B

bandwidth The difference between the highest and lowest frequencies available for network signals. The term also is used to describe the rated throughput capacity of a given network medium or protocol. The frequency range necessary to convey a signal measured in units of hertz (Hz). For example, voice signals typically require approximately 7 kHz of bandwidth and data traffic typically requires approximately 50 kHz of bandwidth.

C

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.

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

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.

D

dial peer Addressable call endpoint. In Voice over IP, there are two kinds of dial peers: POTS and VoIP.

DS0 digital service zero (0). Single timeslot on a DS1 (also known as T1) digital interface—that is, a 64-kbps, synchronous, full-duplex data channel, typically used for a single voice connection on a PBX.

E

E.164 ITU-T recommendation for international telecommunication numbering, especially in ISDN, BISDN, and SMDS. An evolution of standard telephone numbers.

F

frame Logical grouping of information sent as a data link layer unit over a transmission medium. Often refers to the header and the trailer, used for synchronization and error control, that surround the user data contained in the unit. The terms cell, datagram, message, packet, and segment also are used to describe logical information groupings at various layers of the OSI reference model and in various technology circles.

H

H.323 H.323 allows dissimilar communication devices to communicate with each other by using a standardized communication protocol. H.323 defines a common set of codecs, call setup and negotiating procedures, and basic data transport methods.

I

interoperability Capability of equipment manufactured by different vendors to communicate with one another successfully over a network.

IPSec IP Security. A framework of open standards that provides data confidentiality, data integrity, and data authentication between participating peers. IPSec provides these security services at the IP layer. IPSec uses IKE to handle the negotiation of protocols and algorithms based on local policy and to generate the encryption and authentication keys to be used by IPSec. IPSec can protect one or more data flows between a pair of hosts, between a pair of security gateways, or between a security gateway and a host.

K

keepalive Message sent by one network device to inform another network device that the virtual circuit between the two is still active

M

multicast Single packets copied by the network and sent to a specific subset of network addresses. These addresses are specified in the Destination Address Field. Compare with unicast.

multicast address Single address that refers to multiple network devices. Synonymous with group address. Compare with broadcast address and unicast address. See also multicast

N

NAT Network Address Translation. Mechanism for reducing the need for globally unique IP addresses. NAT allows an organization with addresses that are not globally unique to connect to the Internet by translating those addresses into globally routable address space. Also known as Network Address Translator.

P

packet Logical grouping of information that includes a header containing control information and (usually) user data. Packets most often are used to refer to network layer units of data. The terms datagram, frame, message, and segment also are used to describe logical information groupings at various layers of the OSI reference model and in various technology circles.

PTC Positive Temperature Coefficient. A device that increases its internal resistance as it get hotter, thus limiting the current flow and additional heating.

Q

QoS quality of service. Measure of performance for a transmission system that reflects its transmission quality and service availability.

R

radio frequency (RF) Generally refers to wireless communications with frequencies below 300 GHz.

repeater Device that regenerates and propagates electrical signals between two network segments.

RTP Real-Time Transport Protocol. Commonly used with IP networks. RTP is designed to provide end-to-end network transport functions for applications transmitting real-time data, such as audio, video, or simulation data, over multicast or unicast network services. RTP provides such services as payload type identification, sequence numbering, timestamping, and delivery monitoring to real-time applications.

RTCP RTP Control Protocol. Protocol that monitors the QoS of an IPv6 RTP connection and conveys information about the on-going session.

T

TCP Transmission Control Protocol. Connection-oriented transport layer protocol that provides reliable full-duplex data transmission. TCP is part of the TCP/IP protocol stack.

trunk 1. Physical and logical connection between two switches across which network traffic travels. A backbone is composed of a number of trunks.

2. In telephony, a phone line between two COs or between a CO and a PBX.

U

unicast Message sent to a single network destination. Compare with multicast.

V

VAD voice activity detection. When enabled on a voice port or a dial peer, silence is not transmitted over the network, only audible speech. When VAD is enabled, the sound quality is slightly degraded but the connection monopolizes much less bandwidth.

VoIP Voice over IP. The capability to carry normal telephony-style voice over an IP-based internet with POTS-like functionality, reliability, and voice quality. VoIP enables a router to carry voice traffic (for example, telephone calls and faxes) over an IP network. In VoIP, the DSP segments the voice signal into frames, which then are coupled in groups of two and stored in voice packets. These voice packets are transported using IP in compliance with ITU-T specification H.323.