

HARGRAVE'S COMMUNICATIONS DICTIONARY

Frank Hargrave



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IEEE 1284—an enhanced parallel port standard based on both the enhanced parallel port (EPP) and the extended capabilities port (ECP) strategies. See also *enhanced parallel port (EPP)* and *extended capabilities port (ECP)*.

IEEE 1394—a 1995 serial bus interface standard offering high-speed communications and isochronous real-time data services for Macintosh and IBM PCs. It is meant to be a replacement of the ADB, RS-232, RS-422, SCSI, and even the parallel port. Features include the following:

- There are data transfer rates between devices of 100, 200, or 400 Mbps, with a planned increase to 1.2 Gbps.
- Cable is 6 conductors with lengths to 5 m.
- It can supply up to 60 watts of power, allowing low-consumption devices to operate without a separate power cord.
- It can *daisy-chain* up to 63 devices in a treelike structure (as opposed to SCSI's linear structure).
- No bus terminator is required.
- It allows peer-to-peer device communication, such as communication between a scanner and a printer, to take place without using system memory or the computer itself.
- Each device identifies itself dynamically (that is, it will not require dip switch or jumper settings).
- It supports plug-and-play (PnP) and allows connection and disconnection of devices without interrupting system operation.

Also called *Firewire*, *High Performance Serial Bus*, and *i.Link*. See also *Access bus* and *Universal Serial Bus (USB)*.

IEN An abbreviation of Internet Experimental Notes.

IEPG An abbreviation of Internet Engineering and Planning Group.

IES (1) An abbreviation of Inter-Enterprise System. An Electronic Data Interchange (EDI) network connection that allows the inter-company exchange of e-mail, fax, electronic fund transfers, CAD/CAM, etc. (2) An abbreviation of Information Exchange Services. (3) An abbreviation of Incoming Echo Suppressor.

IESG An abbreviation of Internet Engineering Steering Group.

IETF An abbreviation of Internet Engineering Task Force.

IF An abbreviation of Intermediate Frequency.

IFAX An acronym for International facsimile (FAX) service.

IFG An abbreviation of InterFrame Gap.

IFM An abbreviation of Instantaneous Frequency Measurement.

IFRB An abbreviation of International Frequency Registration Board. The ITU group responsible for allocating frequency bands in the electromagnetic spectrum.

IFS An abbreviation of Ionospheric Forward Scatter. See *ionospheric scatter*.

IGES An acronym for Initial Graphics Exchange Standard.

IGFET An acronym for Insulated Gate Field Effect Transistor. See *transistor*.

IGMP An abbreviation of Internet Group Membership Protocol.

IGP An abbreviation of Interior Gateway Protocol.

IGRP An abbreviation of Interior Gateway Routing Protocol. An Internetworking protocol for routers developed by Cisco Systems Inc.

IHL An abbreviation of Internet Header Length. A 4-bit field in an Internet Protocol (IP) datagram (packet) that specifies the length of the datagram's header in 32-bit words.

IIR An abbreviation of Infinite Impulse Response.

IIR Filter An abbreviation of Infinite Impulse Response Filter.

IISP An abbreviation of Interim Inter-switch Signaling Protocol.

ILD An abbreviation of Injection Laser Diode.

illegal In computer terminology, a term that signifies an element or procedure that is not allowed because it is impossible or would produce invalid results. For example, an 8-bit character is *illegal* in a system that is designed for 7-bit ASCII. (It's not possible to put an 8-bit character into a 7-bit long field.)

illegal character A combination of bits (character), that is not valid in a particular system according to its specification (such as with respect to a specified alphabet, a particular pattern of bits, a rule of formation, or a check code), e.g., any 8-bit ASCII character with a most significant bit of one. (It may be a valid extended ASCII character, however.) Also called *false character*, *forbidden character*, *improper character*, *unallowable character*, and *unused character*.

IM (1) An abbreviation of Intensity Modulation. (2) An abbreviation of InterModulation.

IMAC An acronym for Isochronous Media Access Control.

image (1) A fully processed unit of operational information that is ready for transmission, execution, or use. Examples include:

- An *exact* copy of a computer's working RAM is transferred to a secondary storage device such as a diskette.
- A file, when loaded into the control storage of a unit, determines the operations of that unit.

(2) A graphic, which may contain pictures and/or text. It may be represented as a *bit map* (*raster image*) or a *vector image*. (3) In the field of image processing, a two-dimensional representation of a scene. Also called a *picture*.

image antenna A hypothetical, mirror-image antenna considered to be located as far below ground (ground plane) as the actual antenna is above ground. It is in the same position and orientation as the actual antenna; however, it is reversed.

image frequency In heterodyne receivers, the frequency of an undesired input signal to a *heterodyne* receiver capable of producing the same intermediate frequency (IF) as the desired input frequency.

For example, given a local oscillator frequency of 655 kHz (f) and an IF frequency of 455 kHz (Δf), the two input frequencies are 1110 kHz ($f + \Delta f$) and 200 kHz ($f - \Delta f$), one of which is the desired frequency and the other is the *image frequency*.

image rejection ratio In heterodyne receivers, the ratio of the intermediate frequency (IF) signal level produced by the desired input frequency to that produced by the image frequency of equal power. The image rejection ratio is usually expressed in decibels (dB). Also called *image frequency rejection ratio*.

image resolution The degree of clarity of an image due to the number of pixels per unit area. Facsimile images typically are 203 by 98 or 203 by 198 dots per inch. Laser printers, on the other hand, may be 1200 by 1200 dots per inch or better.

imaginary number A number that multiplied by itself will yield a *negative number*. *Imaginary numbers* are represented by a numeric value and the letter i or j where i or j represents $\sqrt{-1}$. (i is used primarily in the field of mathematics, while j is usually used in engineering.)