Cisco Systems
Networking Academy

Course Glossary

Cisco Networking Academy Program

IP Telephone v1.0

NOTE: The Course Glossary for *IP Telephony* v1.0 highlights and defines key terms and acronyms used throughout this course. Many of these terms are also described in the Cisco Internetworking Terms and Acronyms resource, available via http://www.cisco.com.

Acronym or Term	Definition
3DES	Triple Data Encryption Standard. A stronger form of the Data Encryption Standard (DES), 3DES follows a pattern of encryption/decryption/encryption. 3DES has many different variations.
AAL1	ATM adaptation layer 1. One of four AALs recommended by the ITU-T. AAL1 is used for connection-oriented, delay-sensitive services requiring constant bit rates, such as uncompressed video and other isochronous traffic.
ABR	available bit rate. QoS class defined by the ATM Forum for ATM networks. ABR is used for connections that do not require timing relationships between source and destination. ABR provides no guarantees in terms of cell loss or delay, providing only best-effort service. Traffic sources adjust their transmission rate in response to information they receive describing the status of the network and its capability to successfully deliver data.
access rate	*See* AR.
adaptive differential pulse code modulation	*See* ADPCM.
adaptive predictive coding	*See* APC.
Ad-Hoc conference	A conference call feature where a conference is started by an initiator and only the initiator of the conference can add people into the conference.
admission request	*See* ARQ.
ADPCM	adaptive differential pulse code modulation. A waveform process by which analog voice samples are encoded into digital signals.
advanced integration module	*See* AIM.
Advanced Research Projects Agency	*See* ARPA.
AF	Assured Forwarding. A means of providing different levels of forwarding assurances for IP packets. This method is used by providers who offer differentiated services to their customers.
AIM	advanced integration module. A module in some Cisco routers that provides enhanced processing capabilities to the routers.
alternate mark inversion	*See* AMI.
American National Standards Institute	*See* ANSI.
AMI	alternate mark inversion. Line-code modulation type used on T1 and E1 circuits. In AMI, marks (or ones) cause a pulse in alternating positive and negative directions, while zeros never pulse. Two pulses of the same polarity are not allowed. AMI requires that the sending device maintain ones density. Ones density is not maintained independently of the data stream. Sometimes called *binary coded alternate mark inversion*.
ANI	automatic number identification. SS7 feature in which a series of digits, either analog or digital, are included in the call, identifying the telephone number of the calling device. In other words, ANI identifies the number of the calling party. *See also* CLID.
ANSI	American National Standards Institute. A voluntary organization composed of corporate, government, and other members that coordinates standards-related activities, approves U.S. national standards, and develops positions for the United States in international standards organizations. ANSI helps develop international and U.S. standards relating to, among other things, communications and networking. ANSI is a member of the International Electrotechnical Commission (IEC) and the International Organization for Standardization (ISO).

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Acronym or Term	Definition
APC	adaptive predictive coding. A narrowband analog-to-digital conversion technique employing a one-level or multilevel sampling system in which the value of the signal at each sample time is adaptively predicted to be a linear function of the past values of the quantized signals. APC is related to LPC in that both use adaptive predictors. However, APC uses fewer prediction coefficients, thus requiring a higher bit-rate than LPC.
API	application programming interface. The means by which an application program talks to communications software. Standardized APIs allow application programs to be developed independently of the underlying method of communication. A set of standard software interrupts, calls, and data formats that computer application programs use to initiate contact with other devices (for example, network services, mainframe communications programs, or other program-to-program communications). Typically, APIs make it easier for software developers to create the links that an application needs to communicate with the operating system or with the network.
application programming interface	*See* API.
AR	access rate. (1) The maximum data rate of the access channel, typically referring to access to broadband networks and network services. (2) A Frame Relay term that addresses the maximum transmission rate supported by the access link into the network, and the port speed of the device (switch or router) at the edge of the carrier network. The AR defines the maximum rate for data transmission or receipt. *See also* CIR.
ARPA	Advanced Research Projects Agency. Research and development organization that is part of Department of Defense (DoD). ARPA is responsible for numerous technological advances in communications and networking. ARPA evolved into Defense Advanced Research Projects Agency (DARPA), and then back into ARPA again (in 1994).
ARQ	admission request. An RAS admission message defined as an attempt by an endpoint to initiate a call.
AS5300	A series of Cisco gateways that provide reliable, scalable, and feature-rich data and voice gateway functionality. The Cisco AS5300 Series Universal Gateways include the Cisco AS5300 Access Server/Voice Gateway and the Cisco AS5350 Universal Gateway.
Assured Forwarding	*See* AF.
Asynchronous Transfer Mode	*See* ATM.
ATM	Asynchronous Transfer Mode. The international standard for cell relay in which multiple service types (such as voice, video, or data) are conveyed in fixed-length (53-byte) cells. Fixed-length cells allow cell processing to occur in hardware, thereby reducing transit delays. ATM is designed to take advantage of high-speed transmission media, such as E3, SONET, and T3.
ATM adaptation layer 1	*See* AAL1.
automatic number identification	*See* ANI.
available bit rate	*See* ABR.
B8ZS	binary 8-zero substitution. Line-code modulation type used on T1 circuits. In B8ZS, marks (or ones) cause a pulse in alternating positive and negative directions, while zeros never pulse. Two pulses of the same polarity are not allowed, except when inserting a code to represent eight zeros. B8ZS maintains ones density by inserting a special code in place of eight consecutive zeros. The special code contains intentional violations of the bipolar pattern.
bandwidth change request	*See* BRQ.
basic call	*See* BC.
BC	basic call. A call between two users that does not require Advanced Intelligent Network Release 1 features (e.g., a POTS call).

Acronym or Term	Definition
Bc	committed burst. Negotiated tariff metric in Frame Relay internetworks. The maximum amount of data (in bits) that a Frame Relay internetwork is committed to accept and transmit above the CIR. *See also* Be *and* CIR.
Be	excess burst. Negotiated tariff metric in Frame Relay internetworks. The number of bits that a Frame Relay internetwork attempts to transmit after Bc is accommodated. Be data, in general, is delivered with a lower probability than Bc data because Be data can be marked as DE by the network. *See also* Bc.
Bell operating company	*See* BOC.
BHCA	busy hour call attempts. A traffic engineering term that refers to the number of call attempts made during the busiest hour of the day.
binary 8-zero substitution	*See* B8ZS.
BLF	busy lampfield. A visual display of the status of all or some of your phones. Your BLF tells you if a phone is busy or on hold. Your BLF is typically attached to or part of your operator phone.
BOC	Bell operating company. BOC is a term for any of the 22 original companies (or their successors) that were created when AT&T was broken up in 1983 and given the right to provide local telephone service in a given geographic area. The companies had previously existed as subsidiaries of AT&T and were called the ”Bell System.” The purpose of the breakup was to create competition at both the local and long-distance service levels. BOCs compete with other, independent companies to sell local phone service. In certain areas, long-distance companies, including AT&T, can now compete for local service. Collectively, companies offering local phone service are referred to legally as local exchange carriers (LECs). BOCs are not allowed to manufacture equipment and were initially not allowed to provide long-distance service. The Telecommunications Act of 1996 now permits them to engage in long-distance business under certain circumstances. As of 1996, the BOCs consisted of original and successor companies to: Bell Telephone Company of Nevada, Illinois Bell, Indiana Bell, Michigan Bell, New England Telephone and Telegraph Company, New Jersey Bell, New York Telephone Company, U S West Communications Company, South Central Bell, Southern Bell, Southwestern Bell, Bell Telephone of Pennsylvania, The Chesapeake and Potomac Telephone Company, The Chesapeake and Potomac Telephone Company of Maryland, The Chesapeake and Potomac Telephone Company of Virginia, The Diamond State Telephone Company, The Ohio Bell Telephone Company, The Pacific Telephone and Telegraph Company, and the Wisconsin Telephone Company.
BRI voice module	*See* BVM.
BRQ	bandwidth change request. RAS bandwidth control message sent by endpoint to gatekeeper requesting an increase/decrease in call bandwidth.
busy hour call attempts	*See* BHCA.
busy lampfield	*See* BLF.
BVM	BRI voice module. An optional device for Cisco modular routers providing four ISDN BRI ports for connection to ISDN PBXs or PINXs. The BVM has four ISDN BRI ports for voice traffic. Each BRI port supports two voice channels (ISDN B channels) and one signaling channel (ISDN D channel).
calling line ID	*See* CLID.
CAS	channel associated signaling. The transmission of signaling information in association with the voice channel. In T1 networks, CAS signaling often is referred to as “robbed-bit” signaling because the network is robbing user bandwidth for other purposes.
CBR	constant bit rate. QoS class defined by the ATM Forum for ATM networks. CBR is used for connections that depend on precise clocking to ensure undistorted delivery.

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Acronym or Term	Definition
CBWFQ	class-based weighted fair queuing. Congestion management mechanism that extends the standard WFQ functionality to provide support for user-defined traffic classes.
CCIS	common channel interoffice signaling. A technology that uses a common link to carry signaling information for a number of trunks. CCIS is similar to ITU-T SS6 protocol that operated at low bit rates (2.4, 4.8, and 9.6 kbps) and transmitted messages that were only 28 bits in length.
CCITT	Consultative Committee for International Telegraph and Telephone. Former name for the International organization responsible for the development of communications standards. Now called the ITU-T. *See also* ITU-T.
CCS	common channel signaling. Signaling system used in telephone networks that utilizes a statistical multiplexing protocol for signaling. A specified channel is exclusively designated to carry signaling information for all channels in the system. An example is ISDN or SS7. *See also* SS7.
CDVT	cell delay variation tolerance. In ATM, a QoS parameter for managing traffic that is specified when a connection is set up. In CBR transmissions, CDVT determines the level of jitter that is tolerable for the data samples taken by the PCR. *See also* CRB.
cell delay variation tolerance	*See* CDVT.
CELP	code excited linear prediction. Compression algorithm used in low bit-rate voice encoding. Used in ITU-T Recommendations G.728, G.729, G.723.1.
central office	*See* CO.
centum call seconds	Units used to measure traffic load. A CCS is 1/36th of an erlang. The formula for a centum call second is the number of calls per hour multiplied by their average duration in seconds, all divided by 100.
CES	circuit emulation service. Enables users to multiplex or to concentrate multiple circuit emulation streams for voice and video with packet data on a single high-speed ATM link without a separate ATM access multiplexer.
channel associated signaling	*See* CAS.
channel ID	*See* CID.
CID	channel ID. Designates the Frame Relay subchannel ID for Voice over Frame Relay.
CIR	committed information rate. The rate at which a Frame Relay network agrees to transfer information under normal conditions, averaged over a minimum increment of time. CIR, measured in bits per second, is one of the key negotiated tariff metrics. *See also* Bc.
circuit emulation service	*See* CES.
Cisco Architecture for Voice, Video and Integrated Data	*See* Cisco AVVID.
Cisco AVVID	Cisco Architecture for Voice, Video and Integrated Data. Cisco AVVID is the architecture for Voice, Video and Integrated Data. Cisco AVVID includes three components: infrastructure, such as switches and routers; clients, such as IP Phones, H.323 videoconferencing equipment, and PCs; and applications, such as call control, that use a common IP network.
Cisco CallManager	Software-based call-processing agent. It is a component of the Cisco IP telephony solution, part of Cisco AVVID. The software extends enterprise telephony features and functions to packet telephony network devices such as IP Phones, media processing devices, VoIP gateways, and multimedia applications.
Cisco.com	The name of the Cisco Systems external website.

Acronym or Term	Definition
Cisco ICM software	Cisco Intelligent Call Management software. Software, which delivers an integrated suite of contact center capabilities. Cisco ICM software provides intelligent queue management in a contact center environment. It enables improved queue management across a variety of ACDs from different vendors as well as integrating IVRs, database and desktop applications, and CTI solutions
Cisco Intelligent Call Management software	*See* Cisco ICM software.
Cisco IOS	Cisco Systems software that provides common functionality, scalability, and security for all products under the CiscoFusion architecture. Cisco IOS software allows centralized, integrated, and automated installation and management of internetworks while ensuring support for a wide variety of protocols, media, services, and platforms.
Cisco IPCC	Cisco IP Contact Center. An integrated suite of products that enables contact center agents using Cisco IP Phones to receive both TDM and VoIP calls. IPCC provides ACD and IVR capabilities in a single-vender IP suite. The IPCC can be implemented in a single-site environment or integrated into an enterprise-wide multisite contact center.
Cisco IP Contact Center	*See* Cisco IPCC.
Cisco IP Phone	The Cisco family of IP Phones provides a complete range of intelligent communication systems that use the data network while providing the convenience and ease of use of a business telephone.
Cisco IP SoftPhone	A Windows-based application for the PC. Used as a standalone end station or in conjunction with the Cisco IP Phone, it provides mobility, directory integration, user interface, and a virtual conference room.
class-based weighted fair queuing	*See* CBWFQ.
CLEC	competitive local exchange carrier. A company that builds and operates communication networks in metropolitan areas and provides its customers with an alternative to the local telephone company. In the United States, a CLEC is a company that competes with the already established local telephone business by providing its own network and switching. The term distinguishes new or potential competitors from established local exchange carriers (LECs) and arises from the Telecommunications Act of 1996, which was intended to promote competition among both long-distance and local phone service providers. North American Telecom and Winstar Communications are examples of CLECs, which are generally listed as simply “local exchange carriers.”
CLI	command-line interface. An interface that allows the user to interact with the operating system by entering commands and optional arguments. The UNIX operating system and Microsoft MS-DOS provide CLIs.
CLID	calling line ID. Information about the billing telephone number from which a call originated. The CLID value might be the entire telephone number, the area code, or the area code plus the local exchange. Also known as Caller ID.
CNG	comfort noise generation. While using VAD, the DSP at the destination emulates background noise from the source side, preventing the perception that a call is disconnected.
CO	central office. The local telephone company office to which all local loops in a given area connect and in which circuit switching of subscriber lines occurs.
“Codebook” excitation index	Used by the receiver to look up a set of excitation values. A codebook is a set of rules that helps to determine what conditions indicate a Cisco device fault.
code excited linear prediction	*See* CELP.
comfort noise generation	*See* CNG.

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Acronym or Term	Definition
command-line interface	*See* CLI.
committed burst	*See* Bc.
committed information rate	*See* CIR.
common channel interoffice signaling	*See* CCIS.
common channel signaling	*See* CCS.
competitive local exchange carrier	*See* CLEC.
Compressed Real-Time Transport Protocol	*See* CRTP.
computer telephony integration	*See* CTI.
Conjugate Structure Algebraic Code Excited Linear Prediction	*See* CS-ACELP.
constant bit rate	*See* CBR.
Consultative Committee for International Telegraph and Telephone	*See* CCITT.
CPE	customer premises equipment. (1) Terminating equipment, such as terminals, telephones, and modems, installed at customer sites, and connected to the telephone company network. (2) Any telephone equipment residing on the customer site.
CRC	cyclic redundancy check. Error-checking technique in which the frame recipient calculates a remainder by dividing frame contents by a prime binary divisor and compares the calculated remainder to a value stored in the frame by the sending node.
cross-connect (adj.) cross connect (n, v)	Cross connect is a connection scheme between cabling runs, subsystems, and equipment, using patch cords or jumpers that attach to connecting hardware on each end. Cross-connection is the attachment of one wire to another, usually by anchoring each wire to a connecting block and then placing a third wire between them so that an electrical connection is made. The TIA/EIA-568-A standard specifies that cross-connect cables (also called patch cords) are to be made out of stranded cable.
CRTP	Compressed Real-Time Transport Protocol. A type of header compression designed to reduce the IP/UDP/RTP headers to two bytes for most packets in the case where no UDP checksums are being sent, or four bytes with checksums.
CS-ACELP	Conjugate Structure Algebraic Code Excited Linear Prediction. CELP voice compression algorithm providing 8 kbps, or 8:1 compression, standardized in ITU-T Recommendation G.729 or G.729A.
CTI	computer telephony integration. The name given to the merger of traditional telecommunications (PBX) equipment with computers and computer applications. The use of caller ID to retrieve customer information automatically from a database is an example of a CTI application.
customer premises equipment	*See* CPE.
cyclic redundancy check	*See* CRC.
DACS	digital access and crossconnect system. A digital cross-connect system that provides grooming, switching, and aggregation.

Acronym or Term	Definition
data carrier detect	*See* DCD.
data circuit-terminating equipment (ITU-T expansion)	*See* DCE.
data communications equipment (EIA expansion)	*See* DCE.
data-link connection identifier	*See* DLCI.
data terminal equipment	*See* DTE.
data terminal ready	*See* DTR.
dB	decibel. Unit for measuring relative power ratios in terms of gain or loss. The rule of thumb to remember is that 10 dB indicates an increase (or a loss) by a factor of 10; 20 dB indicates an increase (or a loss) by a factor of 100; 30 dB indicates an increase (or a loss) by a factor of 1000.
DCD	data carrier detect. Signal from the DCE (modem or printer) to the DTE (typically your PC), indicating that the modem is receiving a carrier signal from the DCE (modem) at the other end of the telephone circuit.
DCE	data communications equipment (EIA expansion). data circuit-terminating equipment (ITU-T expansion). Devices and connections of a communications network that comprise the network end of the user-to-network interface. The DCE provides a physical connection to the network, forwards traffic, and typically provides a clocking signal used to synchronize data transmission between DCE and DTE devices. Modems and interface cards are examples of DCE.
DDS	digital data service. A class of service that is offered by telecommunications companies to transport data rather than voice. Originally called Dataphone Digital Service by AT&T in the late 1970s.
DE bits	discard eligible bits. Bits that are used to tag Frame Relay frames that are eligible to be discarded if the network gets congested.
decibel	*See* dB.
delay budget	The maximum amount of delay in data, voice, and video applications. The total end-to-end delay when engineering a VoIP implementation should not exceed the 150- to 200-ms delay budget.
Delay Dial	A signaling method in which the terminating side remains off hook until it is ready to receive address information. The off-hook interval is the delay dial signal.
DHCP	Dynamic Host Configuration Protocol. Provides a mechanism for allocating IP addresses dynamically so that addresses can be reused when hosts no longer need them.
Dialed Number Identification Service	*See* DNIS.
dial plan mapper	Provides the mapping of IP addresses to telephone numbers. After enough digits are accumulated to match a configured destination pattern, the dial plan mapper maps the IP host to a telephone number.
dial pulse	*See* DP.

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Acronym or Term	Definition
dialup (adj, n) dial up (v)	Modem access to a data network. The use of a dial or push-button telephone to create a telephone or data call. Dialup calls are usually billed by time of day, duration of call, and distance traveled. It is a connection to the Internet, or any network, where a modem and a standard telephone are used to make a connection between computers.
dialup remote access server	A remote access server is computer hardware that resides on a corporate LAN and into which employees dial on the PSTN to get access to their e-mail and to software and data on the corporate LAN (for example, status on customer orders). Remote access servers are also used by commercial service providers, such as ISPs, to allow their customers access into their networks. Remote access servers are typically measured by how many simultaneous dial-in users (on analog or digital lines) they can handle and whether they can work with cheaper digital circuits, such as T 1 and E 1 connections.
digital access and crossconnect system	*See* DACS.
digital data service	*See* DDS.
Digital Private Network Signaling System	*See* DPNSS.
digital service level zero	*See* DS0.
digital signal processor	*See* DSP.
digital speech interpolation	*See* DSI.
digital subscriber line	*See* DSL.
Digital T1/E1 Packet Voice Trunk Network Module	A flexible and scalable T1/E1 voice solution for Cisco 2600 and 3600 series Modular Access routers that supports up to 60 voice channels in a single network module.
Digital T1/E1 voice port adapter	A single-width port adapter, which incorporates one or two universal ports configurable for either T1 or E1 connection with high-performance DSP support for up to 24 to120 channels of compressed voice.
discard eligible bits	*See* DE bits.
disengage request	*See* DRQ.
DLCI	data-link connection identifier. Value that specifies a PVC or an SVC in a Frame Relay network. In the basic Frame Relay specification, DLCIs are locally significant (connected devices might use different values to specify the same connection at different ends of the network).
DNIS	Dialed Number Identification Service. Feature of trunk lines where the called number is identified; this called number information is used to route the call to the appropriate service. DNIS is a service used with toll-free dedicated services whereby calls placed to specific toll-free numbers are routed to the appropriate area within the company.
DP	dial pulse. A means of signaling that consists of regular momentary interruptions of a direct or alternating current at the sending end in which the number of interruptions corresponds to the value of the digit or character. In short, the old style of rotary dialing. Dial the number "5" and you will hear five "clicks."
DPNSS	Digital Private Network Signaling System. A common-channel, message-oriented signaling protocol commonly used by PBXs.

Acronym or Term	Definition
drop and insert	Allows DS-0 channels from one T1 or E1 facility to be cross-connected digitally to DS-0 channels on another T1 or E1. By using this method, channel traffic is sent between a PBX and a CO PSTN switch or other telephony device, so that some PBX channels are directed for long-distance service through the PSTN while the router compresses others for interoffice VoIP calls. In addition, drop and insert can cross connect a telephony switch (from the CO or PSTN) to a channel bank for external analog connectivity. Also called TDM Cross-Connect. *See* DACS.
DRQ	disengage request. RAS message sent by the gateway to the gatekeeper during the process of a call. The gateway waits for the DCF message before it sends the setup message to the new destination gatekeeper.
DS0	digital service level zero. Single timeslot on a DS1 (also known as T1) digital interface—that is, a 64-kbps, synchronous, full-duplex data channel, typically used for a single voice connection on a PBX. Also, a single timeslot on an E1.
DSI	digital speech interpolation. An algorithm that analyzes voice channels for silence. It suppresses the voice bits to conserve packet-line bandwidth and inserts a code to indicate to the far end that these bits have been removed. Also referred to as VAD.
DSL	digital subscriber line. Public network technology that delivers high bandwidth over conventional copper wiring at limited distances. There are four types of DSL: ADSL, HDSL, SDSL, and VDSL. All are provisioned via modem pairs, with one modem located at a central office and the other at the customer site. Because most DSL technologies do not use the whole bandwidth of the twisted pair, there is room remaining for a voice channel.
DSP	digital signal processor. An electronic circuit that compresses voice signals, generates tones, and decodes received compressions. DSPs can also emulate modems for purposes of fax relay.
DTE	data terminal equipment. Device at the user end of a user-network interface that serves as a data source, destination, or both. DTE connects to a data network through a DCE device (for example, a modem) and typically uses clocking signals generated by the DCE. DTE includes such devices as computers, protocol translators, and multiplexers.
DTMF	dual tone multifrequency. Tones generated when a button is pressed on a telephone to convey address signaling.
DTR	data terminal ready. EIA/TIA-232 circuit that is activated to let the DCE know when the DTE is powered up and not in test mode.
dual tone multifrequency	*See* DTMF.
Dynamic Host Configuration Protocol	*See* DHCP.
E&M	ear and mouth. Earth and Magneto. recEive and transMit. (1) Trunking arrangement generally used for two-way switch-to-switch or switch-to-network connections. Cisco analog E&M interface is an 8-pin modular connector that allows connections to PBX trunk lines (tie-lines). E&M also is emulated on E1 and T1 digital interfaces. (2) A type of signaling traditionally used in the telecommunications industry. Indicates the use of a handset that corresponds to the ear (receiving) and mouth (transmitting) component of a telephone.
ear and mouth	*See* E&M.
Earth and Magneto	*See* E&M.
ECMA	European Computer Manufacturers Association. Group of European computer vendors who have done substantial OSI standardization work.
E-lead	The wiring arrangement on an E&M circuit in which the signal side sends its signaling information.

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Acronym or Term	Definition
ESF	Extended Superframe. Framing type used on T1 circuits that consists of 24 frames of 193 bits each, with the 193rd bit providing framing information and other functions. ESF is an enhanced version of SF. *See also* SF.
ETSI	European Telecommunication Standards Institute. ETSI is a nonprofit organization producing voluntary telecommunications standards used throughout Europe.
European Computer Manufacturers Association	*See* ECMA.
European Telecommunication Standards Institute	*See* ETSI.
excess burst	*See* Be.
Extended Superframe	*See* ESF.
FDM	frequency-division multiplexing. Technique whereby information from multiple channels can be allocated bandwidth on a single wire based on frequency. An example is DSL.
FIFO	first-in/first-out. Refers to a buffering scheme where the first byte of data entering the buffer is the first byte retrieved by the CPU. In telephony, FIFO refers to a queuing scheme where the first calls received are the first calls processed.
first-in/first-out	*See* FIFO.
flash memory	A special type of electrically erasable programmable read-only memory (EEPROM) that can be erased and reprogrammed in blocks instead of one byte at a time. Many modern PCs have their basic input/output system (BIOS) stored on a flash memory chip so that it can be updated easily if necessary. Such a BIOS is sometimes called a flash BIOS. Flash memory is also popular in modems because it enables the modem manufacturer to support new protocols as they become standardized.
Foreign Exchange Office	*See* FXO.
Foreign Exchange Station	*See* FXS.
four-wire	One of two distinct types of audio interfaces (two-wire or four-wire). The four-wire implementation provides separate paths for receiving and sending audio signals, consisting of T, R, and T1, R1 leads.
frame forwarding	Mechanism by which frame-based traffic, such as HDLC and SDLC, traverses an ATM network.
Frame Relay traffic shaping	*See* FRTS.
frequency-division multiplexing	*See* FDM.
FRTS	Frame Relay traffic shaping. Queuing method that uses queues on a Frame Relay network to limit surges that can cause congestion. Data is buffered and sent into the network in regulated amounts to ensure that the traffic can fit within the promised traffic envelope for the particular connection.
FXO	Foreign Exchange Office. An FXO interface connects to the PSTN central office. Cisco FXO interface is an RJ-11 connector that allows an analog connection at the PSTN's central office or to a station interface on a PBX.
FXS	Foreign Exchange Station. An FXS interface connects directly to a standard telephone and supplies ring, voltage, and dial tone. Cisco FXS interface is an RJ-11 connector that allows connections to basic telephone service equipment, key sets, and PBXs.

Acronym or Term	Definition
gatekeeper	(1) The component of an H.323 telephony system that performs call address resolution, admission control, and subnet bandwidth management. (2) Telecommunications: H.323 entity on a LAN that provides address translation and control access to the LAN for H.323 terminals and gateways. The gatekeeper can provide other services to the H.323 terminals and gateways, such as bandwidth management and locating gateways. A gatekeeper maintains a registry of devices in the multimedia network. The devices register with the gatekeeper at startup and request admission to a call from the gatekeeper.
gatekeeper discovery request	*See* GRQ.
gateway	An H.323 term that describes the component of a H.323 telephony network that translates between one technology and another, typically between traditional telephony and TCP/IP.
generic traffic shaping	Shapes traffic by reducing outbound traffic flow to avoid congestion by constraining traffic to a particular bit rate using the token bucket mechanism.
GRQ	gatekeeper discovery request. RAS gatekeeper discovery message sent by endpoint to gatekeeper.
HDB3	high density binary 3. A line coding method used to maintain synchronization by ensuring a sufficient number of binary ones. HDB3 is used on E1 circuits.
HDLC	High-Level Data Link Control. Bit-oriented synchronous data-link-layer protocol developed by International Organization for Standardization (ISO). *See also* SDLC.
high density binary 3	*See* HDB3.
High-Level Data Link Control	*See* HDLC.
Hoot and Holler	A broadcast audio network used extensively by the brokerage industry for market updates and trading. Similar networks are used in publishing, transportation, power plants, and manufacturing.
Hot Standby Router Protocol	*See* HSRP.
HSRP	Hot Standby Router Protocol. Provides high network availability and transparent network topology changes. HSRP creates a hot standby router group with a lead router that services all packets sent to the hot standby address. Other routers in the group monitor the lead router, and if it fails, one of these standby routers inherits the lead position and the hot standby group address.
HTTP	Hypertext Transfer Protocol. The protocol used by web browsers and web servers to transfer files, such as text and graphic files.
Hyperterm software	Terminal emulation software.
Hypertext Transfer Protocol	*See* HTTP.
IC	*See* IXC.
IETF	Internet Engineering Task Force. Task force consisting of over 80 working groups responsible for developing Internet standards

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Acronym or Term	Definition
ILEC	incumbent local exchange carrier. An ILEC is a telephone company in the United States that was providing local service when the Telecommunications Act of 1996 was enacted. ILECs include the former Bell operating companies (BOCs), which were grouped into holding companies known collectively as the regional Bell operating companies (RBOCs) when the Bell System was broken up by a 1983 consent decree. ILECs are in contradistinction to competitive local exchange carriers (CLECs). A “local exchange” is the local “central office” of an LEC. Lines from homes and businesses terminate at a local exchange. Local exchanges connect to other local exchanges within a local access and transport area (LATA) or to inter-exchange carriers (IXCs), such as long-distance carriers AT&T, MCI, and Sprint.
IMAP	Internet Message Access Protocol. Method of accessing e-mail or bulletin board messages kept on a mail server that can be shared. IMAP permits client e-mail applications to access remote message stores as if they were local without actually transferring the message.
IMT	Inter-Machine Trunk. A means to give service providers access to more favorable tariffs and rates. In SS7 environments, IMTs terminate bearer traffic on the voice gateways.
IN	Intelligent Network. A network that provides IP routing, QoS, network access and control, and network management services.
incumbent local exchange carrier	*See* ILEC.
Integrated Services Digital Network	*See* ISDN.
Intelligent Network	*See* IN.
interactive voice response	*See* IVR.
inter-exchange carrier	*See* IXC.
Inter-Machine Trunk	*See* IMT.
International Telecommunication Union	*See* ITU.
International Telecommunication Union Telecommunication Standardization Sector	*See* ITU-T.
Internet Engineering Task Force	*See* IETF.
Internet Message Access Protocol	*See* IMAP.
Internet Protocol	*See* IP.
IP	Internet Protocol. Network layer protocol in the TCP/IP stack offering a connectionless internetwork service. IP provides features for addressing, type-of-service specification, fragmentation and reassembly, and security. Defined in RFC 791.
IP cloud	The area in which data travels through an IP network. Illustrated in diagrams as a cloud.
IP precedence	A 3-bit value in the ToS byte used for assigning precedence to IP packets.
IP RTP priority	A Frame Relay feature that provides a strict priority queuing scheme on a Frame Relay PVC for delay-sensitive data, such as voice.
ISDN	Integrated Services Digital Network. Communication architecture offered by telephone companies that permits customers to access digital networks to carry data, voice, and other source traffic.

Acronym or Term	Definition
ISDN User Part	*See* ISUP.
ISUP	ISDN User Part. SS7 protocol layer that defines the protocol used to prepare, manage, and release trunks that carry voice and data between calling and called parties under the auspice of ISDN.
ITU	International Telecommunication Union. An organization established by the United Nations to set international telecommunications standards and to allocate frequencies for specific uses.
ITU-T	International Telecommunication Union Telecommunication Standardization Sector. International body that develops worldwide standards for telecommunications technologies. The ITU-T carries out the functions of the former CCITT. *See also* CCITT.
IVR	interactive voice response. Term used to describe systems that provide information in the form of recorded messages over telephone lines in response to user input in the form of spoken words, or, more commonly, DTMF signaling. Examples include banks that allow you to check your balance from any telephone, and automated stock quote systems.
IXC	inter-exchange carrier. Common carrier providing long-distance connectivity between local access and transport areas (LATAs). The three major IXCs are AT&T, MCI, and Sprint, but several hundred IXCs offer long-distance service in the United States.
Java Telephony Application Programming Interface	*See* JTAPI.
JTAPI	Java Telephony Application Programming Interface. A Java API for call control developed by Sun Microsystems.
LCC	Lost Calls Cleared
LCD	Lost Calls Delayed
LCH	Lost Calls Held
LDAP	Lightweight Directory Access Protocol. Protocol that provides read/write interactive access to X.500 Directories for uniform application security and access levels.
LDCELP	low-delay CELP. CELP voice compression algorithm providing 16-kbps, or 4:1, compression. Standardized in ITU-T Recommendation G.728.
least significant bit	*See* LSB.
LEC	local exchange carrier. LEC is the term for a public telephone company in the U.S. that provides local service. Some of the largest LECs are the Bell operating companies (BOCs), which were grouped into holding companies known collectively as the regional Bell operating companies (RBOCs) when the Bell System was broken up by a 1983 consent decree. In addition to the Bell companies, there are a number of independent LECs, such as GTE. LEC companies are also sometimes referred to as “telcos.” A “local exchange” is the local “central office” of an LEC. Lines from homes and businesses terminate at a local exchange. Local exchanges connect to other local exchanges within a local access and transport area (LATA) or to interexchange carriers (IXCs) such as long-distance carriers AT&T, MCI, and Sprint.
LFI	link fragmentation and interleaving. A Cisco IOS feature that reduces delay on slower-speed links by breaking up large datagrams and interleaving low-delay traffic packets with the smaller packets resulting from the fragmented datagram.
Lightweight Directory Access Protocol	*See* LDAP.
linear predictive coding	*See* LPC.
line code	Electrical modulation scheme used by digital carrier systems. In North America, T1 uses AMI or B8ZS line coding. In other countries, E1 uses AMI or HDB3 line coding.

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Acronym or Term	Definition
link fragmentation and interleaving	*See* LFI.
LLQ	Low Latency Queuing. Enables use of a single priority queue in conjunction with CBWFQ. Typically, the priority queue only carries VoIP traffic. All other traffic is carried in the user-defined queues of CBWFQ.
local exchange carrier	*See* LEC.
location request	*See* LRQ.
low-delay CELP	*See* LDCELP.
Low Latency Queuing	*See* LLQ.
LPC	linear predictive coding. Voice coding that uses a special algorithm that models the way human speech works. Because LPC can take advantage of an understanding of the speech process, it can be efficient without sacrificing voice quality.
LRQ	location request. RAS location request message sent to request the gatekeeper contact information for one or more E.164 addresses.
LSB	least significant bit. The bit of a binary expression having the least value; or, representing the number of ones.
Main Distribution Frame	*See* MDF.
MC	multipoint controller. A required part of an MCU. The MC is the conference controller. The MC handles negotiation between all terminals to determine common capabilities and controls conference resources such as multicasting. The MC does not deal directly with any of the media streams.
MCSs	media convergence servers. An integral component of the Cisco IP Communications system. A high availability server platform for Cisco AVVID.
MCU	multipoint control unit. A component that manages videoconferences of three or more participants.
MDF	Main Distribution Frame. The point where all network-related external services, IP equipment, and wiring converge within a building.
mean opinion score	*See* MOS.
media convergence servers	*See* MCSs.
Media Gateway Control Protocol	*See* MGCP.
media termination point	*See* MTP.
Meet-Me conference	A conference feature where everyone who dials the same Meet-Me number will join the conference together.
MEL CAS	Mercury Exchange Limited Channel Associated Signaling. A voice signaling protocol used primarily in the United Kingdom.
Mercury Exchange Limited Channel Associated Signaling	*See* MEL CAS.
MGCP	Media Gateway Control Protocol. Protocol that helps bridge the gap between circuit-switched and IP networks. A combination of IPDC and SGCP, MGCP allows external control and management of data communications devices, or "media gateways" at the edge of multiservice packet networks by software programs.

Acronym or Term	Definition
MICA	Modem ISDN Channel Aggregation. Modem module and card used in the Cisco AS5300 universal access servers. A MICA modem provides an interface between an incoming or outgoing digital call and an ISDN telephone line; the call does not have to be converted to analog as it does with a conventional modem and an analog telephone line. Each line can accommodate, or aggregate, up to 24 (T1) or 30 (E1) calls.
Microsoft NetMeeting	Complete H.323 desktop Internet multimedia solution for all Windows users with multipoint data conferencing, text chat, whiteboard, and file transfer, as well as point-to-point audio and video.
M-lead	The wiring arrangement on an E&M circuit in which the trunking side sends its signaling information.
MLP	Multilink Point-to-Point Protocol. Method of splitting, recombining, and sequencing datagrams across multiple logical data links under the PPP protocol.
Modem ISDN Channel Aggregation	*See* MICA.
MOS	mean opinion score. A common benchmark used to determine the perceived quality of sound produced by specific codecs.
MP	multipoint processor. Part of an MCU. The MP processes the media streams. It receives audio, video, or data bits from the endpoints for which it does the required mixing, switching, and other processing before distributing the stream to the videoconference participants.
MTP	media termination point. A Cisco software application. An MTP software device allows the Cisco CallManager to extend supplementary services, such as hold and transfer, to calls routed through an H.323 endpoint or an H.323 gateway.
multicast backbone	Multicast backbone of the Internet. It is a virtual multicast network composed of multicast LANs and the point-to-point tunnels that interconnect them.
Multilink Point-to-Point Protocol	*See* MLP.
multipoint controller	*See* MC.
multipoint control unit	*See* MCU.
multipoint processor	*See* MP.
network service access point	*See* NSAP.
NSAP	network service access point. Network address, as specified by ISO. An NSAP is the point at which OSI network service is made available to a transport layer (Layer 4) entity.
ODBC	Open Database Connectivity. Abstracts data USING applications from database management systems. Standard API for accessing data in both relational and nonrelational database management systems. Using this API, common database applications can be written to access data stored in a variety of database management systems on a variety of computers regardless of DBMS or programming interface.
off hook	Call condition in which transmission facilities are already in use. Also known as *busy*.
Off-Premises eXtension	*See* OPX.
OMAP	operations, maintenance, administration, and provisioning. Telephony operations functions include monitoring and discovery of problems before they negatively impact service. Administration deals with billing, department cross-charges, accounting, and capacity management. The telephony maintenance function is quite similar to the data networking processes of fault isolation and correction. The final element, provisioning, is used to define services for individual subscribers.

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Acronym or Term	Definition
on hook	(1) Condition that exists when a receiver or a handset is resting on the switch hook, or is not in use. (2) Idle state (open loop) of a single telephone or PBX line loop.
OOS	Out-of-Service. State of the call or trunk.
Open Database Connectivity	*See* ODBC.
Open System Interconnection	*See* OSI.
operations, maintenance, administration, and provisioning	*See* OMAP.
OPX	Off-Premises eXtension. A telephone line from a telephone system that is terminated in a different building than the one in which the telephone system resides.
OSI	Open System Interconnection. International standardization program created by ISO and ITU-T to develop standards for data networking that facilitate multivendor equipment interoperability.
Out-of-Service	*See* OOS.
packet voice digital signal processor module	*See* PVDM.
PAM	pulse amplitude modulation. Modulation scheme where the modulating wave is caused to modulate the amplitude of a pulse stream.
PBX	private branch exchange. Digital or analog telephone switches located on the customer premises and used to connect private and public telephone networks.
PCI	protocol control information. Control information added to user data to compose an OSI packet. The OSI equivalent of the term “header.”
PCM	pulse code modulation. Technique of encoding analog voice into a 64-kbps data stream by sampling with 8-bit resolution at a rate of 8000 times per second.
PCMCIA	Personal Computer Memory Card Industry Association. A standard interface that connects any type of device to a portable computer. Developed by PCMCIA in the early 1990s.
Perceptual Speech Quality Measurement	*See* PSQM.
permanent virtual circuit	*See* PVC.
Personal Computer Memory Card Industry Association	*See* PCMCIA.
phase-lock loop	*See* PLL.
PINX	private integrated services network exchange. A PBX or key system, which in a BRI voice application uses QSIG signaling.
plain old telephone service	*See* POTS.
PLAR	private line, automatic ringdown. Voice circuit that connects two single endpoints together. When either telephone handset is taken off hook, the remote telephone automatically rings.
PLAR Off-Premises eXtension	*See* PLAR-OPX.

Acronym or Term	Definition
PLAR-OPX	PLAR Off-Premises eXtension. Specifies a PLAR Off-Premises eXtension connection. Using this option, the local voice port provides a local response before the remote voice port receives an answer. On FXO interfaces, the voice port will not answer until the remote side answers.
PLL	phase-lock loop. A circuit on a T1 or E1 module that provides clocking information.
point of presence	*See* POP.
POP	point of presence. In OSS, a physical location where an inter-exchange carrier installed equipment to interconnect with an LEC.
Post, Telephone, and Telegraph	*See* PTT.
POTS	plain old telephone service. Basic telephone service supplying standard single-line telephones, telephone lines, and access to the PSTN. *See also* PSTN.
PQ	priority queuing. PQ ensures that important traffic gets the fastest handling at each point where it is used. It was designed to give strict priority to important traffic.
priority queuing	*See* PQ.
private branch exchange	*See* PBX.
private integrated services network exchange	*See* PINX.
private line, automatic ringdown	*See* PLAR.
protocol control information	*See* PCI.
PSQM	Perceptual Speech Quality Measurement. A technique used for measuring voice quality. It compares the received audio with the transmitted audio.
PSTN	public switched telephone network. General term referring to the variety of telephone networks and services in place worldwide. Sometimes called POTS.
PTT	Post, Telephone, and Telegraph. Government agency that provides telephone services. PTTs exist in most areas outside North America and provide both local and long-distance telephone services.
public switched telephone network	*See* PSTN.
pulse amplitude modulation	*See* PAM.
pulse code modulation	*See* PCM.
PVC	permanent virtual circuit. Connections that are assigned but not connected until data is sent, thereby not using bandwidth when idle. A virtual circuit that is permanently established. PVCs save bandwidth associated with circuit establishment and teardown in situations where certain virtual circuits must exist all the time. In ATM terminology, called a permanent virtual connection.
PVDM	packet voice digital signal processor module. Provides the ability to increase the voice processing capabilities within a single network module.
QoS	quality of service. (1) Measure of performance for a transmission system that reflects its transmission quality and service availability. (2) A set of tools used in networking devices to ensure best-of-class transmission quality and service availability.
QSIG	Q Signaling. An inter-PBX signaling protocol for networking PBX supplementary services in a multi- or single-vendor environment.

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Acronym or Term	Definition
Q Signaling	*See* QSIG.
quality of service	*See* QoS.
RAS	registration, admission, and status. Protocol that is used between endpoints and the gatekeeper to perform management functions. RAS signaling function performs registration, admissions, bandwidth changes, status, and disengage procedures between the VoIP gateway and the gatekeeper.
RBOCs	regional Bell operating companies. Seven regional telephone companies formed by the breakup of AT&T. RBOCs differ from regional Bell holding companies (RBHCs) in that RBOCs do not cross boundaries that were set out by the consent decree. Regional Bell operating company (RBOC) is a term describing one of the U.S. regional telephone companies (or their successors) that were created as a result of the breakup of American Telephone and Telegraph Company (AT&T, known also as the Bell System or “Ma Bell”) by a U.S. Federal Court consent decree on December 31, 1983. The seven original regional Bell operating companies were Ameritech, Bell Atlantic, BellSouth, NYNEX, Pacific Bell, Southwestern Bell, and US WEST. Each of these companies owned at least two Bell operating companies (BOCs). The BOCs were given the right to provide local phone service while AT&T was allowed to retain its long-distance service. The RBOCs and their constituent BOCs are part of the class of local exchange carriers (LECs). In addition to the RBOCs, there are more than 100 other franchised local telephone companies classed as local exchange carriers. Competitive local exchange carriers (CLECs) are additional companies allowed to compete with the LECs. These include AT&T, in some localities, and power companies. An interexchange carrier (IXC) is a long-distance carrier that carries traffic between LECs. Under the Telecommunications Act of 1996, RBOCs and LECs are allowed to compete for long-distance telephone traffic under certain circumstances. RBOCs are generally in competition for digital data and Internet traffic with wireless service providers and cable TV companies. RBOCs are gradually making available new telephone carrier technologies such as ISDN and DSL.
RBS	robbed-bit signaling. A technique by which a single bit in every DS0 bearer channel is "stolen" from every sixth frame. The stolen bit is then used to carry signaling information.
Real Time Streaming Protocol	*See* RTSP.
Real-Time Transport Protocol	*See* RTP.
recEive and transmit	*See* E&M.
redirect server	A server that accepts a SIP request, maps the address into zero or more new addresses, and returns these addresses to the client. It does not initiate its own SIP request nor does it accept calls.
reduced instruction set computing	*See* RISC.
regional Bell operating companies	*See* RBOCs.
registration, admission, and status	*See* RAS.
registration request	*See* RRQ.
Request For Comments	*See* RFC.
request notification	*See* RQNT.
Resource Reservation Protocol	*See* RSVP.

Acronym or Term	Definition
RFC	Request For Comments. Document series generated by the IETF and used as the primary means for communicating information about the Internet. Some RFCs are designated by the Internet Architecture Board (IAB) as Internet standards. Most RFCs document protocol specifications, such as Telnet and FTP, but some are humorous or historical. RFCs are available online from numerous sources.
RISC	reduced instruction set computing. A microprocessor design that provides fewer and simpler instructions burned into the silicon. Fewer instructions let the processor perform at a higher speed. The difference is made up by requiring more work to be done by compilers and greater memory usage.
robbed-bit signaling	*See* RBS.
round robin (n) round-robin (adj)	An algorithm used to schedule processes in a fixed cyclic order. Simply put, it means to "take turns."
RQNT	request notification. RAS message that instructs the gateway to watch for specific events.
RRQ	registration request. RAS message sent as a registration request.
RSVP	Resource Reservation Protocol. Protocol that supports the reservation of resources across an IP network. Applications running on IP end systems can use RSVP to indicate to other nodes the nature (bandwidth, jitter, maximum burst, and so on) of the packet streams they want to receive. Also known as Resource Reservation Setup Protocol.
RTCP	Real-Time Transport Control Protocol. Protocol that monitors the QoS of an IP RTP connection and conveys information about the ongoing session.
RTP	Real-Time Transport Protocol. Commonly used with IP networks. RTP is designed to provide end-to-end network transport functions for applications transmitting real-time data, such as audio, video, or simulation data, over multicast or unicast network services. RTP provides such services as payload type identification, sequence numbering, time stamping, and delivery monitoring to real-time applications.
Real-Time Transport Control Protocol	*See* RTCP.
RTSP	Real Time Streaming Protocol. Enables the controlled delivery of real-time data, such as audio and video. Sources of data can include both live data feeds, such as live audio and video, and stored content, such as pre-recorded events. RTSP is designed to work with established protocols, such as RTP and HTTP.
SAP	Session Announcement Protocol. A protocol used to assist in the advertisement of multicast multimedia conferences and other multicast sessions, and to communicate the relevant session setup information to prospective participants.
SCCP	(1) signaling connection control part. Software that provides an OSI network layer service to its users. It does not support intermediate routing. (2) Skinny Client Control Protocol. The Cisco standard for real-time calls and conferencing over IP.
SCP	service control point. An element of an SS7-based Intelligent Network that performs various service functions, such as number translation, call setup and teardown, and so on.
SDLC	Synchronous Data Link Control. IBM Systems Network Architecture (SNA) data-link-layer communications protocol. SDLC is a bit-oriented, full-duplex serial protocol that has spawned numerous similar protocols, including HDLC. *See also* HDLC.
SDP	Session Description Protocol. A protocol used to describe multimedia sessions in order to enable session announcement, session invitation, and other forms of multimedia session initiation.
serial tunnel	*See* STUN.
service control point	*See* SCP.

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Acronym or Term	Definition
service level agreement	*See* SLA.
service switching point	*See* SSP.
Session Announcement Protocol	*See* SAP.
Session Description Protocol	*See* SDP.
session initiation protocol	*See* SIP.
SF	Super Frame. Common framing type used on T1 circuits. SF consists of 12 frames of 193 bits each, with the 193rd bit providing framing synchronization. SF is superseded by ESF but is still widely used. Also called D4 framing. *See also* ESF.
signal ground	Refers to the common electrical reference point of a circuit.
signaling connection control part	*See* SCCP.
Signaling System 7	*See* SS7.
signal/noise ratio	*See* SNR.
signal transfer point	*See* STP.
SIMMs	single in-line memory modules. A small circuit board that holds a number of memory chips.
Simple Mail Transfer Protocol	*See* SMTP.
single in-line memory modules	*See* SIMMs.
SIP	session initiation protocol. Protocol developed by the IETF MMUSIC Working Group as an alternative to H.323. SIP features are compliant with IETF RFC 2543, published in March 1999. SIP equips platforms to signal the setup of voice and multimedia calls over IP networks.
Skinny Client Control Protocol	*See* SCCP.
SLA	service level agreement. An agreement between the ISP and the client that guarantees a certain level of data transmission over the network.
small office/home office	*See* SOHO.
SMDS	Switched Multimegabit Data Service. High-speed, packet-switched, datagram-based WAN networking technology offered by the telephone companies.
SMTP	Simple Mail Transfer Protocol. The standard Internet protocol providing e-mail services.
SNR	signal/noise ratio. A measure of transmission quality. The ratio of good or usable data (signal) to bad or undesired (noise) on a line, expressed in decibels (dB).
SOHO	small office/home office. Networking solutions and access technologies for offices that are not directly connected to large corporate networks.
spanning tree (n) spanning-tree (adj)	Loop-free subset of a network topology.
SQL	Structured Query Language. International standard language for defining and accessing relational databases.

Acronym or Term	Definition
SRST	Survivable Remote Site Telephony. 1. A feature of any VoIP network that provides backup in case of network component failures. 2. A feature on some Cisco routers that uses the Skinny protocol to provide call-handling support for the local IP Phones if the WAN connection to the Cisco CallManager fails.
SS7	Signaling System 7. Standard CCS system used with BISDN and ISDN. Developed by Bellcore. *See also* CCS.
SSP	service switching point. Element of an SS7-based Intelligent Network that performs call origination, termination, or tandem switching.
STP	signal transfer point. Element of an SS7-based Intelligent Network that performs routing of the SS7 signaling.
Structured Query Language	*See* SQL.
STUN	serial tunnel. Router feature allowing two SDLC- or HDLC-compliant devices to connect to one another through an arbitrary multiprotocol topology (using Cisco routers) rather than through a direct serial link.
Super Frame	*See* SF.
Survivable Remote Site Telephony	*See* SRST.
SVC	switched virtual circuit. Virtual circuit that is dynamically established on demand and is torn down when transmission is complete. SVCs are used in situations where data transmission is sporadic.
Switched Multimegabit Data Service	*See* SMDS.
switched virtual circuit	*See* SVC.
Synchronous Data Link Control	*See* SDLC.
T1/E1	T1: The standard digital multiplexed 24-channel voice/data digital span line. Used predominantly in North America. Operates at a data rate of 1.544 Mbps. Digital WAN carrier facility. T1 transmits DS-1 formatted data through the telephone-switching network, using AMI or B8ZS coding. *See also* AMI and B8ZS. E1: Wide-area digital transmission scheme used throughout the world that carries data at a rate of 2.048 Mbps. E1 lines can be leased for private use from common carriers.
tabletop	A conference telephone used on a conference room table.
TAPI	Telephony Application Programming Interface. A call control model developed by Microsoft and Intel.
TCAP	transaction capabilities application part. SS7 protocol layer that helps exchange noncircuit-related data between applications.
T-CCS	Transparent Common Channel Signaling. Feature that allows the connection of two PBXs with digital interfaces that use a proprietary or unsupported CCS protocol without the need for interpretation of CCS signaling for call processing. T1/E1 traffic is transported transparently through the data network, and the feature preserves proprietary signaling. From the PBX standpoint, this is accomplished through a point-to-point connection. Calls from the PBXs are not routed, but follow a preconfigured route to the destination.
TDM	time-division multiplexing. Technique in which information from multiple channels can be allocated bandwidth on a single wire based on preassigned timeslots. Bandwidth is allocated to each channel regardless of whether the station has data to transmit.
Telephony Application Programming Interface	*See* TAPI.

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Acronym or Term	Definition
time-division multiplexing	*See* TDM.
time stamp (n) time-stamp (v, adj)	A field in certain FastPacket formats that indicates the amount of time the packet has spent waiting in queues during the transmission between its source and destination nodes. Used to control the delay experienced by the packet.
transaction capabilities application part	*See* TCAP.
Transparent Common Channel Signaling	*See* T-CCS.
Triple Data Encryption Standard	*See* 3DES.
two-wire	One of two distinct types of audio interface (two-wire or four-wire). With the two-wire implementation, full-duplex audio signals are transmitted over a single pair, which consists of tip (T) and ring (R) leads.
UAC	user agent client. A client application that initiates the SIP request.
UAS	user agent server. A server application that contacts the user when a SIP request is received, and then returns a response on behalf of the user. The response accepts, rejects, or redirects the request.
UDP	User Datagram Protocol. Connectionless transport layer protocol in the TCP/IP protocol stack. UDP is a simple protocol that exchanges datagrams without acknowledgments or guaranteed delivery, requiring that error processing and retransmission be handled by other protocols. UDP is defined in RFC 768.
U interface	The ISDN interface between the telco and the user, also known as the local loop.
user agent client	*See* UAC.
user agent server	*See* UAS.
User Datagram Protocol	*See* UDP.
VAD	voice activity detection. Used to statistically save bandwidth by not sending packets in the absence of speech. When enabled on a voice port or a dial peer, silence is not transmitted over the network, only audible speech. When VAD is enabled, the sound quality is slightly degraded but the connection uses much less bandwidth.
variable bit rate	*See* VBR.
variable bit rate-nonreal time	*See* VBR-NRT.
variable bit rate real-time	*See* VBR-RT.
VBR	variable bit rate. QoS class defined by the ATM Forum for ATM networks. VBR is subdivided into an RT class and NRT class.
VBR-NRT	variable bit rate-nonreal time. Subclass of VBR. Used for connections in which there is no fixed timing relationship between samples but that still need a guaranteed QoS.
VBR-RT	variable bit rate-real time. Subclass of VBR. Used for connections in which there is a fixed timing relationship between samples.
V card	An electronic business card. V cards carry information such as name, telephone numbers, mail addresses, e-mail addresses, and URLs.
VIC	voice interface card. A Cisco interface card used to connect the system to either the PSTN or to a PBX. *See also* PBX *and* PSTN.

Acronym or Term	Definition
videoconference	A meeting between people in different locations, using audio and video. The simplest type of videoconference can involve transmission of static images between two locations; the most complex videoconferences can use full-motion video and high-quality audio between multiple locations.
video on demand	*See* VoD.
Virtual Private Network	*See* VPN.
VoATM	Voice over ATM. A technology that enables a router to carry voice traffic (for example, telephone calls and faxes) over an ATM network. When sending voice traffic over ATM, the voice traffic is encapsulated using a special AAL5 encapsulation for multiplexed voice.
VoD	video on demand. System using video compression to supply video programs to viewers when requested via ISDN or cable.
VoFR	Voice over Frame Relay. A technology that enables a router to carry voice traffic (for example, telephone calls and faxes) over a Frame Relay network. When sending voice traffic over Frame Relay, the voice traffic is segmented and encapsulated for transit across the Frame Relay network.
voice activity detection	*See* VAD.
voice interface card	*See* VIC.
Voice over ATM	*See* VoATM.
Voice over Frame Relay	*See* VoFR.
Voice over IP	*See* VoIP.
Voice over X	*See* VoX.
VoIP	Voice over IP. The capability to carry normal telephony-style voice over an IP-based internet with POTS-like functionality, reliability, and voice quality. VoIP enables a router to carry voice traffic (for example, telephone calls and faxes) over an IP network. In VoIP, the DSP segments the voice signal into frames, which then are coupled in groups of two and stored in voice packets. These voice packets are transported using a variety of signaling protocols.
VoIP over Frame Relay	*See* VoIPovFR.
VoIPovFR	VoIP over Frame Relay. Provides VoIP application interworking over an existing Frame Relay network. Can be used over point-to-point leased lines or a Frame Relay circuit; it does not require a full-fledged Frame Relay network or service.
VoX	Voice over X. Term that refers to nontraditional methods of carrying voice.
VPN	Virtual Private Network. Enables IP traffic to travel securely over a public TCP/IP network by encrypting all traffic from one network to another. A VPN uses "tunneling" to encrypt all information at the IP level.
WAN interface card	*See* WIC.
weighted fair queuing	*See* WFQ.
WFQ	weighted fair queuing. Congestion management algorithm that identifies conversations (in the form of traffic streams), separates packets that belong to each conversation, and ensures that capacity is shared fairly between these individual conversations. WFQ is an automatic way of stabilizing network behavior during congestion and results in increased performance and reduced retransmission.
WIC	WAN interface card. A Cisco interface card that connects the system to the WAN link service provider.

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Acronym or Term	Definition
Wink Start	A method of E&M signaling. When the signaling leads indicate a change to an off-hook state, the other side must send a momentary *wink* (on-hook to off-hook to on-hook transition) on the correct signaling lead before the call signaling information can be sent by the sending side. After the call signaling information is received, the side that sent the wink goes off hook again when the subscriber answers and stays that way for the duration of the call.