseproof *See:* waterproof machine.

hospital (health care facilities) A building or part thereof used for the medical, psychiatric, obstetrical or surgical care, on a 24-hour basis, of 4 or more inpatients. Hospital, wherever used in this Code, shall include general hospitals, mental hospitals, tuberculosis hospitals, children's hospitals, and any such facilities providing inpatient care. (NESC/NEC) [86]

hospital information system (HIS) An automated system used in hospitals and other health care facilities to perform such tasks as communication between staff members, statistical analysis, inventory planning, and scheduling of medication, blood analysis, and patient testing. *Note:* Hospital information systems typically use interactive operations on a hierarchical file structure based on a patient-oriented record. *Synonyms:* medical information system; health information system. (C) 610.2-1987

Hospital Operating System-Structured Programming Language An application-oriented language with some FORTRAN features, used to manipulate string variables and to support structured programming. (C) 610.13-1993w

host (1) A device to which other devices (peripherals) are connected and that generally controls those devices. (EMC/EMB/MIB) C63.4-1991, 1073.3.1-1994

(2) A device, typically a personal computer, that will control the communications with attached peripherals. (C/MM) 1284-1994

(3) In general, an electronic circuit assembly (e.g., a plug-in unit, a back-plane, a mother board, or another mezzanine card), that provides electrical and/or mechanical connections to a subordinate assembly. (C/BA) 1301.4-1996

(4) Whatever is driving (i.e., providing) commands or data to the printer (e.g., a workstation, a print server, or spooler.) (C/MM) 1284.1-1997

(5) The client or host station/computer, with which the RTU equipment communicates. *Synonym:* master. (PE/SUB) 1379-1997

(6) *See also:* host computer.

(C/DIS) 610.7-1995, 1278.2-1995

host byte order The native representation of an integer: unsigned integer m is the representation in *host byte order* of bit string $b_n b_{n-1} \dots b_0$ (where b_n is the *most significant*, or *highest order* bit, and b_0 is the *least significant* or *lowest order*

bit) if $m = 2^n * b_n + 2^{n-1} * b_{n-1} + \dots + 2^0 * b_0$.

(C) 1003.5-1999

host character string A sequence of characters describing a host. Within software definition files of an exported catalog, all data that can be encoded using IRV, shall be. Any such data that cannot be so encoded shall be transformed using UTF-8. (C/PA) 1387.2-1995

host computer (1) A computer, attached to a network, providing primary services such as computation, data base access or special programs or programming languages. *See also:* communications computer. (LM/COM/EMB/MIB) 168-1956w, 1073.3.1-1994

(2) A computer that supports one or more simulation applications. All host computers participating in a simulation exercise are connected by network(s) including local area networks, wide area networks, radio frequency links, etc. (DIS/C) 1278.1-1995, 1278.2-1995r

(3) (A) The primary or controlling computer in a multiple computer installation. *Synonyms:* host machine; host. *See also:* bifunctional machine. (B) The primary or controlling processor in a multiprocessor computer or a computer with multiple processing elements, some of which may be dedicated to specific functions. For example, intelligent adapters; math coprocessors. *Synonym:* host processor. (C) 610.7-1995, 610.10-1994

(4) A computer used to prepare computer programs for use on another computer or on another computer system; for example, a computer used to compile, link, or test programs to be used on another system. *Synonym:* host processor. (C) 610.10-1994w

host computer system A computational-based system used for clinical support of patient care, limited to medical device data interchange. *Synonym:* patient care information system. (EMB/MIB) 1073.4.1-2000

hostile environment computer A computer designed for use in an environment not conducive to safe operation, such as one with many dust particles in the air; precautions must be taken to ensure that dust particles do not enter the disk drives or settle on the heads. *See also:* hardened computer. (C) 610.10-1994w

host interface The interface between a communications network and a host computer. (C) 610.7-1995, 610.10-1994w

host language A programming language such as COBOL or PL/I into which data manipulation language statements are embedded. *See also:* data sublanguage. (C) 610.5-1990w

host machine (1) (A) (software) A computer used to develop software intended for another computer. *Contrast:* target machine. (B) (software) A computer used to emulate another computer. *Contrast:* target machine. (C) (software) The computer on which a program or file is installed. (D) (software) In a computer network, a computer that provides processing capabilities to users of the network. (C) 610.12-1990

(2) *See also:* host computer. (C) 610.7-1995

host processor (1) (FASTBUS acquisition and control) The data processing and control processor assigned to exercise overall supervision over a FASTBUS system. Contains detailed knowledge of the system topology. (NID) 960-1993

(2) A processor that controls all or part of a user application network. *See also:* host computer. (C) 610.10-1994w

hot *See:* energized.

hot cathode (thermionic cathode) A cathode that functions primarily by the process of thermionic emission. (ED) 161-1971w

hot-cathode lamp (illuminating engineering) An electric-discharge lamp whose mode of operation is that of an arc discharge. The cathodes may be heated by the discharge or by external means. (EEC/IE) [126]

hot-cathode tube (thermionic tube) An electron tube containing a hot cathode. (ED) 161-1971w, [45]

hot electron programming The injection of energetic "hot" electrons onto the floating gate. (ED) 1005-1998