CA
See *congestion avoidance*.

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

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 value.

cable television
See *CATV*.

California Education and Research Federation Network
See *CERFnet*.

call admission control
Traffic management mechanism used in ATM networks that determines whether the network can offer a path with sufficient bandwidth for a requested VCC.

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

CAM
content-addressable memory. See *associative memory*.

Canadian Standards Association
See *CSA*.

carrier
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 sense multiple access collision detect
See *CSMA/CD*.

Catalyst 1600 Token Ring Switch
Cisco Token Ring switch that offers full-duplex dedicated LAN segments to individual servers and other workstations that require high-speed switching access. The Catalyst 1600 provides up to 12 switched Token Ring interfaces and low latency switching between servers and clients across a backbone.

Catalyst 5000
Cisco modular switching system that allows connection to Ethernet, CDDI, FDDI, and ATM LANs and backbones. The Catalyst 5000 switch performs store-and-forward packet switching and allows the user to dedicate 10- or 100-Mbps connections to existing LAN segments or high-performance end stations.

Catalyst Workgroup Switch
Series of Cisco workgroup switches that enhance the network performance of Ethernet client/server workgroups. The Catalyst Workgroup Switch integrates software enhancements for network management and provides a 100-Mbps interface to servers and dedicated Ethernet-to-desktop workstations.

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 is used for running CDDI and 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

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

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 (available bit rate)*, *UBR*, and *VBR*.

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

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*.

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

CDDI
Copper Distributed Data Interface. Implementation of FDDI protocols over STP and UTP cabling. CDDI transmits over relatively short distances (about 100 meters), providing data rates of 100 Mbps using a dual-ring architecture to provide redundancy. Based on the ANSI Twisted-Pair Physical Medium Dependent (TPPMD) standard. Compare with *FDDI*.

CDDI/FDDI workgroup concentrator
See *Cisco Workgroup Concentrator*.

CDP
Cisco Discovery Protocol. Media- and protocol-independent device-discovery protocol that runs on all Cisco-manufactured equipment including routers, access servers, bridges, and switches. Using CDP, a device can advertise its existence to other devices and receive information about other devices on the same LAN or on the remote side of a WAN. Runs on all media that support SNAP, including LANs, Frame Relay, and ATM media.

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.

CDVT
cell delay variation tolerance. Parameter defined by the ATM Forum for ATM traffic management. In CBR transmissions, determines the level of jitter that is tolerable for the data samples taken by the PCR. See also *CBR* and *PCR*.

cell
The basic 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 tolerance
See *CDVT*.

cell line card
See *CLC*.

cell loss priority
See *CLP*.

cell payload scrambling
Technique used on the LightStream 2020 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*.

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.

CEMAC
circuit emulation access card. T1 or E1 circuit emulation card in the LightStream 2020 ATM switch. See also *access card*.

central office
See *CO*.

Centrex
AT&T PBX that provides direct inward dialing and automatic number identification of the calling PBX.

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

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.

CFRAD
See *Cisco FRAD*.

CGS
Compact Gateway Server. Cisco midrange multiprotocol router designed for medium to small regional and district environments. The CGS is a 2-slot router that supports up to four interfaces (all of the same type).

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

Challenge Handshake Authentication Protocol
See *CHAP*.

channel
1. A communication path. 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.

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

Channel Interface Processor
See *CIP*.

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 referred to as *fractional T1*. Compare with *channelized E1*.

channel service unit
See *CSU*.

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

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*, *Ethernet*, 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 compared for verification.

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

CIA
See *classical IP over ATM*.

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.

CIDR

classless interdomain routing. Technique supported by BGP4 and based on route aggregation. CIDR allows routers to group routes together in order to cut down on 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. See also *BGP4*.

CIO

Cisco Information Online. Online service available to Cisco customers that provides electronic services and online information relating to Cisco products. CIO services include product information, software updates, release notes, technical tips, configuration notes, brochures, and download offerings.

CIP

Channel Interface Processor. Channel attachment interface for Cisco 7000 series routers. The CIP is used to connect a host mainframe to a control unit, eliminating the need for an FEP for channel attachment.

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

Communications path between two or more points.

circuit emulation access card
See *CEMAC*.

circuit group
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 switching
Switching system in which a dedicated physical circuit path must exist between sender and 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 1000
Any of the Cisco 1000 series LAN Extenders and routers. The Cisco 1000 series are easy-to-install, inexpensive, multiprotocol access products designed for small offices and other remote sites. The Cisco 1000 series includes an ISDN router, an asynchronous router, and LAN extenders. See also *LAN Extender*.

Cisco 2500
Any of the Cisco 2500 series routers and access servers, including single LAN routers; mission-specific, low-end routers; router/hub combinations; access servers; and dual LAN routers. The Cisco 2500 is designed for small offices and other remote sites and runs the Cisco IOS software. Sometimes called the *Cisco Access Server 2500* series.

Cisco 4000
Any of the Cisco 4000 series routers designed for a wide variety of network computing environments. The Cisco 4000 series routers run the Cisco IOS software and can be optimized for particular environments with custom configurations.

Cisco 5100
Cisco data communications platform that combines the functions of a Cisco access server with analog and digital modems, CSUs, and T1 channel banks. The Cisco 5100 is optimized for high-speed modem access and is well-suited for dial-up applications, including host access, electronic mail, file transfer, and dial-in access to a LAN. Also known as the *Cisco Access Server 5100*.

Cisco 7000
Any of the Cisco 7000 series of routers (the Cisco 7000 or the Cisco 7010), a high-end router platform that supports a wide range of network interfaces and media types and is designed for use in enterprise networks. Cisco 7000 series routers run the Cisco IOS software and support online software reconfiguration, OIR, fast boot, environmental monitoring, self-diagnostics, redundant power supplies, and Flash memory.

Cisco 7500
Any of the Cisco 7500 series of routers, a high-end multiprotocol router platform designed for use in enterprise networks. Cisco 7500 series routers run the Cisco IOS software and implement a distributed multiprocessor architecture consisting of the CyBus, the RSP, and the VIP. See also *CyBus*, *RSP*, and *VIP*.

Cisco Access Server 2500
See *Cisco 2500*.

Cisco Access Server 5100
See *Cisco 5100*.

ciscoBus controller
See *SP*.

Cisco Discovery Protocol
See *CDP*.

Cisco Extended Bus
See *CxBus*.

Cisco FRAD

Cisco Frame Relay access device. Cisco product that supports Cisco IOS Frame Relay SNA services and can be upgraded to be a full-function multiprotocol router. The Cisco FRAD connects SDLC devices to Frame Relay without requiring an existing LAN. However, the Cisco FRAD does support attached LANs and can perform conversion from SDLC to Ethernet and Token Ring. See also *FRAD*.

Cisco Frame Relay access device

See *Cisco FRAD*.

CiscoFusion

Cisco internetworking architecture that "fuses" together the scalability, stability, and security advantages of the latest routing technologies with the performance benefits of ATM and LAN switching, and the management benefits of VLANs. See also *Cisco IOS software*.

Cisco Information Online

See *CIO*.

Cisco Internetwork Operating System software

See *Cisco IOS software*.

Cisco IOS software

Cisco Internetwork Operating System software. Cisco system software that provides common functionality, scalability, and security for all products under the CiscoFusion architecture. The 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. See also *CiscoFusion*.

Cisco LightStream 100

Cisco LightStream 100 ATM switch, a fully nonblocking ATM switch operating at up to 2.4 Gbps and supporting multiple ATM lines of 155-Mbps data speed as well as a variety of LAN and WAN interfaces. The LightStream 100 switch can serve as part of an ATM workgroup or small campus backbone connecting a number of ATM routers, multilayer LAN switches, and high-performance servers and clients.

Cisco LightStream 2020
Cisco LightStream 2020 Enterprise ATM switch, for campus and wide-area applications. The LightStream 2020 ATM switch supports trunks operating at T1/E1 data rates and provides a migration path through T3/E3 into a SONET/SDH OC-3 trunk. The LightStream 2020 intelligent edge modules support a variety of services including frame forwarding, Frame Relay, ATM UNI, and LAN internetworking.

CiscoView
GUI-based device-management software application that provides dynamic status, statistics, and comprehensive configuration information for Cisco internetworking devices. In addition to displaying a physical view of Cisco device chassis, CiscoView also provides device monitoring functions and basic troubleshooting capabilities, and can be integrated with several leading SNMP-based network management platforms.

Cisco Workgroup Adapter
Series of Cisco workgroup adapters that allow workstations to connect to CDDI or FDDI interfaces operating at 100 Mbps.

Cisco Workgroup Concentrator
Series of Cisco workgroup concentrators that combines the compact form factor of workgroup concentrators with the versatility of modular hubs. Supports from 4 to 32 combinations of CDDI or FDDI ports.

CiscoWorks
Series of SNMP-based internetwork management software applications. CiscoWorks includes applications for monitoring router and access server status, managing configuration files, and troubleshooting network problems. CiscoWorks applications are integrated on several SNMP-based network management platforms, including SunNet Manager, HP OpenView, and IBM NetView.

Class A station
See *DAS*.

Class B station
See *SAS*.

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. Sometimes called *CIA*.

classless interdomain routing
See *CIDR*.

class of service
See *COS*.

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 efficiency of channel use and allows the CIP to provide the functionality of a 3172 in TCP/IP environments and support direct channel attachment. The output from TCP/IP mainframe processing is a series of IP datagrams that the router can switch without modifications.

CLC
cell line card. Card on the LightStream 2020 ATM switch that, in conjunction with an access card, supports up to two OC-3c edge ports or one OC-3c trunk port. A CLC can be configured as an edge card or a trunk card.

Clear To Send
See *CTS*.

CLI
command line interface. The command-line interface on the LightStream 2020 that runs on NPs and Sun SPARCstations and is used to monitor and control an ATM network.

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

CLNP

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

CLNS

Connectionless Network Service. 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*.

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 in order to free up resources to handle insured traffic.

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, an IBM 3174 or 3274 device.

CMI

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*.

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 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*.

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.

CO
central office. Local telephone company office to which all local loops in a given area connect and in which circuit switching of subscriber lines occurs.

coaxial cable
Cable consisting of a hollow outer cylindrical conductor that surrounds a single inner wire conductor. Two types of coaxial cable are currently 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. Device that typically uses PCM to transform analog signals into a digital bit stream, and digital signals back into analog.

coded mark inversion
See *CMI*.

coder-decoder
See *CODEC*.

coding
Electrical techniques used to convey binary signals.

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 *CSMA/CD*.

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*.

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 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 WAN through network and terminal emulation software. Performs only asynchronous routing of IP and IPX. Compare with *access server*.

communications line
The 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 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.

Compact Gateway Server
See *CGS*.

companding
Contraction derived from the opposite processes of compression and expansion. Part of the PCM process whereby analog signal values are logically rounded to discrete scale-step values on a nonlinear scale. The decimal step number is then 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*.

Compressed Serial Link Internet Protocol
See *CSLIP*.

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*.

Conférence Européenne des Postes et des Télécommunications
See *CEPT*.

Configuration Builder

Cisco software application that lets you create configuration files for multiple routers without knowing the router command-line syntax. Configuration Builder is a Microsoft Windows-based application that enables you to configure multiple routers simultaneously; automatically detect the model, software version, image type, and the number and type of installed interfaces on the router you are configuring; and quickly import predefined priority queuing lists, access lists, and filters into multiple configuration files.

configuration database

File of attribute settings created using the Cisco LightStream configurator. A global database holds configuration information for the entire LightStream-based ATM backbone and is stored on the NMS. A local database, stored in each LightStream 2020 ATM switch, contains just the configuration information for that switch. Configuration data includes definitions of chassis, cards, ports, VCs, and the attributes that describe them. See also *configurator*.

configuration management

One of five categories of network management defined by ISO for 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

In Cisco routers, a 16-bit, user-configurable value that determines how the router functions during initialization. The configuration register can be stored in hardware or software. In hardware, the bit position is set using a jumper. In software, the bit position is set by specifying a hexadecimal value using configuration commands.

configurator

Management tool used with the LightStream 2020 ATM switch that is used to create configuration database files for the nodes in an ATM network. The configurator is an HP OpenView-based application that runs on an NMS. See also *configuration database*.

congestion

Traffic in excess of network capacity.

congestion avoidance
The mechanism by which a LightStream-based ATM network controls traffic entering the network to minimize delays. In order to use resources most efficiently, lower-priority traffic is discarded at the edge of the network if conditions indicate that it cannot be delivered. Sometimes abbreviated *CA*.

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 management
See *CMT*.

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*. See also *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*.

console
DTE through which commands are entered into a host.

constant bit rate
See *CBR*.

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. Contrast with *circuit switching* and *token passing*.

control point
See *CP*.

ControlStream traffic management
Traffic management scheme used by the LightStream 2020 ATM switch. Includes congestion avoidance, traffic shaping, and traffic policing, and allows links to operate at high levels of utilization by scaling back lower-priority, delay-tolerant traffic at the edge of the network when congestion begins to occur.

convergence
The 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.

Cooperation for Open Systems Interconnection Networking in Europe
See *COSINE*.

Copper Distributed Data Interface
See *CDDI*.

core gateway
The 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
1. class of service. Indication of how an upper-layer protocol requires that a lower-layer protocol 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 (type of service)*.
2. 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 European Community (EC) to build a communication network between scientific and industrial entities in Europe. The project ended in 1994.

cost
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. Cost values are used by routing protocols 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*.

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

CPCS
common part convergence sublayer. One of the two sublayers of any AAL. The CPCS is service-independent and is further divided into the CS and the SAR sublayers. 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*.

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.

CPI-C
Common Programming Interface for Communications. Platform-independent API developed by IBM and used to provide portability in APPC applications. See also *APPC*.

cps
cells per second.

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, students, faculty, and other affiliates of participating educational and research institutions, via BITNET III. See also *BITNET*, *BITNET III*, and *CSNET*.

cross talk

Interfering energy transferred from one circuit to another.

CS

convergence sublayer. One of the two sublayers of the AAL CPCS, 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 padded, if necessary, so that the length of the resulting PDU is divisible by 48. These PDUs are then passed to the SAR sublayer of the CPCS for further processing. See also *AAL*, *CPCS*, *SAR*, and *SSCS*.

CSA

Canadian Standards Association. Agency within Canada that certifies products that conform to Canadian national safety standards.

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*.

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. CSMA/CD access is used by Ethernet and IEEE 802.3.

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.

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*.

csumon

Tool available on the LightStream 2020 ATM switch, accessible from the bash shell. Csumon allows connection to an external CSU/DSU on a low-speed line for monitoring and control purposes, and can display statistics on the internal CSU/DSU of a medium-speed line.

CTS

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

Customer Information Control System

See *CICS*.

customer premises equipment

See *CPE*.

cut-through packet switching

Packet switching approach that streams data through a switch so that 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 determined. Also known as *on-the-fly packet switching*. Contrast with *store and forward packet switching*.

CxBus
Cisco Extended Bus. Data bus for interface processors on Cisco 7000 series routers that operates at 533 Mbps. See also *Switch Processor*.

CyBus
1.067-Gbps data bus for interface processors. Used in the Cisco 7500 series routers. See also *Cisco 7500*.

cycles per second
See *hertz*.

cyclic redundancy check
See *CRC*.