Numerics

1+1

A method of protecting traffic in which a protection channel exists for each working traffic channel. For optical systems, the protection channel fibers can be routed over a path separate from the working fibers. The traffic signal is bridged to both the working and protection transmitters so the protection signal can be selected quickly if the working channel fails.

1:n

A method of protecting traffic in which one protection channel exists for *n* traffic channels. Only one traffic channel can be switched to the protection channel at any given time.

1G mobile network

First generation mobile network. Refers to the initial category of mobile wireless networks that use analog technology only. Advanced Mobile Phone Service (AMPS) is an example of a 1G mobile network standard.

10Base2

10-Mbps baseband Ethernet specification using 50-ohm thin coaxial cable. 10Base2, which is part of the IEEE 802.3 specification, has a distance limit of 606.8 feet (185 meters) per segment. See also *Cheapernet*, *EtherChannel*, *IEEE 802.3*, and *Thinnet*.

10Base5

10-Mbps baseband Ethernet specification using standard (thick) 50-ohm baseband coaxial cable. 10Base5, which is part of the IEEE 802.3 baseband physical layer specification, has a distance limit of 1640 feet (500 meters) per segment. See also *EtherChannel* and *IEEE 802.3*.

10BaseF

10-Mbps baseband Ethernet specification that refers to the 10BaseFB, 10BaseFL, and 10BaseFP standards for Ethernet overov 4 t o,,, andEtherChanne10BaseF20seband 190ernet specif

2. Software within an SNA processor that controls the flow of information through a network.

access server

Communications processor that connects asynchronous devices to a LAN or WAN through network and terminal emulation software. Performs both synchronous and asynchronous routing of supported protocols. Sometimes called a *network access server.* See also *communication server*.

access unit

See *AU*.

Access-Accept

Response packet from the RADIUS server notifying the access server that the user is authenticated. This packet contains the user profile, which defines the specific AAA functions assigned to the user.

Access-Challenge

Responseorkmao2the(Rer)mina(ac -nareourcio)-3pro8 0 TD (ser)54d a

Notification sent from one network device to another to acknowledge that some event occurred (for example, the receipt of a nowle110(6). S0(etile1 abbrce)-209ated-1.2 /F6 690 0 30.830 53cur- [(1otif

A relationship formed between selected neighboring routers and end nodes for the purpose of exchanging routing information. Adjacency is d 0 0 seigupon

ATM subscriber access multiplexer. A telephone central office multiplexer that supports SDL ports over a wide range of network interfaces. An ASAM sends and receives subscriber data (often Internet services) over existing copper telephone lines, concentrating all traffic onto a single high-speed trunk for transport to the Internet or the enterprise intranet. This device is similar to a DSLAM (different manufacturers use different terms for similar devices).

ASBR

autonomous system boundary router. ABR located between an OSPF autonomous system and a non-OSPF network. ASBRs run both OSPF and abplelm.routing protocol, such as RIP. ASBRs must reside in a nonstub OSPF area. See also *ABR*, *nonstub area*, and *OSPF*.

ASCII

American Standard Code for Information Interchange. 8-bit code for character representation (7 bits plus parity).

ASCU

agent-set control unit.

ASD

automated software distribution.

ASE

1. amplified spontaneous emissions. Noise that is added to an optical signal when it is amplified. This noise (or ASE) accumulates and builds in optical spans that have multiple optical amplifiers between regenerators.

2. application service element.

ASI

ATM Service Interface.

ASIC

application-specific integrated circuit.

ASIST

Application Software Integration Support Tools. A set of C-language application (or racter

See *ATM network interface card* in the "Cisco Systems Terms and Acronyms" section.

ATM interface processor

B channel

Bearer channel. DS0 time slot that carries analog voice or digital data over ISDN. In ISDN, a full-duplex, 64-kbps channel used to send user data. Compare with *D channel*, *E channel*, and *H channel*.

B8ZS

binary 8-zero substitution. Line-code type, used on T1 and E1 circuits, in which a special code is substituted whenever eight consecutive zeros are sent over the link. This code then is interpreted at the remotl 1 e3of the connection. This technique

broadcast and unknown server. Multicast server used in ELANs that is used to flood traffic addressed to an unknown destination and to forward multicast and broadcast traffic to the appropriate clients. See also *ELAN*.

bus and tag channel

IBM channel, developed in the 1960s, incorporating copper multiwire technology. Replaced by the ESCON channel. See also *ESCON channel* and *parallel channel*.

Bus Interface Gate Array

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

bus topology

Linear LAN architecture in which transmissions from network stations propagate the length of the medium and are received by all other stations. Compare with *ring topology*, *star topology*, and*broadc Tc (, 0 -1.7(/Fgy)]TJ /F8 1 Tf 5.556 0 TD (,17 (.)Tj /F6 1 Tf 9 0 0 9 128 613.5 T*

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.

CCR

Certificate Enrollment Protocol. Certificate management protocol jointly developed by Cisco Systems and VeriSign, Inc. CEP is an early implementation of Certificate

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

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.

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 C* Bn effic,]TJ T* [(hich imightbe dropped.in ton

Communications processor that connects asynchronous devices to a LAN or a WAN through network and terminal emulation softwvicesd ttmsco server5.6 /F.6 693.8 118m 0 ET.34 m .5.6 /F66 69

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

See *DCE*.

data communications channel

See DCC.

data communications equipment

See *DCE*.

Data Country Code

See *DCC*.

data direct VCC

In ATM, a bi-directional point-to-point VCC set up between two LECs. One of three

data communications network. An out-of-band network that provides connectivity between network elements and their respective operations support systems (OSSs).

Search request sent to a specific node known to contain a resource. A directed search is used to determine the continued existence of the resource and to obtain routing information specific to the node. See also *broadcast search*.

directed tree

domain name server zone. Point of delegation in the DNS tree. It contains all names

dual-homed station

Device attached to multiple FDDI rings to provide redundancy.

DVB

enhanced high system av. Processorf* dundd hy scheme thatf* duces

electromagnetic pulse. Caused by lightning and other high-energy phenomena. Capable of coupling enough energy into unshielded conductors to destroy electronic

fast switching

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

fault management

One of five categories of network management defined by ISO for management

format indicator 4

See *FID4*.

forward channel

Communications path carrying information from the call initiator to the called party.

forward delay interval

Amount of time an interface spends listening for topology change information after that interface is activated for bridging and before forwarding actually begins.

forward explicit congestion notification

See *FE*.

forwarding

Process of sending a frame toward its ultimate destination by way of an internetworking device.

FOTS

Fiber Optics Transmission Systems. Vendor-proprietary fiber-optic

Foreign Exchange Office. An FXO interface connects to the Public Switched Telephone Network (PSTN) central office and is the interface offered on a standard telephone. Cisco's 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's FXS interface is an RJ-11 connector that allows connections to basic telephone service equipment, keysets, and PBXs.

See *Gn interface*.

GGP

Gateway-to-Gateway Protocol. MILNET protocol specifying how core routers (gateways) should exchange reachability and routing information. GGP uses a distributed shortest-path algorithm.

GGSN

H channel

high-speed channel. Full-duplex ISDN primary rate channel operating at 384 kbps.

International Code Designator. One of two ATM address formats developed by the ATM Forum for use by private networks. Adapted from the subnetwork model of addressing in which the ATM layer is responsible for mapping network layer addresses to ATM addresses. Compare with *DCC*

See *ISR*.

intermediate system

See *IS*.

Intermediate System-to-Intermediate System

See *IS-IS*.

International Code Designator

See *ICD*.

International Data Number

See *X.121*.

International Electrotechnical Commission

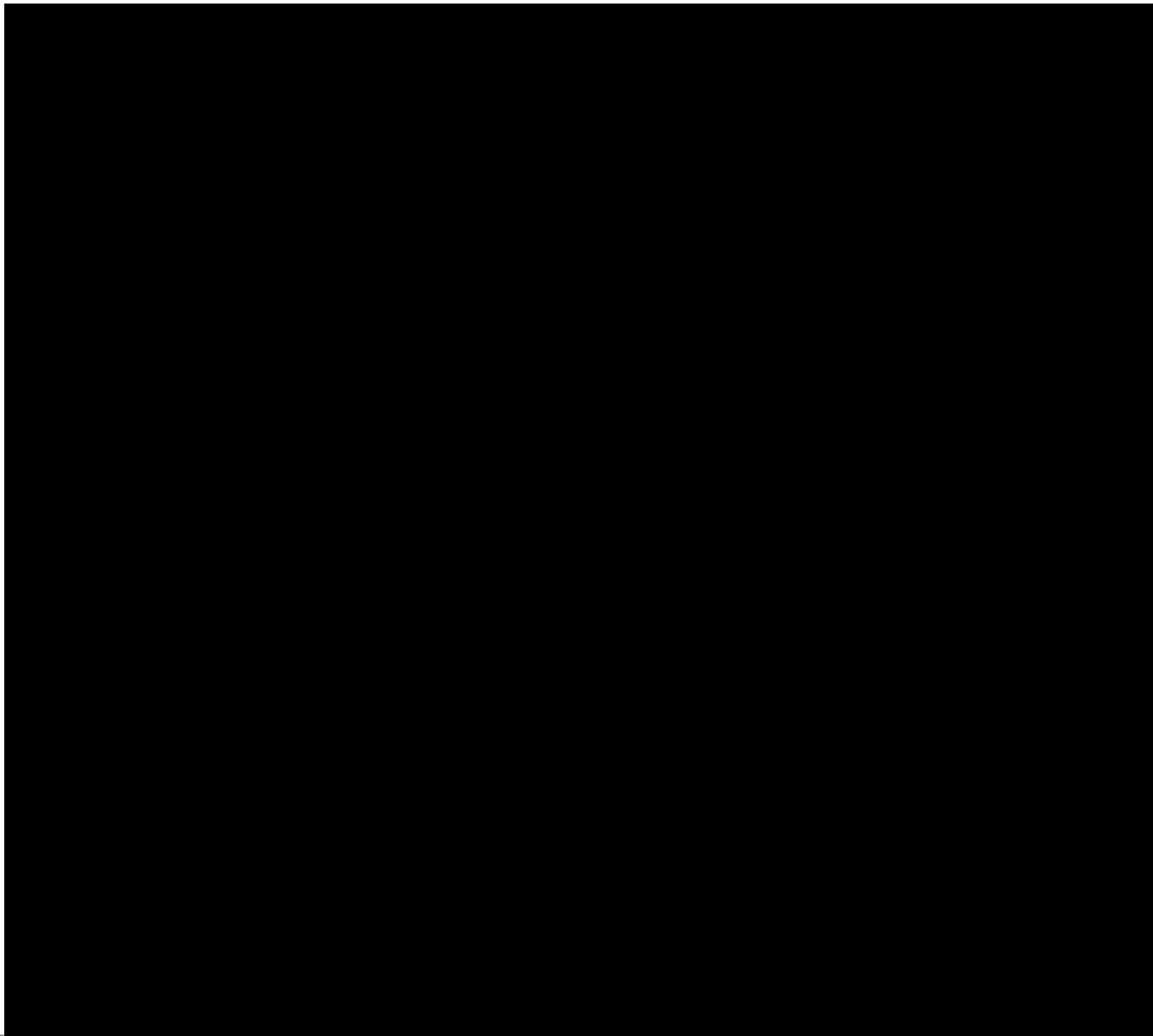
See *IEC*.

Local Multipoint Distribution Service; a relatively low power license for broadcasting voice, video, and data. There are typically two licenses granted in three frequencies, each to separate entities within a BTA. These licenses are known as Block A or Block B licenses. Block A licenses operate from 27.5 to 28.35 GHz, 29.10 to 29.25 GHz, and 31.075 to 31.225 GHz for a total of 1.159 MHz of bandwidth. Block B licenses operate from 31.00 to 31.075 GHz and 31.225 to 31.300 for a total

LVC

label switched controlled virtual circuit. A virtual circuit (VC) established under the control of MPLS. An LVC is neither a PVC nor an SVC. The LVC must traverse only a single hop in a label-switched path (LSP) but the LVC can traverse several ATM hops only if the LVC exists within a VP tunnel.

midsplit



N

Commonly distributed set of names in which all names are unique.

NANOG

North American Network Operator's Group. Primary forum for information exchange among U.S. exchange point participants, Internet service providers, and end users.

NANP

North American Numbering Plan.

NAP

network access point. Location for interconnection of Internet service providers in the United States for the exchange of packets.

NARP

Netscape Directory Server. An LDAP server.

NE

network element. In general, an NE is a combination hardware and software system

A feature of some routers that allows them to categorize incoming packets into flows. Because packets in a flow often can be treated in the same way, this classification can be used to bypass some of the work of the router and accelerate its switching operation.

netiquette

A pun on "etiquette" referring to proper behavior on a network.

NETscout

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

NetView

Network Control Program

See *NCP*.

network driver interface specification

See *NDIS*.

network element

See NE.

network entity title

See *NET*.

Network File System

See *NFS*.

Network Indicator

Random or non-repeating value that is included in data exchanged by a protocol, usually for the purpose of guaranteeing liveness and thus detecting and protecting against replay attacks.

none line of sight

See *NLOS*.

nonextended network

8 bits. In networking, the term *octet* often is used (rather than byte) because some machine architectures employ bytes that are not 8 bits long.

ODA

Open Document Architecture. ISO standard that specifies how documents are represented and transmitted electronically. Formerly called *Office Document Architecture*.

ODBC

Open DataBase Connectivity. Standard application programming interface for accessing data in both relational and nonrelational database management systems. Using this application programming interface, database applications can access data stored in database management systems on a variety of computers even if each database management system uses a different data storage format and programming interface. ODBC is based on the call level interface specification of the X/Open SQL Access Group and was developed by Digitial Equipment Corporation, Lotus, Microsoft, and Sybase. Contrast with *JDBC*.

ODI

Open Data-Link Interface. Novell specification providing a standardized interface for NICs (network interface cards) that allows multiple protocols to use a single NIC. See also *NIC*.

OEMI channel

See *block multiplexer channel*.

OFA

online insertion and removal. Feature that permits the addition, the replacement, or the removal of cards without interrupting the system power, entering console

One of five categories of network management defined by ISO for management of OSI networks. Performance management subsystems are responsible for analyzing

Server (at least one in each QoS domain) that holds policies for reference by and decision over client routers and switches.

policy-based routing

See *policy routing*.

poll/final bit

See *P/F*.

polling

PU 2

Physical Unit 2. SNA peripheral node that can support only DLUs that require services from a VTAM host and that are capable only of performing the secondary LU role in SNA sessions.

PU 2.1

Physical Unit type 2.1. SNA network node used for connecting peer nodes in a peer-oriented network. PU 2.1 sessions do not require that one node reside on VTAM. APPN is based upon PU 2.1 nodes, which also can be connected to a traditional hierarchical SNA network.

PU 4

Physical Unit 4. Component of an IBM FEP capable of full-duplex data transfer. Each such SNA device employs a separate data and control path into the transmit and receive buffers of the control program.

PU 5

Q.2931

ITU-T specification, based on Q.931, for establishing, maintaining, and clearing network connections at the B-ISDN user-network interface. The UNI 3.1 specification is based on Q.2931. See also *Q.931* and *UNI*.

Q.920/Q.921

ITU-T specifications for the ISDN UNI data link layer. See also *UNI*.

Q.922A

ITU-T specification for Frame Relay encapsulation.

Q.931

ITU-T specification for signaling to establish, maintain, and clear ISDN network connections. See also *Q.93B*

routing metric

Method by which a routing algorithm determines that one route is better than another. This information is stored in routing tables. Metrics include bandwidth, communication cost, delay, hop count, load, MTU, path cost, and reliability. Sometimes referred to simply.2 1. o se 10 1 Tf 4.5670 0 TD metric

routingover large cloudsc

See. o se 10 1 Tf .7740 0 TD[(R)40(OLC.)]TJ /F8 1 Tf525961 0 TD 0 Tc .c

SDP

1. Session Definition Protocol. An IETF protocol for the definition of Multimedia Services. SDP messages can be part of SGCP and MGCP messages.

2. Session Data Protocol. SDP is intended for describing multimedia sessions for the purposes of session announcement, session invitation, and other forms of multimedia session initiation. [RFC 2327]

SDSL

single-line digital subscriber line. One of four DSL technologies. SDSL delivers 1.544 Mbps both downstream and upstream over a single copper twisted pair. The use of a single twisted pair limits the operating range of SDSL to 10,000 feet (3048.8 meters). Compare with *ADSL*, *HDSL*, and *VDSL*.

SDSU

service profile identifier

See *SPID*.

Service Specific Connection Oriented Protocol

See *SSCOP*.

service specific convergence sublayer

See *SSCS*.

service tuple

Service type and level pair. For example, the service tuple data-bandwidth=45 Mbps consists of the service type data-bandwidth and the service level 45 Mbps.

Simple Multicast Routing Protocol. Specialized multicast network protocol for routing multimedia data streams on enterprise networks. SMRP works in conjunction with multicast extensions to the AppleTalk protocol.

SMT

Station Management. ANSI FDDI specification that defines how ring stations are managed.

SMTP

Simple Mail Transfer Protocol. Internet protocol providing e-mail services.

SNA

Systems Network Architecture. Large, complex, feature-rich network architecture

termination point

See TP.

terminator

Device that provides electrical resistance at the end of a transmission line to absorb signals on the line, thereby keeping them from bouncing back and being received again by network stations.

TESS

The Exponential Encryption System. A system of separate but cooperating cryptographic mechanisms and functions for the secure authenticated exchange of cryptographic keys, the generation of digital signatures, and the distribution of public

TR VLAN

Token Ring virtual LAN.

traceroute

Program available on many systems that traces the path a packet takes to a destination. It is used mostly to debug routing problems between hosts. A traceroute protocol is also defined in RFC 1393.

traffic analysis

Inference of information from observable characteristics of data flow(s), even when the data is encrypted or otherwise not directly available. Such characteristics include the identities and locations of the source(s) and destination(s), and the presence, amount, frequency, and duration of occurrence.

traffic engineering

1.

U

U interface

virtual path. One of two types of ATM circuits identified by a VPI. A virtual path is a bundle of virtual channels, all of which are switched transparently across an ATM network based on a common VPI. See also *VPI*.

VPC

virtual path connection. Grouping of VCCs that share one or more contiguous VPL. See also *VCC* and *VPL*.

VPDN

virtual private dial-up network. Also known as virtual private dial network. A VPDN is a network that extends remote access to a private network using a shared infrastructure. VPDNs use Layer 2 tunnel technologies (L2F, L2TP, and PPTP) to extend the Layer 2 and higher parts of the network connection from a remote user across an ISP network to a private network. VPDNs are a cost effective method of establishing a long distance, point-to-point connection between remote dial users and a private network. See also *VPN*.

VPI

virtual path identifier. 8-bit field in the header of an ATM cell. The VPI, together with the VCI, identifies the next destination of a cell as it passes through a series of ATM switches on its way to its destination. ATM switches use the VPI/VCI fields to identify the next VCL that a cell needs to transit on its way to its final destination.

Wideband Digital Crossconnect System. SONET DCS capable of crossconnecting DS-1 and VT1.5 signals. See also *DCS*, *DS-1*, *SONET*, and *VT-n*.

WDM

wavelength division multiplexing. Multiple optical wavelengths can share the same transmission fiber. The spectrum occupied by each channel must be adequately separated from the others.

Web

World Wide Web (also called WWW). A client/server system based on HTML and HTTP.

Web browser

See *browser*.

Web Console

A graphical user interface (GUI) application that communicates with the system by translating HTML pages into Cisco IOS commands.

WEPD

Weighted Early Packet Discard. A variant of EPD used by some ATM switches for HTTPasupport e sysxisTML pting

WWW

Closely integrated BPX switch, AXIS interface shelf, and extended services processor designed to support ATM and Frame Relay switched virtual circuits, as well as traditional PVCs.

NCIA

native client interface architecture. SNA applications-access architecture, developed by Cisco, that combines the full functionality of native SNA interfaces at both the host and the client with the flexibility of leveraging TCP/IP backbones. NCIA encapsulates SNA traffic on a client PC or workstation, thereby providing direct