

Hargrave's Communications Dictionary

Frank Hargrave

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threshold (1) That point of a transfer function where a change in the input causes an abrupt change in the output. See also *hysteresis* and *Schmitt trigger*. (2) In network management. An attribute value that is used as a cutoff point between significant (or critical) and non-significant events. (3) The smallest value of a parameter that can be detected or causes a specified action by a particular device. For example, the smallest value an analog-to-digital converter can discern. (4) The minimum value a stimulus may have to create a desired effect, e.g., the minimum current necessary for a laser diode to produce coherent emission. (5) A value used to denote predetermined levels. For example:

- The levels in a UART (Universal asynchronous receiver transmitter) transmit or receive buffer.
- Those pertaining to volume of message storage, i.e., in-transit storage or queue storage, used in a message-switching center.

threshold current (1) In a laser, the driving current corresponding to lasing threshold. Currents below this threshold may cause emission; however, it will not be coherent. (2) Of a fuse. The current at which the device becomes current limiting, that is, it becomes an open circuit in a specified period of time.

threshold extension See *FM threshold extension*.

threshold frequency In opto-electronics, the frequency of incident radiant energy below which there is no photoemissive effect.

threshold signal to interference (TSI) ratio The minimum signal to interference power required by a circuit, device, or system to provide a specified performance level.

through group A group of 12 voice-frequency channels transmitted as a unit through a carrier system.

through supergroup An aggregate of 60 voice-frequency channels (five groups) transmitted as a unit through a carrier system.

throughput (1) The *average* transfer rate of actual, error-free, useful information (not including overhead, error bits, or retransmitted bits) through a device or series of devices. See also *transfer rate of information bits (TRIB)*. (2) The maximum capacity of a communications channel or system. (3) A measure of the number of tasks performed by a system over a period of time.

THT An abbreviation of *Token Holding Time*.

THz The SI symbol for terahertz (10^{12} Hz).

TI (1) An abbreviation of *Time In*. (2) An abbreviation of *Texas Instruments Inc.* (3) An abbreviation of *Terminal Interface*.

TIA (1) An acronym for *Telecommunications Industry Association*. A trade group representing about 600 manufacturers. A key player in setting telecommunications standards both in the United States and abroad. (2) An acronym for *Thanks In Advance*. (3) An acronym for *The Internet Adapter*. (4) An acronym for *Telematic Internetworking Application*.

TIA/EIA IS-n See *IS-n*.

TIC (1) An acronym for *Tongue In Cheek*. (2) An acronym for *Token Ring Interface Coupler*. (3) An acronym for *Terminal Identification Code*.

TICS An acronym for *Telecommunication Information Control System*.

tick tone A signal generated by some auto dialers and private automatic branch exchanges (PABXs) that indicates digits are being out-pulsed to the local exchange.

ticker A receive only telex machine typically used to report stock and commodity prices. Information is printed on a one-inch-wide paper tape.

TID (1) An abbreviation of *Transaction ID*. (2) An abbreviation of *Traveling Ionospheric Disturbance*.

TIDF An abbreviation of *Trunk Intermediate Distribution Frame*.

TIDS An acronym for *Technical Information Distribution Service*.

TIE (1) An acronym for *Time Interval Error*. (2) An acronym for *Trusted Information Environment*—an encoding method. (3) An acronym for *Terminal Interface Equipment*.

tie line (1) TIE is an acronym for *Terminal Interface Equipment*. A *TIE line* is a long-distance line leased from a communications carrier for private, nonswitched use. The *TIE line* may be a single voice grade line or may have the capacity of a T-1 or greater link. *TIE lines* are frequently used to connect two or more buildings, facilities, or private branch exchanges (PBXs) of an organization. Also called a *tie trunk*. (2) A transmission line connecting two or more power systems.

tie trunk A dedicated telephone line or channel directly connecting two private branch exchanges (PBXs). See also *tie line*.

TIES An acronym for *Time Independent Escape Sequence*. *TIES* is an *escape sequence*, which is not the same as the escape sequence with guard time (patented by Hayes Computer products) that is now used as the de facto standard for reliable modem operation by modem manufacturers worldwide. A modem supporting only *TIES* will respond to the escape sequence with guard time but will also escape into *command mode* if the chosen escape sequence is embedded in the data being transmitted.

.TIF A graphics file adhering to the *Tagged Image File Format*. See also *TIFF*.

TIF (1) An acronym for *Telecommunications Interference Filter*. (2) An acronym for *Telephone Influence (or Interference) Factor*.

TIFF An acronym for *Tagged Image File Format*. The standard was developed by Microsoft, Aldus, and major scanning hardware vendors as a means to capture and transfer images into publishing applications. There are several image types supported in the standard, that is,

- Black and white,
- Halftone or dithered, and
- Grayscale.

tight buffer In fiber optic cabling, a protective layer that is extruded over the cladding to keep the fiber from moving around or bending too sharply. Tight buffers are commonly used in patch cords and other areas where the cable is likely to be "carelessly" moved.

time (1) The interval between two events, or the duration of an event. (2) An apparently irreversible continuum of ordered events. (3) The designation of an instant on a selected time scale, for example.

- *Local Apparent Time (LAT)*—an early timekeeping scheme based on the Sun's crossing the meridian, that is, when the Sun is due south (for positions in northern temperate latitudes), the time is 12:00 noon. (For positions in the southern temperate latitudes, the Sun will be due north, and for regions between these latitudes, the Sun may be due north or south depending on the season.) Because of the Earth's elliptical orbit and its tilted axis, the time scale is not linear. In fact, it can be off as much as 16 minutes in some seasons. Another problem is caused by the fact that the Earth is