

## **GLOSSARY OF TERMS**

<b>10BASE2</b>	An Ethernet standard that uses a thin coaxial cable. Also called Thin Ethernet. 10-Mbps baseband signal.
<b>10BASE5</b>	The original Ethernet Standard that uses a thick coaxial cable. Also called Thick Ethernet, 10-Mbps.
<b>10BASE-FL</b>	The portion of the 10BASE-F standard that defines a fiber optic link between a concentrator and station. Ethernet over fiber.
<b>100BASE-Tx</b>	A high-speed version of Ethernet (IEEE 802.3). Also called Fast Ethernet, 100BASE-Tx transmits at 100 Mbps.
<b>100BASE-FX</b>	Fast Ethernet, 100 Mbps, IEEE 802.3 standard using fiber optics for communication.
<b>1000BASE-T</b>	1 Gigabit/Second with twisted pair, IEEE 802.3 standard.
<b>AC</b>	Abbreviation for <b>A</b> lternating <b>C</b> urrent.
<b>Access</b>	The ability to manipulate data, or to communicate with a computer resource.
<b>ADSL</b>	Asymmetric Digital Subscriber Line. A high-speed copper wire link that connects a Jetstream IAD to a DSLAM.
<b>Analog</b>	Representation of data that varies in a continuous manner. A voice signal.
<b>ANSI</b>	American National Standards Institute. Main standards development body in USA. ANSI participates in international standards (such as IEC) development on behalf of USA
<b>Amplitude</b>	The maximum value of a varying wave form.
<b>ASCII</b>	American Standard Code for Information Interchange. A coding scheme wherein letters, numbers, and special symbols are represented as unique 7-bit values, allowing for standardization between data communications devices.
<b>ASP</b>	Application Service Provider or Apple Talk Session Protocol
<b>Asynchronous Communication</b>	A serial stream of data sent as generated. Characters are delimited by start and stop bits whose function is to synchronize character bit timing.
<b>ATM</b>	Asynchronous Transfer Mode. A technology used for high-speed packet switching and transmission on a Broadband Integrated Services Digital Network (B-ISDN). ATM is designed to take advantage of high-speed transmission media.
<b>Attenuation</b>	The decrease in magnitude of a wave as it travels through any transmitting medium, such as a cable or circuitry. Attenuation is measured as a ratio or as the logarithm of a ratio (decibel).
<b>Audio Frequency</b>	That range of frequencies lying within the range of human hearing: approximately 20 to 20,000 Hz.
<b>AUI</b>	Abbreviation for Attachment Unit Interface, used with Ethernet.
<b>Auto Negotiation</b>	In case of Ethernet network (LAN), automatically selects 10, 100 or 1000 Mbps network operating speed.
<b>Balanced Line</b>	A cable having two identical conductors with the same electromagnetic characteristics in relation to other conductors and to ground.
<b>Balun</b>	A device for matching an unbalanced coaxial transmission line to a balanced two-wire system. Normally gives impedance transformation, e.g. 100 ohm balanced to 75 ohm unbalanced.
<b>Bandwidth</b>	The difference between the upper and lower limits of a given band of frequencies. Usually expressed in Hertz. In fiber optics, it is expressed as MHz/Km
<b>Baseband</b>	The frequency band occupied by a single or composite signal in its original or unmodulated form.
<b>Baseband Lan</b>	A local area network using baseband signaling.
<b>Baud</b>	A unit of signaling speed equal to the number of signal events per second.

# S.I. TECH

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<b>Bend Loss</b>	A form of increased attenuation caused by (a) having the fiber curved around a restrictive radius of curvature or (b) microbends caused by minute distortions in the fiber imposed by externally induced perturbations.
<b>Bend Radius</b>	Radius of curvature that a fiber optic cable can bend without any adverse effects.
<b>Bert</b>	Bit error rate in digital system.
<b>Bridge</b>	A device that connects two LAN segments together, which may be of similar or dissimilar types, such as Ethernet and Token Ring.
<b>Bluetooth</b>	A short range wireless standard used as a substitute for wire or fiber in portable devices such as cell phones, PDAs or laptop PCs operates in 2.4 GHz range
<b>Buffer</b>	A protective coating over the fiber.
<b>Broadband</b>	A technique for sending data, voice, video information over long distances by sending high frequency signals over coax, UTP, fiber optic cable or wireless.
<b>Carrier Frequency</b>	The electromagnetic wave frequency selected to transmit information. Optical carrier frequency is from the infrared, visible or ultraviolet spectrum areas (1012 Hz and above).
<b>CE</b>	European Union standard applicable to electronic, data communication and other products, EMI/RFI compliance requirements.
<b>Cladding</b>	A low refractive index material that surrounds the core and provides optical insulation and protective of the core.
<b>CLEC</b>	Competitive (or Certified) Local Exchange Carrier. A company that offers local exchange services to end users.
<b>Component Video</b>	An analog video signal in which the luminance and chrominance is carried on 3 lines -Y, Pb, Pr.
<b>Composite Video</b>	Analog video only (No audio) part of a TV signal that mixes Red, Green, Blue and Sync signal on one wire. Applicable standards are NTSC, PAL and SECAM.
<b>Controller</b>	A component of a computer system that directs data traffic within the system.
<b>Core</b>	The light transmission part of the fiber with a refractive index higher than that of the cladding.
<b>CoS</b>	(Class of Service)
<b>C.S.A.</b>	Abbreviation for Canadian Standards Association.
<b>CSMA/CD</b>	Carrier sense multiple access with collision detection, used in Ethernet.
<b>Current Loop</b>	A two wire transmit/receive interface.
<b>Daisy Chain</b>	A connection technique where components are attached in a serial fashion.
<b>Data Communications</b>	Movement of data messages to and from remote system through a medium.
<b>Data Compression</b>	The "squeezing" of data for the purpose of throughput. This squeezing can be done on a character basis by reducing the character size of transmitted and received characters, or on a message basis by eliminating redundant characters.
<b>Data Rate</b>	A measure of the signal rate of a data link.
<b>DCE</b>	Abbreviation for Data Circuit Terminating Equipment. Carrier equipment, installed at the user's premises that provides all the functions required to establish, maintain, and terminate a connection, and which provides the signal conversion and coding between the data terminal equipment and the common carrier's line.
<b>Decibel (dB)</b>	One-tenth of a bel. It is equal to 10 times the logarithm of the power ratio, 20 times the log of the voltage ratio, or 20 times the log of the current ratio. One decibel is the amount by which the pressure of a pure sine wave of sound must be varied in order for the change to be detected by the average human ear. The decibel can express an actual level only when comparing with some definite reference level that is assumed to be zero dB.
<b>Dedicated</b>	Committed to one specific use, such as a dedicated port on a computer to a specified terminal or microcomputer.

<b>Degradation</b>	Deterioration in the quality or speed of data transmission, caused as more users access a computer or computer network.
<b>Dispersion</b>	The cause of bandwidth limitations in a fiber. Dispersion causes a broadening of input pulses along the length of the fiber. Two major types are (a) mode dispersion caused by differential optical path lengths in a multimode fiber, and (b) material dispersion caused by a differential delay of various wavelengths of light in a wave guide material.
<b>Digital</b>	Representation of data by discrete characters (1's and 0's), e.g. 0 or 1
<b>DS3</b>	The DS3 port adapter is used for wide-area connectivity, to link multiple campuses, or to connect to public networks. The DS3 port adapters supports standard BNC coaxial cable connectors.
<b>DSL</b>	Digital Subscriber Line. A technology that uses copper wire pairs for high-speed transmission of voice and data.
<b>DSLAM</b>	Digital Subscriber Line Access Multiplexer.
<b>DTE</b>	Abbreviation for Data Terminal Equipment. The end-user machine, be it terminal, computer, controller, etc., that plugs into a unit that is the termination point of a communications circuit (DCE).
<b>DVI</b>	Digital visual interface – a high performance interface between a computer and a display device.
<b>E1</b>	The European standard for high speed digital transmission at 2048 Mbps.
<b>EBCDIC</b>	Extended binary coded decimal interchange code. A coding scheme wherein letters, numbers and special symbols are represented as unique 8-bit values, allowing for standardization between data communications devices; popularized by IBM.
<b>EIA</b>	Electronic Industries Association (formerly RMA or RETMA).
<b>Echo</b>	Data communications devices typically can be informed that they are to return to the sender all received characters. This is known as echoing characters and can be used to provide positive feedback to the initiator.
<b>Electromagnetic</b>	Referring to the combined electric and magnetic fields caused by electron motion through conductors.
<b>Electromagnetic Coupling</b>	The transfer of energy by means of a varying electrostatic field. Capacitive coupling.
<b>EMF</b>	Abbreviation for Electromotive Force (voltage).
<b>EMI/RFI</b>	Electromagnet interference/Radio frequency interference.
<b>Emulation</b>	Referring to “acts like”. In computer equipment an emulation card makes a PC resemble a certain mainframe or mini-computer to another device.
<b>Encryption</b>	A security feature that changes data so it can be read only by intended receiver.
<b>Ethernet</b>	A baseband local area network specification developed jointly by Xerox Corp., Intel Corp., and Digital Equipment Corp. (DEC) to interconnect computer equipment using coaxial cable, twisted pairs and transceivers.
<b>FCC</b>	Federal communication commission.
<b>Fiber</b>	A single, separate optical transmission element characterized by a core and a cladding.
<b>Fiber Channel</b>	A high speed storage protocol describing an interface used in SANs to connect servers to share storage.
<b>Fiber Optics</b>	Light transmission through optical fibers for communication or signaling.
<b>Firewall</b>	A network node set up as a boundary to prevent one segment’

# S.I. TECH

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<b>FM</b>	Frequency Modulation.
<b>FOIRL</b>	(Fiber Optic InterRepeater Link): An IEEE standard for fiber optic Ethernet.
<b>Frame Relay</b>	A packet-switched network similar to X.25 but with end-to-end error-checking and high-speed transmission rates.
<b>Frequency</b>	The number of times a periodic action occurs in a unit of time. The number of cycles that an electric current completes in 1 second.
<b>Frequency Response</b>	The characteristic of a device denoting the range of frequencies over which it may be used effectively.
<b>Full-Duplex Transmission</b>	Allows for simultaneous bi-directional movement of data communications.
<b>Gateway</b>	A special node that interfaces two or more dissimilar networks, providing protocol translation between the networks.
<b>Gigahertz (GHz)</b>	A unit of frequency equal to one billion hertz.
<b>Graded Index</b>	A type of fiber where the refractive index of the core is lower toward the outside of the fiber. It bends the rays inward and also allows them to travel faster in the lower index of refraction region. This type of fiber provides high bandwidth capabilities.
<b>Ground Loop</b>	A completed circuit between shielded pairs of multiple pair cable created by random contact between the shields. An undesirable circuit condition in which interference is created by ground currents when grounds are connected at more than one point.
<b>Half-Duplex</b>	Allows for movement of communications in both directions, but in a single direction only at any point in time.
<b>HDLC</b>	High-level Data Link Control. The International Standards Organization's physical link protocol. Various manufacturers have their own derivative of HDLC, the most common of which is IBM's SDLC (Synchronous data link control).
<b>HDMI</b>	High definition multimedia interface to combine high definition video, multichannel audio and intelligent format and command data in one cable.
<b>Head-End</b>	A central point in broadband networks that receives signals on one set of frequency bands and retransmits them on another set of frequencies. Viewed as a central hub.
<b>Hertz</b>	The unit of frequency, one cycle per second.
<b>Host Computer</b>	The primary of controlling computer in a multiple computer operation upon which the smaller computers depend to do most work.
<b>Hot Spot</b>	A public place in which an access point provides wireless broadband network service to wireless – equipment thru' WLAN.
<b>IAD</b>	Integrated Access Device. A device that supports voice, data and video streams over a single, high-capacity circuit.
<b>IEEE-488</b>	Institute of Electrical and Electronic Engineers 488. An IEEE standard parallel interface bus consisting of eight bi-directional data lines and eight signal grounds, which provides for connection to an IEEE-488 device.
<b>IEEE-802</b>	Standards for the interconnection of local area networking computer equipment. It deals with the Physical and Link Layers of the ISO/OSI reference model.
<b>ILEC/PPT</b>	Incumbent Local Exchange Carrier
<b>Impedance</b>	The total opposition a circuit, cable or component offers to alternating current. It includes both resistance and reactance and is generally expressed in ohms.
<b>Impedance Characteristic</b>	In a transmission cable of infinite length, the ratio of the applied voltage to the resultant current at the point the voltage is applied. Or, the impedance which makes a transmission cable seem infinitely long, when connected across the cable's output terminals. For a wave guide, it is the ratio of rms voltage to total rms longitudinal current at certain point on a diameter, when the wave guide is

	match terminated.
<b>Inductance</b>	A property of a conductor or circuit which resists a change in current. It causes current changes to lag behind voltage changes and is measured in henrys.
<b>Injection Laser Diode (Source)</b>	Sometimes called the semiconductor diode. A laser in which the lasing occurs at the junction of n-type and p-type semiconductor materials.
<b>Interface</b>	The place where two systems or a major and a minor system meet and interact with each other.
<b>Interference</b>	Disturbances of an electrical or electromagnetic nature that introduce undesirable responses into other electronic equipment.
<b>Internet</b>	The worldwide computer network used for reference, e-mail, and other services.
<b>Intranet</b>	A network that connects a related set of standard Internet protocols and files in HTML format with employees using Internet browsers in an organization's network and with in corporate firewalls.
<b>IP (Internet Protocol)</b>	The protocol used in gateways to connect networks at the OSI Network Level (Layer T3 ) and above. IP routes a message across networks.
<b>IPSEC (IP Security)</b>	An IETF working group tasked with developing standards for security protocols to provide IP security services that will support combinations of authentication, integrity, access control and confidentiality.
<b>ISDN</b>	Integrated Services Digital Network: Communication protocol, offered by telephone companies that permits telephone networks to carry data, voice, and other source traffic.
<b>ISO/OSI Reference Model</b>	The International Standards Organization Reference Model for Open Systems interconnection. A standard approach to network design that introduces modularity by dividing the complex set of functions into more manageable, self-contained, functional slices.
<b>Isolation</b>	The ability of a circuit or component to reject interference, usually expressed in dB.
<b>IXC</b>	Inter-Exchange Carrier. These are typically long-distance phone companies.
<b>KPSI</b>	Tensile strength in thousands of pounds per square inch.
<b>Laser</b>	A coherent source of light with a narrow beam and a narrow spectral bandwidth.
<b>Line Driver</b>	A power amplifier for local data transmission.
<b>Link</b>	The combination of communication devices, media and software intelligence that is required to effect data.
<b>Light-Emitting Diode</b>	A semiconductor device that emits incoherent light formed by the P-N junction. Light intensity is roughly proportional to electrical current flow.
<b>Local Area Network (LAN)</b>	A network that is located in a localized geographical area, such as an office, building, complex of buildings or campus, with communications technology that provides a high-bandwidth, low-cost medium to which many nodes can be connected.
<b>Megahertz (Mhz)</b>	Unit of frequency equal to one million hertz.
<b>Micron</b>	Millionth of a meter= $10^{-6}$ meter.
<b>Mode</b>	A permitted electromagnetic field pattern within an optical fiber.
<b>Modem</b>	Device that converts signals in one form to another form compatible with another kind of equipment. (Modulator – demodulator)
<b>Modular</b>	A style of easily connected or disconnected components.
<b>Modulation</b>	The coding of information onto the carrier frequency. Modulation means include (among others) amplitude, frequency, or phase, plus many forms of on-off digital coding.
<b>MPLS</b>	Multiprotocol Label Switching traffic engineering software enables an MPLS backbone to replicate and expand upon the traffic engineering capabilities of Layer 2 ATM and Frame Replay networks.

<b>Multiplex</b>	Placing two or more signals into a single channel.
<b>Multiplexing</b>	The use of common physical channel to make two or more logical channels, either by splitting the frequency band transmitted by the common channel into narrower bands, each of which is used to constitute a distinct channel (frequency division multiplex), or by allotting this common channel in turn to constitute different, intermittent channels (time division multiplex).
<b>Multiplexer</b>	Equipment that permits simultaneous transmission of multiple signals over one physical circuit.
<b>Multi-tasking</b>	The sharing of routines, data space and files to execute several jobs at once.
<b>Nanometer (nm)</b>	One billionth of a meter $10^{-9}$ meter.
<b>NEC</b>	National Electrical Code.
<b>Network</b>	A logical arrangement of data communications devices and software whose purpose is to provide data processing capabilities to end users at optimal efficiency.
<b>Network Interface Controller</b>	A communications device that allows interconnection of information processing devices to a network.
<b>Network Management</b>	Administrative services performed in managing a network, such as network topology and software configuration, downloading of software, monitoring network performance, maintaining network operations, and diagnosing and troubleshooting problems.
<b>Nibble</b>	One half byte (4 bite)
<b>Node</b>	Interface unit, or station, that contains logic for measuring the flow of network traffic that passes through it. May be connected to more than one device.
<b>Noise</b>	In a cable or circuit, any extraneous sound or signal which tend to interfere with the sound or signal normally present in or passing through the system.
<b>Null Modem</b>	A device that connects two DTEs directly by emulating the physical connections of DCE.
<b>Numerical Aperture (NA)</b>	A measure of the angular acceptance for a fiber. It is approximately the size of the half-angle of the acceptance cone. $NA = \sqrt{n_1^2 - n_2^2}$ Where $n_1$ and $n_2$ are respectively, the refractive index of the core and the cladding.
<b>OC-1 (Optical Carrier Level 1)</b>	The lowest optical-transmission rate in the SONET standard, 51.48 Mbps.
<b>OC-3</b>	155 Megabit per second connection often associated with an ATM or Packet over SONET link.
<b>Octopus Cable</b>	A fan-out cable with multiple baluns and one 25 pair telco connector.
<b>Ohm</b>	The electrical unit of resistance. The value of resistance through which a potential difference of one volt will maintain a current of one ampere.
<b>ONS</b>	(Optical Networking System)
<b>Optical Waveguide Fiber</b>	A transparent filament of high refractive index core <i>and</i> low refractive index cladding that transmits light.
<b>PABX</b>	Private Automatic Branch Exchange. Equipment originally used as a means of switching telephone calls within a business site and from the site to outside lines. Can also be used for low-speed transmission of data in addition to voice.
<b>Packet</b>	A collection of bits that contain both control information and data. The basic unit of transmission in a packet-switched network. Control information is carried in the packet, along with the data; to provide for such functions as addressing, sequencing, flow control, and error control at each of several protocol levels. A packet can be of fixed or variable length but generally has a specified length.
<b>Packet Format</b>	The exact order and size of the various control and information fields of a packet, including header, address and data fields.

<b>Packet Overhead</b>	A measure of the ratio of total packet bits occupied by control information to the number of bits of data, usually expressed as a percent.
<b>Packet Switching</b>	A method in which data is transmitted in addressed packets and a transmission channel is only occupied for the duration of packet transmission. The channel is then available for use by packets being transferred between different data terminal equipment.
<b>Parity</b>	The integrity of each character transmitted over a communications link can be tested by generation and subsequent checking of character parity. Computed using the bit-wise “or” of the character bits and added a bit to get an even or odd results.
<b>Phase</b>	The location of a position on a waveform of an alternating quality, in relation to the start of a cycle. Measured in degrees, with 360 corresponding to one complete cycle.
<b>Phase Shift</b>	A change in the phase relationships between two alternating quantities.
<b>POE</b>	Power over Ethernet.
<b>Photo detector (receiver)</b>	Transforms light into electricity. The silicon photo diode is most commonly used for relatively fast speeds and good sensitivity in the 0.75 $\mu\text{m}$ to 0.95 $\mu\text{m}$ wavelength region. Avalanche photodiodes (APD) combines the detection of optical signals with internal amplification of photocurrent. The internal gain is realized through avalanche multiplication of carriers in the junction region. The advantage in using an APD is its higher signal-to-noise ration, especially at high bit rates.
<b>Pin-diode</b>	A photodetector used to convert optical signals to electrical signals in a receiver.
<b>Point-to-point</b>	Transmission of data between only two nodes, one sender and one receiver.
<b>Polling</b>	The continuous checking of device status. A method of controlling the transmission sequence by requiring each device on a multipoint line to wait until the controlling processor requests it to transmit.
<b>PoP (Point of Presence)</b>	In OSS, a physical location where an interexchange carrier has installed equipment to interconnect with an LEC (local exchange carrier).
<b>Propagation Delay</b>	Time required for a signal to pass from the input to the output of a device.
<b>Protocol</b>	A set of rules and conventions that governs the orderly and meaningful exchange of information between or among communicating parties. Hardware and software protocols can be defined.
<b>Protocol Converter</b>	A device for translating the data transmission code and/or protocol of one network or device to the corresponding code or protocol of another network or device, enabling equipment with different conventions to communicate with one another.
<b>Public Data Network (PDN)</b>	A packet-switched or circuit-switched network that is available for use by many customers. A PDN may offer value-added services at a reduced cost because of communications resource sharing, and it will usually provide increased reliability due to built-in redundancy.
<b>QoS (Quality of Service)</b>	Measure of performance for a transmission system that reflects its transmission quality and service ability.
<b>Receiver</b>	An electronic package that converts the optical signal to an electrical signal.
<b>Refractive Index</b>	The ratio of light velocity in a vacuum to its velocity in the transmitting medium.
<b>Repeater</b>	Bi-directional device that amplifies or resynchronizes signals into standard voltages, currents and timing.
<b>Resistance</b>	In dc circuits, the opposition a material offers to current, measured in ohms. In ac circuits, resistance is the real component of impedance and may be higher than the value measured at dc.



<b>Response Time</b>	The interval between the execution of a command or inquiry at a terminal and the subsequent receipt of a response at the same terminal.
<b>Ring</b>	A network topology in which stations are connected to one another in a closed, logical circle. Typically, access to the media passes sequentially from one station to the next by means of polling from a master station, or by passing an access token from one station to another.
<b>ROHS</b>	.Restriction of hazardous substances – European Union (EU) directive banning use of six hazardous materials in electrical and electronic equipment.
<b>Router</b>	A computer system that stores and forwards data packets by way of network address between LANs and WANS.
<b>RS-232C</b>	A technical specification that specifies mechanical and electrical characteristics of the interface for connecting DTE to DCE. It defines interface circuit functions and their corresponding connector pin assignments. The standard applies to both a synchronous and synchronous serial binary data transmission at speeds up to 20 kilobits per second in half- or full-duplex mode. It defines 20 specific functions and the physical connection is made through plug-in, 25-pin connectors.
<b>RS-422</b>	A standard operating in conjunction with RS-449 that specifies the electrical characteristics for balanced circuits, that is, circuits with their own ground leads.
<b>RS-449</b>	A standard for DTE/DCE connection that specifies interface requirements for expanded transmission speeds, up to 2 megabits per second (Mbps), longer cable lengths, and 10 additional functions. It applies to binary, serial, asynchronous and synchronous communication in half- or full-duplex mode. The physical connection is made through a 37-contact connector; a separate 9-contact connector is specified to service secondary channel interchange circuits when used.
<b>RS-485</b>	A standard which specifies electrical characteristics of generators and receivers for use in balanced multiport systems.
<b>RS-530</b>	Similar to RS-449, uses DB25 connector and supports RS-422, RS-423, RS-485 and V.35.
<b>SAN</b>	Storage area network – a network of storage devices.
<b>SDH</b>	(Synchronous Digital Hierarchy)
<b>SDLC</b>	(Synchronous Data Link Control): IBM computer networking protocol associated with SNA. It provides for a control of a single communications link or line, accommodates a number of networking arrangements, and operates in half- or full-duplex over private or switched facilities.
<b>Serial Interface</b>	An interface requiring serial transmission or the transfer of information in which the bits composing a character are sent sequentially.
<b>Serial Transmission</b>	Transmission of one bit at a time.
<b>Server</b>	A processor that provides a specific service to the network. An example is a file server, which provides an interface between compatible peripheral devices on a LAN.
<b>SFP</b>	Small form factor pluggable optical transceiver.
<b>Simplex Communications</b>	Allows movement in a single direction only.
<b>Single-Ended</b>	Unbalanced, such as grounding one side of a circuit or transmission line.
<b>Single Mode Fiber</b>	A fiber wave-guide in which only one mode will propagate. The fiber has a very small core diameter of approximately 8µm. It permits signal transmissions at extremely high bandwidths and is generally used with laser diodes.
<b>Skew Rays</b>	A ray that does not intersect the fiber axis. Generally, a light ray that enters the fiber core at a very high angle.
<b>SNA</b>	Systems Network Architecture: Network for moving IBM mainframe data.

# S.I. TECH

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<b>Source</b>	The means (usually LED or laser) used to convert an electrical information-carrying signal into a corresponding optical signal for transmission by an optical wave-guide.
<b>Spectral Bandwidth</b>	The difference between wavelengths at which Bandwidth the radiant intensity of illumination is half its peak intensity.
<b>Speed of Light (c)</b>	2.998 X 10 <sup>8</sup> meters per second.
<b>Splicing</b>	permanent joining of identical or similar fiber ends without a connector.
<b>Star</b>	A network topology consisting of one central node with point-to-point links to several other nodes. Control of the network is usually located in the central node or switch, with all routing of network message traffic performed by the central node.
<b>Start Bit</b>	Serial asynchronous data transmission relies upon the start bit to signify to the receiver that a character follows. The start bit is longer in duration than normal data bits, and this extended length allows it to be distinguished from normal data bits.
<b>Station</b>	A network node.
<b>Step-Index Fiber</b>	A fiber in which the core is of a uniform refractive index and there is a sharp decrease in the index of refraction at the cladding.
<b>Stop Bit(s)</b>	Serial asynchronous data transmission relies upon the stop bit(s) to signify to the receiver that no more data bits follow. Stop bits are longer in duration than normal data bits and this extended length allows them to be distinguished from normal data bits. Serial communications may be configured to allow for either 1, 1.5, or 2 stop bits (however, the most common number is 1).
<b>T1</b>	A digital carrier facility used to transmit a DS-1 formatted digital signal at 1-544 Mbps. (24 voice channels at 64 Kbps)
<b>Tap</b>	A Device in the feeder cable that connects a device to a network.
<b>TCP/IP</b>	Transmission control protocol/Internet protocol. A specification that conforms to the latest Department of Defense Arpanet standard. The protocol corresponds to layers three and four of the ISO/OSI model.
<b>TDM</b>	Time Division Multiplexing. A method of using channel capacity efficiently, in which each node is allotted a small time interval, in turn, during which it may transmit a message or portion of a message. Nodes are given unique time slots during which they have exclusive command of the channel. The messages of many channels are interleaved for transmission and then de-multiplexed into their proper order at the receiving end.
<b>Terrabits</b>	1 Trillion Bits
<b>Throughput</b>	The total useful information processed or communicated during a specified time period. Expressed in bits per second or packets per second.
<b>Token Bus</b>	A network with a bus or tree typology using token passing access control.
<b>Token Passing</b>	A method whereby each device on a local area network receives and passes the right to use the channel. Tokens are special bit patterns or packets, usually several bits in length, which circulate from node to node when there is no message traffic. Possession of the token gives exclusive access to the network for message transmission.
<b>Token Ring</b>	The token access procedure used on a network with a sequential or ring topology.
<b>Topology</b>	Network topology can be centralized or distributed. Centralized networks, or star-like networks, have all nodes connected to a single node. Alternative topology is distributed; that is, in the limit each node is connected to every other node. Typical topology names include bus, ring, star, and tree.
<b>Traffic</b>	The measurement of data movement, volume, and velocity over a communications link.

<b>Transceiver</b>	A device required in baseband networks that takes the digital signal from a computer or terminal and imposes it on the baseband medium.
<b>Transceiver Cable</b>	Cable connecting the transceiver to the network interface controller, allowing nodes to be placed away from the baseband medium.
<b>Transmission Line</b>	An arrangement of two or more conductors or a wave-guide used to transfer signal energy from one location to another.
<b>Transmission Medium</b>	The physical mechanism that allows for signals to be passed from one data communications device to another.
<b>Transmitter</b>	The electronic package that converts an electrical signal to an optical signal.
<b>Transparency</b>	A data communications mode that enables equipment to send and receive bit patterns of any form, without regard to interpretation as control characters. The user is unaware that this is taking place.
<b>Trunk Cable</b>	See Feeder Cable.
<b>U.L.</b>	Underwriters Laboratories, Inc.
<b>Unbalance Line</b>	A transmission line in which voltages on the two conductors are unequal with respect to ground, e.g., a coaxial cable.
<b>USB</b>	Universal Serial Bus – used for attaching peripherals to computers(PCs)
<b>Velocity of Propagation</b>	The transmission speed of an electrical signal down a length of cable compared to speed in free space. Usually expressed as a percentage.
<b>VLAN</b>	Virtual LAN – a group of devices on a LAN or LANs that are configured for communications as if they were attached to the same wire, when in reality they are on a number of different LAN segments.
<b>VoDSL</b>	(Voice over Digital Subscriber Line)
<b>VoIP</b>	(Voice over Internet Protocol)
<b>VPN (Virtual Private Network)</b>	An encrypted connection between private networks over a public network, such as the Internet.
<b>WAN</b>	(Wide Area Network)
<b>WDM</b>	(Wavelength Division Multiplexing)
<b>Wave Form</b>	A graphical representation of a varying quantity. Usually, time is represented on the horizontal axis, and the current or voltage value is represented on the vertical axis.
<b>Wavelength</b>	The distance between the nodes of a wave. The ratio of the velocity of the wave to the frequency of the wave.
<b>WEEE</b>	Waste Electrical and Electronic Equipment directive of European Union controls regarding end of life disposal and recycling of equipment.
<b>WI-FI</b>	Wireless fidelity, refer to IEEE 802.11 standard for WI-FI network
<b>WI-MAX</b>	Wireless broadband network, refer to IEEE 802.16 standard. World wide Interoperability for microwave access.
<b>WLAN</b>	Wireless LAN
<b>X.25</b>	A CCITT (Consultative Committee on International Telegraphy and Telephone) standard that defines the interface between a public display network (PDN) and a packet-mode user device (DTE). It also defines the services that these user devices can expect from the X.25 PDN, including the ability to establish virtual circuits through a PDN to another user device, to move data from one user device to another, and to destroy the virtual circuit when through.
<b>XDSL</b>	Group term used to refer to ADSL, HDSL, SDSL and VDSL. All are digital technologies using the existing copper infrastructure provided by the telephone companies. XDSL is a high-speed alternative to ISDN.