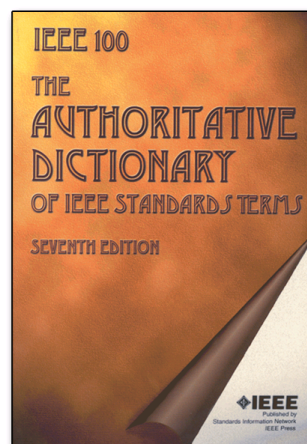


# **IEEE 100**

# **The Authoritative Dictionary of IEEE Standards Terms**

**Seventh Edition**



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# Introduction

IEEE standards establish an authoritative common language that defines quality and sets technical criteria. By guaranteeing consistency and conformity through open consensus, IEEE standards add value to products, facilitate trade, drive markets, and ensure safety. That's why leading companies, organizations, and industries around the globe rely on them.

Critical components of this common language are the terms and definitions that are at the foundation of the vast body of IEEE standards. In the past decade alone, hundreds of terms—describing the latest tools, techniques, and best practices—have been added to the lexicon of IEEE standards.

In this newly updated *Authoritative Dictionary of IEEE Standards Terms*, professional experts and students alike will gain an in-depth understanding and appreciation for the breadth of coverage of IEEE standards terms and definitions not found in any other single source.

The seventh edition of IEEE 100 has been revised to include nearly 35 000 technical terms and definitions from over 800 standards—covering areas such as power and energy, communications, information technology, and transportation systems. In addition to an extensive list of widely used acronyms and abbreviations, this new edition also contains detailed abstracts of each term's associated standard(s). What's more, all definitions are augmented by a combination of indispensable information, including:

- ◆ Preferred and popular usage of each term
- ◆ Variations in meanings among different technical specialties
- ◆ Cross-indexing to related works
- ◆ Key explanatory notes for further term clarification

In preparing this latest edition of the Dictionary, we realized that the standards community desired more than just a compilation of IEEE standardized terms and definitions. They needed an authoritative resource created by the organization that develops and produces the standards from which the terms and definitions are derived—the IEEE. In addition, we determined the Dictionary needed to be not only user friendly, but also rich in information. In other words, it needed to be the *Authoritative Dictionary of IEEE Standards Terms*.

Susan K. Tatiner  
Director, IEEE Standards Publishing Programs

IEEE Standards Project Editors for the seventh edition:  
Kim Breitfelder  
Don Messina

Additional assistance was provided by the IEEE Standards editorial staff.

# 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                                 |

|        |                                                    |
|--------|----------------------------------------------------|
| 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                   | AES  |
| antennas and propagation                           | AP   |
| automatic meter reading and energy management      | AMR  |
| broadcast technology                               | BT   |
| circuits and systems                               | CAS  |
| communication                                      | COM  |
| components, hybrids, and manufacturing technology  | CHM  |
| computer                                           | C    |
| computer—Abbreviated Test Language for All Systems | ATL  |
| computer—Analog Hardware Descriptive Language      | AHDL |
| computer—bus architecture                          | BA   |
| computer—design automation                         | DA   |
| computer—distributed interactive simulation        | DIS  |
| computer—local and metropolitan area networks      | LM   |
| computer—microprocessors and microcomputers        | MM   |
| computer—optical disk and multimedia platforms     | ODM  |
| computer—portable applications                     | PA   |
| computer—security and privacy                      | S&P  |
| computer—software engineering                      | SE   |
| consumer electronics                               | CE   |

control systems  
 dielectrics and electrical insulation  
 dispersed energy storage and generation  
 education  
 electrical equipment and components  
 electricity metering  
 electromagnetic compatibility  
 electron devices  
 engineering in medicine and biology  
 engineering management  
 geoscience and remote sensing  
 graphic symbols and designations  
 industrial electronics  
 industry applications  
 information infrastructure  
 information theory  
 instrumentation and measurement  
 intelligent vehicle highway systems  
 lasers and electro-optics  
 magnetics  
 microwave theory and techniques  
 military  
 National Electrical Code  
 National Electrical Safety Code  
 National Fire Protection Association  
 neural networks  
 non-ionizing radiation  
 nuclear and plasma sciences  
 nuclear instruments  
 oceanic engineering  
 photovoltaics  
 power electronics  
 power engineering  
 power quality  
 power switchgear  
 quantities, units, and letter symbols  
 reliability  
 roadway lighting  
 robotics and automation  
 rotating electrical machinery  
 signal processing  
 Standard 100 legacy data  
 stationary batteries  
 substations  
 surge-protective devices  
 systems, man, and cybernetics  
 test technology  
 time and frequency  
 transformers, regulators, and reactors  
 transmission and distribution  
 ultrasonics, ferroelectrics, and frequency control  
 vehicular technology

CS  
 DEI  
 DESG  
 EDU  
 EEC  
 ELM  
 EMC  
 ED  
 EMB  
 EM  
 GRS  
 GSD  
 IE  
 IA  
 II  
 IT  
 IM  
 IVHS  
 LEO  
 MAG  
 MTT  
 MIL  
 NEC  
 NESC  
 NFPA  
 NN  
 NIR  
 NPS  
 NI  
 OE  
 PV  
 PEL  
 PE  
 PQ  
 SWG  
 QUL  
 R  
 RL  
 RA  
 REM  
 SP  
 Std100  
 SB  
 SUB  
 PSPD  
 SMC  
 TT  
 TF  
 TRR  
 T&D  
 UFFC  
 VT

**optical probe** A flux density meter in which the transduction mechanism is optical. A number of physical effects (i.e., magnetostriction, change in birefringence) may be used to affect the light in a "witness crystal" or "sense fiber."

(T&D/PE) 539-1990

**optical pyrometer** A temperature-measuring device comprising a standardized comparison source of illumination and source convenient arrangement for matching this source, either in brightness or in color, against the source whose temperature is to be measured. The comparison is usually made by the eye. *See also*: electric thermometer. (EEC/PE) [119]

**optical reader** *See*: optical character reader; optical mark reader; optical scanner.

**optical recording** A method for storing data by using optical means. (C) 610.10-1994w

**optical repeater (fiber optics)** In an optical waveguide communication system, an optoelectronic device or module that receives a signal, amplifies it (or, in the case of a digital signal, reshapes, retimes, or otherwise reconstructs it) and retransmits it. *See also*: modulation. (Std100) 812-1984w

**optical rise time** The time it takes for optical power to rise from 10% effective power to 90% effective power. When expressed as a percentage, the rise time is specified as a percentage of an encoded bit period. (C/BA) 1393-1999

**optical scanner (A) (character recognition)** A device that scans optically and usually generates an analog or digital signal. **(B) (character recognition)** A device that optically scans printed or written data and generates their digital representations. *See also*: electronic analog computer; visual scanner. (C) [20], [85]

(2) (A) A scanner that uses light for examining patterns. *See also*: bar code scanner; optical character reader. **(B)** A device that scans optically and generates a corresponding output signal. *See also*: digitizer. (C) 610.10-1994

**optical sensor** A device capable of detecting light and producing an analog or digital output signal. *See also*: optical mouse. (C) 610.10-1994w

**optical sound recorder** *See*: photographic sound recorder.

**optical sound reproducer** *See*: photographic sound reproducer.

**optical spectrum (fiber optics)** Generally, the electromagnetic spectrum within the wavelength region extending from the vacuum ultraviolet at 40 nanometers (nm) to the far infrared at 1 millimeter (mm). *See also*: infrared; light. (Std100) 812-1984w

**optical storage** Storage of information in which access to that information is obtained using optical signals. *Synonym*: photo-optic storage. *See also*: CD-ROM storage. (C) 610.10-1994w

**optical switch (interferometric fiber optic gyro)** A device in an optical path that can pass, stop, or redirect light, depending on control input. (AES/GYAC) 528-1994

**optical thickness (fiber optics)** The physical thickness of an isotropic optical element, times its refractive index. *See also*: optical path length. (Std100) 812-1984w

**optical time domain reflectometry (fiber optics)** A method for characterizing a fiber wherein an optical pulse is transmitted through the fiber and the resulting light scattered and reflected back to the input is measured as a function of time. Useful in estimating attenuation coefficient as a function of distance and identifying defects and other localized losses. *See also*: scattering; Rayleigh scattering. (Std100) 812-1984w

**optical tracker (navigation aid terms)** A device for determining the direction of a luminous body relative to a set of reference axes using visible light vice, infrared, or radio frequencies. (AES/GCS) 172-1983w

**optical transfer function (diode-type camera tube)** The spatial frequency response of an imaging sensor to a point source input. That is, the Fourier transform of the output image waveshape when the input image is a point, is known as the two-dimensional optical transfer function. In the one-dimensional case, the optical transfer function is the Fourier transform of

the output image when the input image is a line. In the most common one-dimensional form, the OTF, designated  $R_O(N)$ , is written

$$R_O(N) = |R_O(N)| \exp[j\Phi(N)].$$

The OTF contains both amplitude and phase information.

(ED) 503-1978w

**optical wand** *See*: light pen.

**optical waveguide (A) (fiber optics)** Any structure capable of guiding optical power. **(B) (fiber optics)** In optical communications, generally a fiber designed to transmit optical signals. *Note*: The use of "optical conductor" as a synonym for this term is deprecated. *Synonym*: optical fiber waveguide; lightguide. *See also*: optical fiber; cladding; tapered fiber waveguide; multimode optical waveguide; fiber bundle; fiber optics; core. (Std100) 812-1984

**optical waveguide connector (fiber optics)** A device whose purpose is to transfer optical power between two optical waveguides or bundles, and that is designed to be connected and disconnected repeatedly. *See also*: optical waveguide coupler; multifiber joint. (Std100) 812-1984w

**optical waveguide coupler (A) (fiber optics)** A device whose purpose is to distribute optical power among two or more ports. *See also*: tee coupler; star coupler. **(B) (fiber optics)** A device whose purpose is to couple optical power between a waveguide and a source or detector. (Std100) 812-1984

**optical waveguide preform** *See*: preform.

**optical waveguide splice (fiber optics)** A permanent joint whose purpose is to couple optical power between two waveguides. (Std100) 812-1984w

**optical waveguide termination (fiber optics)** A configuration or a device mounted at the end of a fiber or cable which is intended to prevent reflection. *See also*: index matching material. (Std100) 812-1984w

**optic amplifier** An optoelectronic amplifier whose signal input and output ports are electric. *Note*: This is in accord with the accepted terminologies of other electric-signal input and output amplifiers such as dielectric, magnetic, and thermionic amplifiers. *See also*: optoelectronic device. (ED) [46]

**optic axis (fiber optics)** In an anisotropic medium, a direction of propagation in which orthogonal polarizations have the same phase velocity. Distinguished from "optical axis." *See also*: anisotropic. (Std100) 812-1984w

**optic coupling device** An isolation device using an optical link to provide the longitudinal isolation. Circuit arrangements on each side of the optical link convert the electrical signal into an optical signal for transmission through the optical link and back to an electrical signal. Various circuit arrangements provide one-way or two-way transmission and permit transmission to the various combinations of voice and/or dc signalling used by the power industry. The optical link may be either a quartz rod or a short length of optic fiber. Single-channel optic coupling devices may be used in conjunction with other isolation devices in protection systems. (PE/PSC) 487-1992

**optic port** A port where the energy is electromagnetic radiation, that is, photons. *See also*: optoelectronic device.

(ED) [46]

**optimal control** An admissible control law that gives a performance index an extremal value. *See also*: control system. (IM) [120]

**optimization** The procedure used in the design of a system to maximize or minimize some performance index. May entail the selection of a component, a principle of operation, or a technique. *See also*: system. (SMC) [63]

**optimum bunching (electron tube) (traveling-wave tube)** The bunching condition that produces maximum power at the desired frequency in an output gap. *See also*: electron device. (ED) 161-1971w, [45]

**optimum linearizing load resistance (Hall generator)** The load resistance that produces the least linearity error.

(MAG) 296-1969w

**optimum working frequency (OWF, FOT)** The frequency that is exceeded by the operational maximum usable frequency (MUF) during 90% of the specified period, usually a month. *Note:* The acronym FOT is the French abbreviation of "fréquence optimale de travail." (AP/PROP) 211-1997

**option (1)** An argument to a command that is generally used to specify changes in the default behavior of a utility.

(C/PA) 9945-2-1993

(2) Any behavior or feature defined in the base standard that need not be present in all conforming implementations.

(C/PA) 2003-1997

**optional (1)** The referenced item is not required to claim compliance with this standard. Implementation of an optional item shall be as defined in this standard. (C/BA) 1496-1993w  
(2) A syntax keyword used to specify a partial mapping. *Contrast:* mandatory. *See also:* partial. (C/SE) 1320.2-1998

**optional attribute** An attribute that may have no value for an instance. (C/SE) 1320.2-1998

**optional category** A category that provides additional details that are not essential but may be useful in particular situations. (C/SE) 1044-1993

**optional nonidentifying relationship** A kind of nonidentifying relationship in which an instance of the child entity can exist without being related to an instance of the parent entity. *Contrast:* mandatory nonidentifying relationship. *See also:* non-identifying relationship. (C/SE) 1320.2-1998

**optional-pause instruction** A pause instruction that allows manual suspension of a computer program. *Synonym:* optional stop instruction. (C) 610.10-1994w

**optional stop (numerically controlled machines)** A miscellaneous function command similar to a program stop except that the control ignores the command unless the operator has previously pushed a button to validate the command. (IA) [61]

**optional stop instruction** *See:* optional-pause instruction.

**optional tasks** Those V&V tasks that may be added to the minimum V&V tasks to address specific application requirements. (C/SE) 1012-1998

**option-argument** A parameter that follows certain options. In some cases an option-argument is included within the same argument string as the option; in most cases it is the next argument. (C/PA) 9945-2-1993

**options file** A file that can be specified with the -x option. This file contains extended option definitions that override default definitions. (C/PA) 1387.2-1995

**optoelectronic (fiber optics)** Pertaining to a device that responds to optical power, emits or modifies optical radiation, or utilizes optical radiation for its internal operation. Any device that functions as an electrical-to-optical or optical-to-electrical transducer. *Notes:* 1. Photodiodes, light emitting diodes (LED), injection lasers and integrated optical elements are examples of optoelectronic devices commonly used in optical waveguide communications. 2. "Electro-optical" is often erroneously used as a synonym. *See also:* optical detector; electro-optic effect. (Std100) 812-1984w

**optoelectronic amplifier** An optoelectronic device capable of power gain, in which the signal ports are either all electric ports or all optic ports. *See also:* optoelectronic device. (ED) [46]

**optoelectronic cell** The smallest portion of an optoelectronic device capable of independently performing all the specified input and output functions. *Note:* An optoelectronic cell may consist of one or more optoelectronic elements. *See also:* optoelectronic device. (ED) [46]

**optoelectronic device** An electronic device combining optic and electric ports. (ED) [46]

**optoelectronic element** A distinct constituent of an optoelectronic cell, such as an electroluminor, photoconductor, diode, optical filter, etc. *See also:* optoelectronic device. (ED) [46]

**OR (mathematics of computing)** A Boolean operator having the property that if P is a statement, Q is a statement, R is a statement, . . . , then the OR of P, Q, R, . . . is true if and only if at least one statement is true. *Note:* P OR Q is often represented by  $P \vee Q$  or  $P + Q$ .

OR Truth Table

| P | Q | $P \vee Q$ |
|---|---|------------|
| 0 | 0 | 0          |
| 0 | 1 | 1          |
| 1 | 0 | 1          |
| 1 | 1 | 1          |

*Synonyms:* OR-ELSE; inclusive OR; logical add; union; disjunction; logic add; Boolean add; false add. *Contrast:* exclusive OR. (C) 1084-1986w

**ORA** *See:* output reference axis.

**orbit (navigation aid terms)** The path of a celestial body relative to another body around which it revolves.

(AES/GCS) 172-1983w

**orbital inclination (communication satellite)** The angle between the plane of the orbit and the plane of the equator measured at the ascending node. (COM) [19]

**orbital plane (communication satellite)** The plane containing the radius vector and the velocity vector of a satellite, the system of reference being that specified for defining the orbital elements. In the idealized case of the unperturbed orbit, the orbital plane is fixed relative to the equatorial plane of the primary body. (COM) [19]

**orbital stability (1) (closed solution curve denoted  $\Gamma$ )** Implies that for every given  $\varepsilon > 0$  there exists a  $\delta > 0$  (which, in general, may depend on  $\varepsilon$  and on  $t_0$ ) such that  $\rho(\Gamma, x(t_0)) \leq \delta$  implies  $\rho(\Gamma, \phi(x(t_0); t)) \leq \varepsilon$  for  $t \leq t_0$ , where  $\rho(\Gamma, a)$  denotes the minimum distance between the curve  $\Gamma$  and the point  $a$ . Here the point  $x(t_0)$  is assumed to be off the curve  $\Gamma$ . *Notes:* 1. Orbital stability does not imply Lyapunov stability of a closed solution curve, since a point on the closed curve may not travel at the same speed as a neighboring point off the curve. 2. Only nonlinear systems can produce the type of solutions for which the concept of orbital stability is applicable. *See also:* control system. (CS/IM) [120]

(2) *See also:* stability of a limit cycle.

**OR circuit** *See:* OR gate.

**OR element** *See:* OR gate.

**order (general)** To put items in a given sequence.

(C) [20], [85]

(2) (A) **(in electronic computation)** Synonym for instruction. (B) **(in electronic computation)** Synonym for command. (C) **(in electronic computation)** Loosely, synonym for operation part. *Note:* The use of order in the computer field as a synonym for terms similar to the above is losing favor owing to the ambiguity between these meanings and the more-common meanings in mathematics and business. *See also:* instruction. (C) 162-1963

(3) (A) **(data management)** To place items in an arrangement in accordance with a specified set of rules. *Note:* The arrangement need not be linear. *See also:* sort. (B) **(data management)** The result of an arrangement as in (A). (C) **(data management)** In a tree, the maximum number of subtrees of any node. *Note:* The use of "sequence" as a preferred term for "order" is deprecated. (C) 610.5-1990

**order-by-merging** To order the items of a set by splitting the set into subsets, ordering the subsets, and merging the subsets. *See also:* sort by merging; sequence by merging. (C) 610.5-1990w

**order clash** In software design, a type of structure clash in which a program must deal with two or more data sets that have been sorted in different orders. *See also:* data structure-centered design. (C) 610.12-1990

**ordered list** A list in which the data items are arranged in some specific order, either physically or logically by some key. *Contrast:* unordered list. (C) 610.5-1990w

**ordered\_set** As used in the 1000BASE-X PCS, a single special code-group, or a combination of special and data code-

groups, used for the delineation of a packet and synchronization between the transmitter and receiver circuits at opposite ends of a link. (C/LM) 802.3-1998

**ordered tree** A tree in which the left-to-right order of the subtrees of a given node is significant. *Contrast:* unordered tree. (C) 610.5-1990w

**ordering bias** The manner and degree by which the order of a set of items departs from the order of a randomly distributed set of items. The ordering bias of a set is inversely proportional to the effort required to sort the set. (C) 610.5-1990w, 1084-1986w

**ordering relation** A VHDL relational expression in which the relational operator is  $<$ ,  $<=$ ,  $>$ , or  $>=$ . (C/DA) 1076.3-1997

**orderly release** The graceful termination of a network connection with no loss of data. (C) 1003.5-1999

**order parameter (primary ferroelectric terms)** A parameter, or functionally related set of parameters, that can describe the reduction in symmetry occurring at a phase transition from a nonferroic phase to a ferroic phase. (UFFC) 180-1986w

**order tone (telephone switching systems)** A tone that indicates to an operator that verbal information can be transferred to another operator. (COM) 312-1977w

**order wire (communication practice)** An auxiliary circuit for use in the line-up and maintenance of communication facilities. (COM) [48]

**ordinary binary** *See:* binary.

**ordinary wave (1) (radio-wave propagation)** The magnetoionic wave component that, when viewed below the ionosphere in the direction of propagation, has counterclockwise or clockwise elliptical polarization, respectively, according as the earth's magnetic field has a positive or negative component in the same direction. *See also:* radiation. (EEC/PE) [119]

(2) That characteristic magneto-ionic wave component deviating the least, in most of its propagation characteristics, from those expected for a wave in a non-magnetized plasma of the same density. *Note:* For vertical incidence, the ordinary wave is reflected near the height at which the plasma frequency is equal to the wave frequency when the effects of collisions are negligible. *Synonym:* O wave. (AP/PROP) 211-1997

**ordinary-wave component (radio-wave propagation)** That magneto-ionic wave component deviating the least, in most of its propagation characteristics, relative to those expected for a wave in the absence of a fixed magnetic field. More exactly, if at fixed electron density, the direction of the fixed magnetic field were rotated until its direction was transverse to the direction of phase propagation, the wave component whose propagation would then be independent of the magnitude of the fixed magnetic field. *Synonym:* O wave. (AP) 211-1977s

**OR-ELSE** *See:* OR.

**organic scintillator solute material (1) (liquid-scintillation counters)** An organic compound that can absorb radiant energy and immediately (typically within  $10^{-9}$  s) re-emit this energy as photons in the visible or ultraviolet range. This material is sometimes referred to as the scintillator or the fluor. (NI) N42.16-1986

(2) (liquid-scintillation counters) An organic compound that can absorb radiant energy and immediately (typically within  $10^{-9}$  s) re-emit this energy as photons in the ultraviolet range. (NI) N42.15-1990

**organizational maintenance (test, measurement, and diagnostic equipment)** Maintenance which is the responsibility of and performed by using organizations on its assigned equipment. Its phases normally consist of inspecting, servicing, lubricating, adjusting and the replacing of parts, minor assemblies and subassemblies. (MIL) [2]

**organizational model** An OSI management model that describes the distribution of management controls in the OSI environment. (C) 610.7-1995

**Organizational Process Asset (OPA)** An artifact that defines some portion of an organization's software project environment. (C/SE) 1074-1997

**organizational unit name attributes** The Organizational-Unit-Name-1, Organizational-Unit-Name-2, Organizational-Unit-Name-3, and Organizational-Unit-Name-4 attributes specific to the class. (C/PA) 1224.1-1993w

**organizing** *See:* self-organizing.

**Oregon State Conversational Aid to Research (OSCAR)** An interactive programming system used for performing numerical calculations, string manipulations, vector and matrix operations, and complex arithmetic. (C) 610.13-1993w

**OR gate (1) (electronic computation)** (OR circuit) A gate whose output is energized when any one or more of the inputs is in its prescribed state. An OR gate performs the function of the logical OR. (Std100) 270-1966w

(2) A gate that performs the Boolean operation of disjunction. *Synonyms:* OR element; inclusive OR gate. *See also:* exclusive-OR gate; NOR gate. (C) 610.10-1994w

**orientation (1) (illuminating engineering)** The relation of a building with respect to compass directions. (EEC/IE) [126]

(2) The positioning of the dimensions of a spatial vector. For example, spatial vectors may be represented by a cartesian coordinate system oriented in space in some application-specific manner. (IM/ST) 1451.1-1999

**orifice** An opening or window in a side or end wall of a waveguide or cavity resonator, through which energy is transmitted. *See also:* waveguide. (EEC/PE) [119]

**orifice plate (rotating machinery)** A restrictive opening in a passage to limit flow. (PE) [9]

**origin** The address of the initial storage location assigned to a computer program in main memory. *Contrast:* starting address. *See also:* assembled origin; loaded origin. (C) 610.12-1990

**originating port** A transmitting port on a physical layer (PHY), which has no active receiving port. The source of the transmitted packet is either the PHY's local link or the PHY itself. (C/MM) 1394a-2000

**originating traffic (telephone switching systems)** Traffic received from lines. (COM) 312-1977w

**origin attribute** The classification of software as either developed or nondeveloped. (C/SE) 1045-1992

**original equipment manufacturer** The manufacturer of a component in a computer system such that the component is used in assembling a larger system or component by another manufacturer. Many peripheral devices are made by an OEM but sold as part of a complete computer system by another vendor. (C) 610.10-1994w

**original master (number 1 master) (disk recording) (metal master) (metal negative) (electroacoustics)** The master produced by electroforming from the face of a wax or lacquer recording. (SP) [32]

**original source statements** Source statements that are obtained from an external product. (C/SE) 1045-1992

**original supplier (replacement parts for Class 1E equipment in nuclear power generating stations)** Supplier of the original Class 1E equipment, as opposed to the original manufacturer of the part. (PE/NP) 934-1987w

**originating domain** The MD at which a communique or report originated. (C/PA) 1224.1-1993w

**OR-parallelism** Pertaining to the performance of multiple predicate operations concurrently, the successful completion of any results in a true response. *Note:* Successful termination of one predicate operation may cause the others to be immediately terminated. *Contrast:* AND-parallelism. *See also:* OR-tying. (C) 610.10-1994w

**orphaned process group (1)** A process group in which the parent of every member is either itself a member of the group or is not a member of the group's session. (C/PA) 9945-1-1996