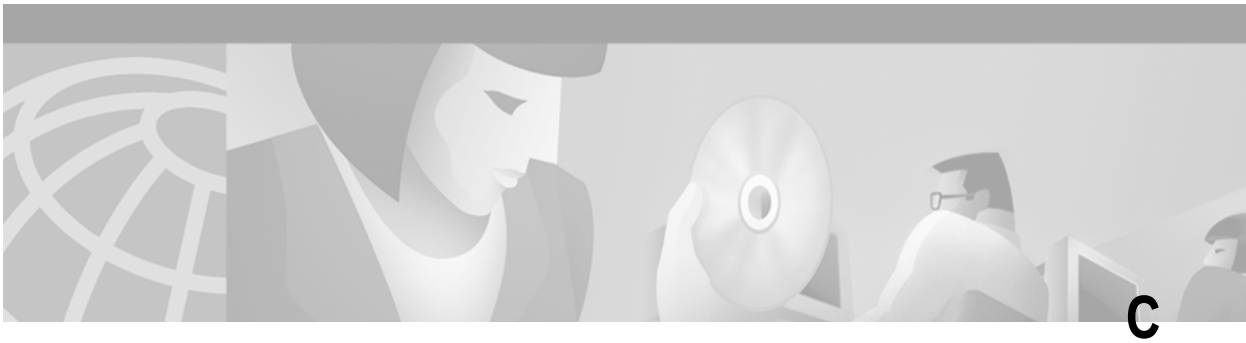

C

C/N

Difference in amplitude between the desired radio frequency (RF) carrier and the noise in a portion of the spectrum. See *carrier-to-noise*.

CA

1. certification authority. Entity that issues digital certificates (especially X.509 certificates) and vouches for the binding between the data items in a certificate.

2. Telecommunications: call appearance.

CA certificate

[Digital] certificate for one CA issued by another CA.

cable

Transmission medium of copper wire or optical fiber wrapped in a protective cover.

cable modem

Modulator-demodulator device that is placed at subscriber locations to convey data communications on a cable television system.

cable range

Range of network numbers that is valid for use by nodes on an extended AppleTalk network. The cable range value can be a single network number or a contiguous sequence of several network numbers. Node addresses are assigned based on the cable range values.

cable router

Modular chassis-based router optimized for data-over-CATV hybrid fiber-coaxial (HFC) applications.

cable television

See *CATV*.

CAC

connection admission control. Set of actions taken by each ATM switch during connection setup to determine whether a connection's requested QoS will violate the QoS guarantees for established connections. CAC also is used when routing a connection request through an ATM network.

caching

A form of replication in which information learned during a previous transaction is used to process later transactions.

CAF

controllable ATM fabric.

cage

A piece of hardware into which cards are installed.

calculated planning impairment factor

See *ICPIF*.

California Education and Research Federation Network

See *CERFnet*.

call

An attempted connection between a remote system and LAC, such as a telephone call through the PSTN. An incoming or outgoing call that is established successfully between a remote system and LAC results in a corresponding L2TP session within a previously established tunnel between the LAC and the LNS.

call admission precedence

An MPLS traffic engineering tunnel with a higher priority will, if necessary, preempt an MPLS traffic engineering tunnel with a lower priority. Tunnels that are harder to route are expected to have a higher priority and to be able to preempt tunnels that are easier to route. The assumption is that a lower-priority tunnel can find another path.

call agent

Intelligent entity in an IP telephony network that handles call control in an MGCP model voice over IP network. Also known as a Media Gateway Controller (MGC).

call detail record

See *CDR*.

call leg

Discrete segment of a call connection. A call leg is a logical connection between the router and either a telephony endpoint over a bearer channel, or another endpoint using a session protocol.

call priority

Priority assigned to each origination port in circuit-switched systems. This priority defines the order in which calls are reconnected. Call priority also defines which calls can or cannot be placed during a bandwidth reservation. See also *bandwidth reservation*.

call reference value

See *CRV*.

call setup time

The time required to establish a switched call between DTE devices.

caller ID

See *CLID*.

calling line identification

See *CLID*.

CAM

content-addressable memory. See *associative memory*. See also *CAM* in the “Cisco Systems Terms and Acronyms” section.

Canadian Standards Association

See *CSA*.

CAP

Competitive Access Provider. An independent company providing local telecommunications services mainly to business customers in competition with an area’s BOC or IOC. Teleport and MFS are the two major CAPs operating in major metropolitan areas in the United States. See also *BOC* and *IOC*.

CAR

1. committed access rate. The CAR and DCAR (distributed CAR) services limit the input or output transmission rate on an interface or subinterface based on a flexible set of criteria.

2. Cisco Access Registrar. Provides RADIUS services to DOCSIS modems for the deployment of high-speed data services in a one-way cable plant requiring telco-return for upstream data.

carrier

An electromagnetic wave or alternating current of a single frequency, suitable for modulation by another, data-bearing signal. See also *modulation*.

Carrier Detect

See *CD*.

Carrier Identification Code

See *CIC*.

carrier sense multiple access collision detect

See *CSI*.

carrier-to-noise

See *C/N*.

CAS

channel associated signaling. The transmission of signaling information within the voice channel. CAS signaling often is referred to as *robbed-bit* signaling because user bandwidth is being robbed by the network for other purposes.

Category 1 cabling

One of five grades of UTP cabling described in the EIA/TIA-586 standard. Category 1 cabling is used for telephone communications and is not suitable for transmitting data. Compare with *Category 2 cabling*, *Category 3 cabling*, *Category 4 cabling*, and *Category 5 cabling*. See also *EIA/TIA-586* and *UTP*.

Category 2 cabling

One of five grades of UTP cabling described in the EIA/TIA-586 standard. Category 2 cabling is capable of transmitting data at speeds up to 4 Mbps. Compare with *Category 1 cabling*, *Category 3 cabling*, *Category 4 cabling*, and *Category 5 cabling*. See also *EIA/TIA-586* and *UTP*.

Category 3 cabling

One of five grades of UTP cabling described in the EIA/TIA-586 standard. Category 3 cabling is used in 10BaseT networks and can transmit data at speeds up to 10 Mbps. Compare with *Category 1 cabling*, *Category 2 cabling*, *Category 4 cabling*, and *Category 5 cabling*. See also *EIA/TIA-586* and *UTP*.

Category 4 cabling

One of five grades of UTP cabling described in the EIA/TIA-586 standard. Category 4 cabling is used in Token Ring networks and can transmit data at speeds up to 16 Mbps. Compare with *Category 1 cabling*, *Category 2 cabling*, *Category 3 cabling*, and *Category 5 cabling*. See also *EIA/TIA-586* and *UTP*.

Category 5 cabling

One of five grades of UTP cabling described in the EIA/TIA-586 standard. Category 5 cabling can transmit data at speeds up to 100 Mbps. Compare with *Category 1 cabling*, *Category 2 cabling*, *Category 3 cabling*, and *Category 4 cabling*. See also *EIA/TIA-586* and *UTP*.

catenet

A network in which hosts are connected to diverse networks, which themselves are connected with routers. The Internet is a prominent example of a catenet.

CATV

cable television. A communication system where multiple channels of programming material are transmitted to homes using broadband coaxial cable. Formerly called Community Antenna Television.

cause codes

Code that indicates the reason for ISDN call failure or completion.

CBAC

Context-based Access Control. Protocol that provides internal users with secure access control for each application and for all traffic across network perimeters. CBAC enhances security by scrutinizing both source and destination addresses and by tracking each application's connection status.

CBC

cipher block chaining. Prevents the problems associated with Electronic Codebook (ECB), where every block of "plain text" maps to exactly one block of "cipher text" by having each encrypted block XORed with the previous block of ciphertext. In this way identical patterns in different messages are encrypted differently, depending upon the difference in the previous data.

CBDS

Connectionless Broadband Data Service. European high-speed, packet-switched, datagram-based WAN networking technology. Similar to SMDS. See also *SMDS*.

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. Compare with *ABR*, *UBR*, and *VBR*.

CBWFQ

class-based weighted fair queueing extends the standard WFQ functionality to provide support for user-defined traffic classes.

CC

1. country code. Part of a numbering plan.

2. VCS–call context.

CCB

call control block.

CCIE

See *CCIE* in the "Cisco Systems Terms and Acronyms" section.

CCITT

Consultative Committee for International Telegraph and Telephone. International organization responsible for the development of communications standards. Now called the ITU-T. See also *ITU-T*.

CCN unit

continuous control node unit. Provides communication between the redundant sides of the admin shelf.

CCNA

Cisco Certified Network Associate.

CCO

See *CCO* in the "Cisco Systems Terms and Acronyms" section.

CCOT

cross office transfer time.

CCR

commitment, concurrency, and recovery. OSI application service element used to create atomic operations across distributed systems. Used primarily to implement two-phase commit for transactions and nonstop operations.

CCS

common channel signaling. Signaling system used in telephone networks that separates signaling information from user data. A specified channel is exclusively designated to carry signaling information for all other channels in the system. See also *SS7*.

CCSRC

See *CCSRC* in the "Cisco Systems Terms and Acronyms" section.

CCSS7

Common Channel Signaling System 7. Protocol used by the AT&T signaling network. The ICM's NIC receives routing requests from the CCSS7 network and returns a routing label to the CCSS7 network.

CD

Carrier Detect. A signal that indicates whether an interface is active. Also, a signal generated by a modem indicating that a call has been connected.

CDB

call detail block. Consists of several Call Data Elements. The CDB is generated at a Certain Point in Call (PIC). For example, a CDB is generated when the call is answered, released, and so on.

CDDI

Copper Distributed Data Interface. The implementation of FDDI protocols over STP and UTP cabling. CDDI transmits over relatively short distances (about 90 yards [100 meters]), providing data rates of 100 Mbps using a dual-ring architecture to provide redundancy. Based on the ANSI TPPMD standard. Compare with *FDDI*.

CDE

call detail element. A data element that includes a basic information field within a billing record. Examples of a CDE are the calling number, the called number, and so on.

CDF

channel definition format. Technology for "push" applications on the World Wide Web. CDF is an application of XML. See also *XML*.

CDMA

code division multiple access. A method of dividing a radio spectrum to be shared by multiple users through the assignment of unique codes. CDMA implements spread spectrum transmission.

CDP

See *CDP (Cisco Discovery Protocol)* in the "Cisco Systems Terms and Acronyms" chapter.

CDPD

Cellular Digital Packet Data. Open standard for two-way wireless data communication over high-frequency cellular telephone channels. Allows data transmissions between a remote cellular link and a NAP. Operates at 19.2 kbps.

CDR

call detail record.

1. A record written to a database for use in postprocessing activities. CDR files consist of several CDBs. These activities include many functions, but primarily are billing and network analysis. Cisco CallManager writes CDR records to the SQL database as calls are made in a manner consistent with the configuration of each individual Cisco CallManager.

2. Used in the original telephony networks, and now extended to mobile wireless network calls, the CDR contains billing information for charging purposes. In a GPRS network, the charging gateway sends the billing information within a CDR to the network service provider for that subscriber.

3. VNS record of voice or data SVCs, which includes calling and called numbers, local and remote node names, data and time stamp, elapsed time, and Call Failure Class fields.

4. Wireless—Used in the original telephony networks and now extended to mobile wireless network calls. The CDR contains billing information for charging purposes. In a GPRS network, the charging gateway sends the billing information within a CDR to the network service provider for that subscriber.

CD-ROM

compact disc read-only memory.

CD-RW

compact disc read/write.

CDV

cell delay variation. A component of cell transfer delay, which is induced by buffering and cell scheduling. CDV is a QoS delay parameter associated with CBR and VBR service. See also *CBR* and *VBR*.

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 *CBR* and *PCR*.

CE router

customer edge router. A router that is part of a customer network and that interfaces to a provider edge (PE) router.

CED

caller-entered digits. Digits entered by a caller on a touch-tone phone in response to prompts. Either a peripheral (ACD, PBX, or VRU) or the carrier network can prompt for CEDs.

CEF

See *CEF* in the “Cisco Systems Terms and Acronyms” section.

cell

The basic data unit for ATM switching and multiplexing. Cells contain identifiers that specify the data stream to which they belong. Each cell consists of a 5-byte header and 48 bytes of payload. See also *cell relay*.

cell delay variation

See *CDV*.

cell delay variation tolerance

See *CDVT*.

cell loss priority

See *CLP*.

cell loss ratio

See *CLR*.

cell payload scrambling

A technique using an ATM switch to maintain framing on some medium-speed edge and trunk interfaces.

cell relay

Network technology based on the use of small, fixed-size packets, or cells. Because cells are fixed-length, they can be processed and switched in hardware at high speeds. Cell relay is the basis for many high-speed network protocols, including ATM, IEEE 802.6, and SMDS. See also *cell*.

cell transfer delay

See *CTD*.

cells per second

Abbreviated cps.

Cellular Digital Packet Data

See *CDPD*.

cellular radio

Technology that uses radio transmissions to access telephone-company networks. Service is provided in a particular area by a low-power transmitter.

CELP

code excited linear prediction compression. Compression algorithm used in low bit-rate voice encoding. Used in ITU-T Recommendations G.728, G.729, G.723.1.

CEN

European Committee for Standardization. CEN's mission is to promote voluntary technical harmonization in Europe in conjunction with worldwide bodies and its partners in Europe. The organization works in partnership with CENELEC and ETSI (European Telecommunications Standards Institute).

CENELEC

Comite Europeen de Normalisation Electrotechnique. CENELEC is the European Committee for Electrotechnical Standardization. It was set up in 1973 and was officially recognised as the European Standards Organisation in its field by the European Commission in Directive 83/189 EEC. CENELEC works with 40,000 technical experts from 19 EC and EFTA countries to publish standards for the European market.

central office

See *CO*.

Centrex

LEC service that provides local switching applications similar to those provided by an onsite PBX. With Centrex, there is no onsite switching; all customer connections go back to the CO. See also *CC* and *LEC*.

CEP

Certificate Enrollment Protocol. Certificate management protocol jointly developed by Cisco Systems and VeriSign, Inc. CEP is an early implementation of Certificate Request Syntax (CRS), a standard proposed to the Internet Engineering Task Force (IETF). CEP specifies how a device communicates with a CA, including how to retrieve the public key of the CA, how to enroll a device with the CA, and how to retrieve a certificate revocation list (CRL). CEP uses Public Key Cryptography Standard (PKCS) 7 and PKCS 10 as key component technologies. The public key infrastructure working group (PKIX) of the IETF is working to standardize a protocol for these functions, either CRS or an equivalent. When an IETF standard is stable, Cisco will add support for it.

CEPT

Conférence Européenne des Postes et des Télécommunications. Association of the 26 European PTTs that recommends communication specifications to the ITU-T.

CER

cell error ratio. In ATM, the ratio of transmitted cells that have errors to the total cells sent in a transmission for a specific period of time.

CERFnet

California Education and Research Federation Network. TCP/IP network, based in Southern California, that connects hundreds of higher-education centers internationally while also providing Internet access to subscribers. CERFnet was founded in 1988 by the San Diego Supercomputer Center and General Atomics, and is funded by the NSF.

CERN

European Laboratory for Particle Physics. Birthplace of the World Wide Web.

CERT

Computer Emergency Response Team. Chartered to work with the Internet community to facilitate its response to computer security events involving Internet hosts, to take proactive steps to raise the community's awareness of computer security issues, and to conduct research targeted at improving the security of existing systems. The U.S. CERT is based at Carnegie Mellon University in Pittsburgh. Regional CERTs are, like NICs, springing up in different parts of the world.

certificate

Digital representation of user or device attributes, including a public key, that is signed with an authoritative private key.

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.

CET

See *CET* in the "Cisco Systems Terms and Acronyms" section.

CFRAD

See *Cisco FRAD* in the "Cisco Systems Terms and Acronyms" section.

CGI

Common Gateway Interface. A set of rules that describe how a Web server communicates with another application running on the same computer and how the application (called a CGI program) communicates with the Web server. Any application can be a CGI program if it handles input and output according to the CGI standard.

chaining

An SNA concept in which RUs are grouped together for the purpose of error recovery.

Challenge Handshake Authentication Protocol

See *CHAP*.

channel

1. Communication path wide enough to permit a single RF transmission. Multiple channels can be multiplexed over a single cable in certain environments.

2. In IBM, the specific path between large computers (such as mainframes) and attached peripheral devices.

3. Specific frequency allocation and bandwidth. Downstream channels are used for television in the United States are 6 MHz wide.

channel definition format.

See *CDF*.

Channel Interface Processor

See *CIP* in the "Cisco Systems Terms and Acronyms" section.

channel service unit

See *CSU*.

channel-attached

Pertaining to the attachment of devices directly by data channels (input/output channels) to a computer.

channelized E1

Access link operating at 2.048 Mbps that is subdivided into 30 B-channels and 1 D-channel. Supports DDR, Frame Relay, and X.25. Compare with *channelized T1*.

channelized T1

Access link operating at 1.544 Mbps that is subdivided into 24 channels (23 B channels and 1 D channel) of 64 kbps each. The individual channels or groups of channels connect to different destinations. Supports DDR, Frame Relay, and X.25. Also called *fractional T1*. Compare with *channelized E1*.

CHAP

Challenge Handshake Authentication Protocol. Security feature supported on lines using PPP encapsulation that prevents unauthorized access. CHAP does not itself prevent unauthorized access, but merely identifies the remote end. The router or access server then determines whether that user is allowed access. Compare with *PAP*.

chargen

Character Generation. Via TCP, a service that sends a continual stream of characters until stopped by the client. Via UDP, the server sends a random number of characters each time the client sends a datagram.

chat script

String of text that defines the login "conversation" that occurs between two systems. Consists of expect-send pairs that define the string that the local system expects to receive from the remote system and what the local system should send as a reply.

Cheapernet

Industry term used to refer to the IEEE 802.3 10Base2 standard or the cable specified in that standard. Compare with *Thinnet*. See also *10Base2*, *EtherChannel*, and *IEEE 802.3*.

checksum

Method for checking the integrity of transmitted data. A checksum is an integer value computed from a sequence of octets taken through a series of arithmetic operations. The value is recomputed at the receiving end and is compared for verification.

child peer group

Peer group for which another peer group is the parent peer group. See also *LGN*, *peer group*, and *parent peer group*.

choke packet

Packet sent to a transmitter to tell it that congestion exists and that it should reduce its sending rate.

churn

Many subscriber additions and deletions.

CIA

classical IP over ATM. Specification for running IP over ATM in a manner that takes full advantage of the features of ATM. Defined in RFC 1577.

CIC

Prefix to select different long distance carriers; prefixes to select tielines, trunk groups, and WATS lines; and private number plans, such as seven-digit dialing.

CICNet

Regional network that connects academic, research, nonprofit, and commercial organizations in the Midwestern United States. Founded in 1988, CICNet was a part of the NSFNET and was funded by the NSF until the NSFNET dissolved in 1995. See also *NSFNET*.

CICS

Customer Information Control System. IBM application subsystem allowing transactions entered at remote terminals to be processed concurrently by user applications.

CID

1. craft interface device. Terminal- or PC-based interface that enables the performance of local maintenance operations.

2. channel ID. Designates the Frame Relay subchannel ID for Voice over Frame Relay.

CIDR

classless interdomain routing. Technique supported by BGP4 and based on route aggregation. CIDR allows routers to group routes together to reduce the quantity of routing information carried by the core routers. With CIDR, several IP networks appear to networks outside the group as a single, larger entity. With CIDR, IP addresses and their subnet masks are written as four octets, separated by periods, followed by a forward slash and a two-digit number that represents the subnet mask. See also *BGP4*.

CIP

See *CIP* (Channel Interface Processor) in the “Cisco Systems Terms and Acronyms” section.

Cipher

Cryptographic algorithm for encryption and decryption.

ciphertext

Data that has been transformed by encryption so that its semantic information content (that is, its meaning) is no longer intelligible or directly available.

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

A communications path between two or more points.

circuit group

A grouping of associated serial lines that link two bridges. If one of the serial links in a circuit group is in the spanning tree for a network, any of the serial links in the circuit group can be used for load balancing. This load-balancing strategy avoids data ordering problems by assigning each destination address to a particular serial link.

circuit steering

Mechanism used by some ATM switches to eavesdrop on a virtual connection and copy its cells to another port where an ATM analyzer is attached. Also known as *port snooping*.

circuit switching

The switching system in which a dedicated physical circuit path must exist between the sender and the receiver for the duration of the "call." Used heavily in the telephone company network. Circuit switching can be contrasted with *contention* and *token passing* as a channel-access method, and with *message switching* and *packet switching* as a switching technique.

Cisco Discovery Protocol

See *CDP* in the "Cisco Systems Terms and Acronyms" section.

Cisco FRAD

See *Cisco FRAD* in the "Cisco Systems Terms and Acronyms" section.

Cisco Frame Relay access device

See *Cisco FRAD* in the "Cisco Systems Terms and Acronyms" section.

Cisco Internetwork Operating System software

See *Cisco IOS* in the "Cisco Systems Terms and Acronyms" section.

Cisco IOS

See *Cisco IOS* in the "Cisco Systems Terms and Acronyms" section.

Cisco Link Services

See *CLS* in the "Cisco Systems Terms and Acronyms" section.

Cisco Link Services Interface

See *CLSI* in the "Cisco Systems Terms and Acronyms" section.

CiscoBus controller

See *SP* in the "Cisco Systems Terms and Acronyms" section.

CiscoFusion

See *CiscoFusion* in the "Cisco Systems Terms and Acronyms" section.

Cisco Network Registrar

A software product that provides IP addresses, configuration parameters, and DNS names to DOCSIS cable modems and PCs, based on network and service policies. CNR also provides enhanced TFTP server capabilities, including the generation of DOCSIS cable modem configuration files.

Cisco Optical Network Planner

See *Cisco Optical Network Planner* in the "Cisco Systems Terms and Acronyms" section.

Cisco-trunk (private line) call

See *Cisco-trunk (private line) call* in the "Cisco Systems Terms and Acronyms" section.

CiscoView

See *Cisco-trunk (private line) call* in the "Cisco Systems Terms and Acronyms" section.

Cisco Wavelength Router Manager

See *Cisco Wavelength Router Manager* in the "Cisco Systems Terms and Acronyms" section.

Cisco WRM

See *Cisco WRM* in the "Cisco Systems Terms and Acronyms" section.

Cisco WW TAC

See *Cisco WW TAC* in the "Cisco Systems Terms and Acronyms" section.

C-ISUP

See *C-ISUP* in the "Cisco Systems Terms and Acronyms" section. See also *ISUP*.

CIX

Commercial Internet Exchange. A connection point between the commercial Internet service providers. Pronounced "kicks." See also *FIX* and *GIX*.

CKTINT

Circuit Interworking software. A module in the SS7 application software that translates SS7 signals for the Cisco VCO/4K and host applications. It also performs call processing and circuit maintenance tasks.

Class A station

See *DAS*.

Class B station

See *SAS*.

Class of Restrictions

See *COR*.

class of service

See *CoS*.

classical IP over ATM

See *CIA*.

classless interdomain routing

See *CIDR*.

CLAW

Common Link Access for Workstations. Data link layer protocol used by channel-attached RISC System/6000 series systems and by IBM 3172 devices running TCP/IP off-load. CLAW improves the efficiency of channel use and allows the CIP to provide the functionality of a 3172 in TCP/IP environments and to support direct channel attachment. The output from TCP/IP mainframe processing is a series of IP datagrams that the router can switch without modifications.

clear channel

A channel that uses out-of-band signaling (as opposed to in-band signaling), so the channel's entire bit rate is available.

Clear To Send

See *CTS*.

ClearDDTS

Distributed Defect Tracking System. Development engineers and CSEs use ClearDDTS (Rational) to track bugs for software, hardware, and microcode products. CSEs also use ClearDDTS as a formal way to escalate an issue to developers. Customers use Release Note information derived from the ClearDDTS database to troubleshoot problems or to select a software version for an upgrade.

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. See also *CAF*.

CLEI

Common Language Equipment Identifier. The standard code used by suppliers to identify equipment parts and system configurations. CLEI is a registered trademark of Bellcore (now Telcordia).

CLI

1. 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 DOS provide CLIs. Compare with *GUI*.

2. Command Language Interpreter. The basic Cisco IOS configuration and management interface.

CLID

calling line ID. Information about the billing telephone number from which a call originated. The CLID value might be the entire phone number, the area code, or the area code plus the local exchange. Also known as Caller ID.

client

Node or software program (front-end device) that requests services from a server. See also *back end*, *FRF.11*, and *server*.

client/server computing

Term used to describe distributed computing (processing) network systems in which transaction responsibilities are divided into two parts: client (front end) and server (back end). Both terms (client and server) can be applied to software programs or actual computing devices. Also called distributed computing (processing). Compare with *peer-to-peer computing*. See also *RFC*.

client/server model

Common way to describe network services and the model user processes (programs) of those services. Examples include the nameserver/nameresolver paradigm of the DNS and fileserver/file-client relationships, such as NFS and diskless hosts.

CLNP

Connectionless Network Protocol. The OSI network layer protocol that does not require a circuit to be established before data is transmitted. See also *CLNS*.

CLNS

Connectionless Network Service. The OSI network layer service that does not require a circuit to be established before data is transmitted. CLNS routes messages to their destinations independently of any other messages. See also *CLNP*.

cloning

Creating and configuring a virtual access interface by applying a specific virtual template interface. The template is the source of the generic user information and the router-dependent information. The result of cloning is a virtual access interface configured with all the commands in the template.

CLP

cell loss priority. Field in the ATM cell header that determines the probability of a cell being dropped if the network becomes congested. Cells with CLP = 0 are insured traffic, which is unlikely to be dropped. Cells with CLP = 1 are best-effort traffic, which might be dropped in congested conditions to free up resources to handle insured traffic.

CLR

cell loss ratio. In ATM, the ratio of discarded cells to cells that are transmitted successfully. CLR can be set as a QoS parameter when a connection is set up.

CLTP

Connectionless Transport Protocol. Provides for end-to-end Transport data addressing (via Transport selector) and error control (via checksum), but cannot guarantee delivery or provide flow control. It is the OSI equivalent of UDP.

cluster controller

1. Generally, an intelligent device that provides the connections for a cluster of terminals to a data link.

2. In SNA, a programmable device that controls the input/output operations of attached devices. Typically, it's an IBM 3174 or 3274 device.

CM

cable modem. Device used to connect a PC to a local cable TV line and receive data at much higher rates than ordinary telephone modems or ISDN. A cable modem can be added to or integrated with a set-top box, thereby enabling Internet access via a television set. In most cases, cable modems are furnished as part of the cable access service and are not purchased directly and installed by the subscriber.

CMI

1. coded mark inversion. ITU-T line coding technique specified for STS-3c transmissions. Also used in DS-1 systems. See also *DS-1* and *STS-3c*.

2. control mode idle.

CMIP

Common Management Information Protocol. OSI network management protocol created and standardized by ISO for the monitoring and control of heterogeneous networks. See also *CMIS*.

CMIS

Common Management Information Services. OSI network management service interface created and standardized by ISO for the monitoring and the control of heterogeneous networks. See also *CMIP*.

CMNS

Connection-Mode Network Service. Extends local X.25 switching to a variety of media (Ethernet, FDDI, Token Ring). See also *CONP*.

CMNM

See *CMNM* in the "Cisco Systems Terms and Acronyms" section.

CMS

1. call management system. A reporting package used on ACDs and PBXs made by Lucent.

2. configuration management system. An application that controls and monitors the Sun Netra ft 1800 hardware

CMT

connection management. FDDI process that handles the transition of the ring through its various states (off, active, connect, and so on), as defined by the ANSI X3T9.5 specification.

CMTS

A cable modem termination system, such as a router or a bridge, typically located at the cable headend. Any DOCSIS-compliant headend cable router, such as the Cisco uBR7246.

CNS/AD

Cisco Networking Services for Active Directory, which consists of a port of Active Directory to Solaris and HP/UX, and an NT and UNIX client implementation of the LDAP API and GSS-API.

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.

CO FRAD

central office frame relay access device.

coaxial cable

Cable consisting of a hollow outer cylindrical conductor that surrounds a single inner wire conductor. Two types of coaxial cable currently are used in LANs: 50-ohm cable, which is used for digital signaling, and 75-ohm cable, which is used for analog signaling and high-speed digital signaling.

codec

coder-decoder.

1. Integrated circuit device that typically uses pulse code modulation to transform analog signals into a digital bit stream and digital signals back into analog signals.

2. In Voice over IP, Voice over Frame Relay, and Voice over ATM, a DSP software algorithm used to compress/decompress speech or audio signals.

coded mark inversion

See *CMI*.

coder-decoder

See *codec*.

coding

Electrical techniques used to convey binary signals.

coding violation

See *CV*.

CO-IPX

Connection Oriented IPX. Native ATM protocol based on IPX under development by Novell.

collapsed backbone

Nondistributed backbone in which all network segments are interconnected by way of an internetworking device. A collapsed backbone might be a virtual network segment existing in a device, such as a hub, a router, or a switch.

collision

In Ethernet, the result of two nodes transmitting simultaneously. The frames from each device impact and are damaged when they meet on the physical media. See also *collision domain*.

collision detection

See *CSI*.

collision domain

In Ethernet, the network area within which frames that have collided are propagated. Repeaters and hubs propagate collisions; LAN switches, bridges, and routers do not. See also *collision*.

COM

common equipment. Items used by more than one channel or equipment function.

command-line interface

See *CLI*.

committed burst

See *Bc*.

committed information rate

See *CIR*.

common carrier

Licensed, private utility company that supplies communication services to the public at regulated prices.

common channel signaling

See *CCS*.

Common Gateway Interface

See *CGI*.

Common Language Equipment Identifier

See CLEI.

Common Link Access for Workstations

See *CLAW*.

Common Management Information Protocol

See *CMIP*.

Common Management Information Services

See *CMIS*.

common part convergence sublayer

See *CPCS*.

Common Programming Interface for Communications

See *CPI-C*.

common transport semantic

See *CTS*.

communication

Transmission of information.

communication controller

In SNA, a subarea node (such as an IBM 3745 device) that contains an NCP.

communication server

Communications processor that connects asynchronous devices to a LAN or a WAN through network and terminal emulation software. Performs only asynchronous routing of IP and IPX. Compare with *access server*.

communications line

Physical link (such as wire or a telephone circuit) that connects one or more devices to one or more other devices.

community

In SNMP, a logical group of managed devices and NMSs in the same administrative domain.

Community Antenna Television

Now known as CATV. See *CATV*.

community name

See *community string*.

community string

Text string that acts as a password and is used to authenticate messages sent between a management station and a router containing an SNMP agent. The community string is sent in every packet between the manager and the agent. Also called a *community name*.

companding

Contraction derived from the opposite processes of compression and expansion. Part of the PCM process whereby analog signal values are rounded logically to discrete scale-step values on a nonlinear scale. The decimal step number then is coded in its binary equivalent prior to transmission. The process is reversed at the receiving terminal using the same nonlinear scale. Compare with *compression* and *expansion*. See also *a-law* and *mu-law*.

complete sequence number PDU

See *CSNP*.

composite clock

A bipolar timing signal containing 64 khz bit-clock and 8 khz byte-clock frequencies (also called composite timing).

compound option

A DOCSIS option that is composed of a number of suboptions. For example, options 4 and 24 are compound options.

Compressed Serial Link Internet Protocol

See *CSI*.

compression

The running of a data set through an algorithm that reduces the space required to store or the bandwidth required to transmit the data set. Compare with *companding* and *expansion*.

Computer Science Network

See *CSNET*.

concentrator

See *hub*.

CONF

configuration failure. Resource is OOS because its provisioning information is inconsistent.

Conférence Européenne des Postes et des Télécommunications

See *CEPT*.

configuration direct VCC

In ATM, a bi-directional point-to-point VCC set up by an LEC to an LES. One of three control connections defined by Phase 1 LANE. Compare with *control distribute VCC* and *control direct VCC*.

configuration management

One of five categories of network management defined by ISO for the management of OSI networks. Configuration management subsystems are responsible for detecting and determining the state of a network. See also *accounting management*, *fault management*, *performance management*, and *security management*.

configuration register

See *configuration register* in the "Cisco Systems Terms and Acronyms" section.

configuration tool

1. Service management tool with a GUI.

2. Element management service tool with a GUI.

congestion

Traffic in excess of network capacity.

congestion avoidance

Mechanism by which an ATM network controls the traffic entering the network to minimize delays. To use resources most efficiently, lower-priority traffic is discarded at the edge of the network if conditions indicate that it cannot be delivered.

congestion collapse

Condition in which the retransmission of frames in an ATM network results in little or no traffic successfully arriving at the destination. Congestion collapse frequently occurs in ATM networks composed of switches that do not have adequate and effective buffering mechanisms complimented by intelligent packet discard or ABR congestion feedback mechanisms.

connection admission control

See *CAC*.

connection management

See *CMT*.

connectionless

Term used to describe data transfer without the existence of a virtual circuit. Compare with *connection-oriented*. See also *virtual circuit*.

Connectionless Broadband Data Service

See *CBDS*.

Connectionless Network Protocol

See *CLNP*.

Connectionless Network Service

See *CLNS*.

Connection-Mode Network Service

See *CMNS*.

connection-oriented

Term used to describe data transfer that requires the establishment of a virtual circuit. See also *connectionless* and *virtual circuit*.

Connection-Oriented Network Protocol

See *CONP*.

CONP

Connection-Oriented Network Protocol. OSI protocol providing connection-oriented operation to upper-layer protocols. See also *CMNS*.

CONS

connection-oriented network service.

console

DTE through which commands are entered into a host.

constant bit rate

See *CBR*.

constraint-based routing

Procedures and protocols that determine a route across a backbone take into account resource requirements and resource availability instead of simply using the shortest path.

Consultative Committee for International Telegraph and Telephone

See *CCITT*.

content-addressable memory

See *associative memory*.

contention

Access method in which network devices compete for permission to access the physical medium. Compare with *circuit switching* and *token passing*.

Context-based Access Control

See *CBAC*.

control direct VCC

In ATM, a bidirectional VCC set up by an LEC to an LES. One of three control connections defined by Phase 1 LANE. Compare with *configuration direct VCC* and *control direct VCC*.

control distribute VCC

In ATM, a unidirectional VCC set up from an LES to an LEC. One of three control connections defined by Phase 1 LANE. Typically, the VCC is a point-to-multipoint connection. Compare with *configuration direct VCC* and *control direct VCC*.

control messages

Signalling messages that provide the control of setup, maintenance, and teardown of L2TP sessions and tunnels.

control point

See *CP*.

control signal distribution box

See *CSD box*.

convergence

Speed and ability of a group of internetworking devices running a specific routing protocol to agree on the topology of an internetwork after a change in that topology.

convergence sublayer

See *CS*.

conversation

In SNA, an LU 6.2 session between two transaction programs.

cookie

A piece of information sent by a Web server to a Web browser that the browser is expected to save and send back to the Web server whenever the browser makes additional requests of the Web server.

Cooperation for Open Systems Interconnection Networking in Europe

See *COSINE*.

COOS

Commanded OOS. A resource is OOS because it was entered as a command. See also *OOS* in the "Cisco Systems Terms and Acronyms" section.

Copper Distributed Data Interface

See *CDDI*.

COPS

Common Open Policy Service. Quality of service (QoS) policy exchange protocol proposed as an IETF standard for communicating network QoS policy information.

COR

Functionality that provides the capability to deny certain call attempts based on the incoming and outgoing class of restrictions provisioned on the dial peers. This functionality provides flexibility in network design, allows users to block calls (for example, to 900 numbers), and applies different restrictions to call attempts from different originators. COR specifies which incoming dial peer can use which outgoing dial peer to make a call.

CORBA

Common Object Request Broker Architecture. OMG's answer to the need for interoperability among the rapidly proliferating number of hardware and software products available today. Simply stated, CORBA allows applications to communicate with one another no matter where they are located or who has designed them. See also *IIOP*.

core gateway

Primary routers in the Internet.

core router

In a packet-switched star topology, a router that is part of the backbone and that serves as the single pipe through which all traffic from peripheral networks must pass on its way to other peripheral networks.

Corporation for Open Systems

See *COS*.

Corporation for Research and Educational Networking

See *CREN*.

CoS

class of service. An indication of how an upper-layer protocol requires a lower-layer protocol to treat its messages. In SNA subarea routing, CoS definitions are used by subarea nodes to determine the optimal route to establish a given session. A CoS definition comprises a virtual route number and a transmission priority field. Also called *ToS*.

COS

Corporation for Open Systems. Organization that promulgates the use of OSI protocols through conformance testing, certification, and related activities.

COSINE

Cooperation for Open Systems Interconnection Networking in Europe. European project financed by the EC to build a communication network between scientific and industrial entities in Europe. The project ended in 1994.

cost

An arbitrary value, typically based on hop count, media bandwidth, or other measures, that is assigned by a network administrator and used to compare various paths through an internetwork environment. Routing protocols use cost values to determine the most favorable path to a particular destination: the lower the cost, the better the path. Sometimes called *path cost*. See also *routing metric*.

COT

Continuity Test. Requirement of the SS7 protocol specifications. It tests the bearer channels' status using either loopback or tone detection and generation. Used to test individual DS0 channels via either loopback or tone detection and generation.

count to infinity

Problem that can occur in routing algorithms that are slow to converge, in which routers continuously increment the hop count to particular networks. Typically, some arbitrary hop-count limit is imposed to prevent this problem.

CP

1. control point. In SNA networks, an element that identifies the APPN networking components of a PU 2.1 node, manages device resources, and provides services to other devices. In APPN, CPs can communicate with logically adjacent CPs by way of CP-to-CP sessions. See also *EN* and *NN*.

2. Telecommunications: control processor.

CPC

calling party category.

CPCS

1. common part convergence sublayer. One of the two sublayers of any AAL. The CPCS is service-independent and is divided further into the CS sublayer and the SAR sublayer. The CPCS is responsible for preparing data for transport across the ATM network, including the creation of the 48-byte payload cells that are passed to the ATM layer. See also *AAL*, *ATM layer*, *CS*, *SAR*, and *SSCS*.

2. Telecommunications: call processing control system.

CPE

customer premises equipment. Terminating equipment, such as terminals, telephones, and modems, supplied by the telephone company, installed at customer sites, and connected to the telephone company network. Can also refer to any telephone equipment residing on the customer site.

CPI-C

common programming interface for communications. Platform-independent API developed by IBM and used to provide portability in APPC applications. See also *APPC*.

CPNIE

called party number information element.

CPP

See *CPP* (Combinet Proprietary Protocol) in the "Cisco Systems Terms and Acronyms" section.

cps

cells per second. Unit of measure used for ATM switch volumes.

CQ

custom queuing.

craft interface device

See *CID*.

crankback

A mechanism used by ATM networks when a connection setup request is blocked because a node along a selected path cannot accept the request. In this case, the path is rolled back to an intermediate node, which attempts to discover another path to the final destination using GCAC. See also *GCAC*.

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.

CREN

Corporation for Research and Educational Networking. The result of a merger of BITNET and CSNET. CREN is devoted to providing Internet connectivity to its members, which include the alumni, the students, the faculty, and other affiliates of participating educational and research institutions, via BITNET III. See also *BITNET*, *BITNET III*, and *CSNET*.

CRF

Concentrator Relay Function CRM cell rate margin. One of three link attributes exchanged using PTSPs to determine the available resources of an ATM network. CRM is a measure of the difference between the effective bandwidth allocation per traffic class as the allocation for sustainable cell rate.

CRL

certificate revocation list. Data structure that enumerates digital certificates that have been invalidated by their issuer prior to when they were scheduled to expire.

cross talk

Interfering energy transferred from one circuit to another.

CRP

customer routing point. AT&T's terminology for third-party processors that accept routing requests from the CCSS7 network. Within the ICM, the Network Interface Controller (NIC) acts as a CRP.

CRV

call reference value. Number carried in all Q.931 (I.451) messages that provides an identifier for each ISDN call.

cryptographic algorithm

Algorithm that employs the science of cryptography, including encryption algorithms, cryptographic hash algorithms, digital signature algorithms, and key agreement algorithms.

cryptographic key

Usually shortened to just "key." Input parameter that varies the transformation performed by a cryptographic algorithm.

CS

convergence sublayer. One of the two sublayers of the AAL CPCS, which is responsible for padding and error checking. PDUs passed from the SSCS are appended with an 8-byte trailer (for error checking and other control information) and are padded, if necessary, so that the length of the resulting PDU is divisible by 48. These PDUs then are passed to the SAR sublayer of the CPCS for further processing. See also *AAL*, *CPCS*, *SAR*, and *SSCS*.

CSA

Canadian Standards Association. Canadian agency that certifies products that conform to Canadian national safety standards.

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.

CSD box

control signal distribution box. Bulkhead splitter box that distributes the clock and control system signals within a system.

CSFS

customer support forwarding service. Facility within the ICM Logger that receives events from all parts of the ICM, filters them, and saves the appropriate messages. The Data Transfer Process (DTP) sends these messages to Cisco Customer Support.

CSI

called subscriber identification. An identifier whose coding format contains the telephone number from a remote fax terminal.

CSLIP

Compressed Serial Link Internet Protocol. Extension of SLIP that, when appropriate, allows just header information to be sent across a SLIP connection, reducing overhead and increasing packet throughput on SLIP lines. See also *SLIP*.

CSM

1. call switching module.

2. See *CSM* in the "Cisco Systems Terms and Acronyms" section.

CSMA/CD

carrier sense multiple access collision detect. Media-access mechanism wherein devices ready to transmit data first check the channel for a carrier. If no carrier is sensed for a specific period of time, a device can transmit. If two devices transmit at once, a collision occurs and is detected by all colliding devices. This collision subsequently delays retransmissions from those devices for some random length of time. Ethernet and IEEE 802.3 use CSMA/CD access.

CSNET

Computer Science Network. Large internetwork consisting primarily of universities, research institutions, and commercial concerns. CSNET merged with BITNET to form CREN. See also *BITNET* and *CREN*.

CSNP

complete sequence number PDU. PDU sent by the designated router in an OSPF network to maintain database synchronization.

CSO

composite second order beat. Peak of the average level of distortion products due to second-order non-linearities in cable system equipment.

CSU

channel service unit. Digital interface device that connects end-user equipment to the local digital telephone loop. Often referred to together with DSU, as *CSU/DSU*. See also *DSU*.

CSV

comma separated values. Commonly used no-frills text file format used for import from and import to spreadsheets and SQL databases.

CTB

composite triple beat. Peak of the average level of distortion components due to third-order non-linearities in cable system equipment.

CTD

cell transfer delay. In ATM, the elapsed time between a cell exit event at the source UNI and the corresponding cell entry event at the destination UNI for a particular connection. The CTD between the two points is the sum of the total inter-ATM node transmission delay and the total ATM node processing delay.

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.

CTS

1. Clear To Send. Circuit in the EIA/TIA-232 specification that is activated when DCE is ready to accept data from a DTE.

2. common transport semantic. Cornerstone of the IBM strategy to reduce the number of protocols on networks. CTS provides a single API for developers of network software and enables applications to run over APPN, OSI, and TCP/IP.

CU

coding unit. A type of access device. See also *access device*.

Customer Information Control System

See *CICS*.

customer premises equipment

See *CPE*.

cut-through packet switching

A packet switching approach that streams data through a switch so the leading edge of a packet exits the switch at the output port before the packet finishes entering the input port. A device using cut-through packet switching reads, processes, and forwards packets as soon as the destination address is looked up and the outgoing port is determined. Also known as *on-the-fly packet switching*. Compare with *store and forward packet switching*.

CWAF

See *CWAF* in the "Cisco Systems Terms and Acronyms" section.

CV

coding violation. Occurrence of transmission bit error(s) in paths and lines, as detected by examining a redundancy check code embedded within the signal format. CV also refers to the performance parameter, which is the count of transmission error detections at line, path, and section levels.

CxBus

See *CxBus* (Cisco Extended Bus) in the "Cisco Systems Terms and Acronyms" section.

Cyberspace

Term coined by William Gibson in his fantasy novel Neuromancer to describe the "world" of computers and the society that gathers around them. Often used to refer to the Internet, the World Wide Web, or some combination thereof.

cycles per second

See *hertz*.

cyclic redundancy check

See *CRC*.