CHAPTER 1

Glossary

A

A-bit (active bit)

The bit in the frame relay frame header that indicates the status of the far end user device and the status of the PVC segment in the foreign network.

A-law

An analog to digital encoding scheme used to convert voice samples to an 8-bit data word used in CEPT E1 multiplex equipment. (See also μ-law.)

ABR (Available Bit Rate)

Connection type for variable bit rate (VBR) data (bursty data) with closed loop control of service rate via ForeSight. See also, CBR and VBR.

ACO (Alarm Cut Off)

A switch to turn off the audible alarm outputs from a node while leaving the visual alarm outputs unchanged.

adaptive voice

An optional feature of the IPX that disables VAD from connections using it whenever there is excess bandwidth available to allow the normal encoded voice to be carried on the packet line. See also VAD.

ADPCM (Adaptive Differential Pulse Code Modulation)

A compression method that samples voice 8,000 times per second, and uses the changes between samples as the basis for compression. Increases the capacity of a T1 line from 24 to 48 channels.

alternate routing

An automatic rerouting of a failed connection by a node to a new route through the network to maintain service.

AMI (Alternate Mark Inversion)

The line code used for T1 and E1 lines where the “1s” or “marks” on the line alternate between positive polarity and negative polarity.

arbiter

A BPX administration processor that polls each network port to control the data flow in and out of the crosspoint switch matrix.

ATM (Asynchronous Transfer Mode)

Data transmission that uses a very flexible method of carrying information, including voice, data, multimedia, and video between devices on a local or wide area network using 53-byte cells on virtual circuits. See also cell relay.

ATM Switched Virtual Circuits (SVCs)

A member of the INS product family that uses ATM SVC Server Shelves and software to enhance a StrataCom network with ATM switched virtual circuits.

ATM SVC Server Shelf

An adjunct processor used in the INS ATM SVC application to enhance traditional StrataCom networks with ATM switched virtual circuits. The ATM SVC Server Shelf is co-located with and connected to a BPX.

auxiliary port

An RS-232 port on the front panel of the SCC card used for connecting a printer or an out-dial modem. This port is a one-way, outgoing port.

B

B3ZS (Bipolar with Three Zero Suppression)

A protocol for T3 lines that converts a channel word with three consecutive zeros into a code which, at the far end, is converted back to three zeros.

B8ZS (Bipolar with Eight Zero Suppression).

A T1 line protocol that converts a channel word with eight consecutive zeros into a code which, at the far end, is converted back to eight zeros. Allows 64 Kbps clear channel operation while assuring the ones density required on the T1 line.

bandwidth reservation

An IPX software feature that allows circuits to automatically become active (or “upped”) at a specified time and date and downed at some later time and date. For circuits that do not need to be available 100% of the time.

B channel

In ISDN, a full-duplex, 64-kbps channel used to send user data. Also known as the bearer channel. Compare with D channel.

BCC

The control card for the BPX

BDA (Bframe Destination Address)

The address of the slot.port.channel for which the Bframe is destined. This address is part of the Bframe header and is only used across the switch fabric locally in the node.

Bframe

The BPX frame is the 64-byte format for messages used to encapsulate ATM cells which are sent across the switch fabric.

bipolar violations

Presence or absence of extra “1” bits on a T1 transmission facility caused by interference or a failing line repeater. These extra or missing bits interrupts one of the rules for bipolar pairs of a digital transmission line.

BISDN (broadband ISDN)

ITU-T communication standards designed to handle high-bandwidth applications. Compare with ISDN.

BPX

A high-speed broadband, high-capacity ATM cell relay network switch from StrataCom for private and public networks.

BRI (Basic Rate Interface)

ISDN interface composed of two B channels and one D channel for circuit-switched communication of voice, video, and data. Compare with PRI.

bundled connections

Frame relay connections grouping a number of ports into one permanent virtual circuit.

BTM

The control card for the IGX.

C

CAS (Channel Associated Signalling)

A signalling mode in E1 transmission where the signalling bits for all 30 E1 channels are carried in timeslot 16. Timeslots 1-15 and 17-31 carry encoded voice bits only.

CBR (Constant Bit Rate)

ATM Connection type for constant bit rate traffic such as voice or synchronized data requiring a low variation in delay. See also, VBR and ABR.

CCDV (Compliant Cell Delay Variation)

A parameter utilized in defining ATM Constant Bit Rate service. The amount of delay that is acceptable between ATM cells for them to be accepted as compliant (usable).

CCITT (Consultive Committee for International Telephone and Telegraph)

An International telecommunications advisory committee established under the United Nations to recommend worldwide standards for data and voice communications.

CCS (Common Channel Signalling)

A carrier signalling mode in E1 transmission where signalling bits are not used. CCS typically separates user data from signalling information. A signalling channel is used to provide signalling for all other user data channels in the system. In CCS, a single timeslot in T1 or E1 signal is used to carry signalling information.

Cell

The 53-byte ATM unit of data.

cell relay

A form of digital communications where data inputs are combined and sent in small, fixed length groups of bytes with a small header called cells. IPX FastPacket was an early implementation of cell relay.

CEPT

CEPT is the European Conference of Posts and Telecommunications Administrations. This association is comprised of European Telecommunications service providers that participate in relevant areas of the work of CEN/CENELEC.

CGA (Carrier Group Alarm)

A major alarm condition for a T1 multiplexer or PABX that results in all channels being taken out of service.

channel

The logical end point for a connection.

circuit line

A T1 or E1 line that connects a user device, such as a PABX or channel bank to the IPX. Carries customer DS0 voice and data circuits. See also line.

clear channel capability

When all eight bits of a channel word in the T1 line signal are available for transmitting customer data with no restrictions on content. Also referred to as 64 Kbps clear channel.

Cmax

A frame relay connection parameter that specifies the number of packets allowed in the initial burst of data after which the data bandwidth is reduced to the connection's minimum specified bandwidth.

CLLM

Consolidated Link Layer Management. A protocol used to transmit ForeSight messages across the frame relay NNI port.

composite data rate

The sum of the data rates for all circuits transmitting on the same synchronous or frame relay data card.

Complex Gateway

Refers to interworking of a connection with respect to the IPX and IGX nodes. For example, in a Frame Relay to ATM interworking, the Frame Relay data is extracted from FastPackets and transformed to ATM cells with redundant overhead bits discarded.

control port

An RS-232 port on the front panel of the SCC card used for connecting a control terminal. This port is bi-directional.

COS (Class of Service)

The priority assigned each user circuit carried by an IPX. Defines which circuits get rerouted first during a network failure.

courtesy downing

A software feature that is used to conserve network bandwidth by automatically "downing" a voice connection when the signalling status indicates an inactive (on-hook) circuit. The circuit is automatically "upped" when the circuit becomes active.

CRC (Cyclical Redundancy Check)

A method of error checking that detects errors in a block of data. Unlike parity checks, the CRC can detect multiple data errors within the block and thus equipment using a CRC error check can derive a error rate.

crosspoint switch

A two-dimensional data switch type that is arranged in a matrix of all input connections along one axis and all output connections along the other axis. Each input and output line has a switch point where the two axis intersect that can be enabled (switch closed) or disabled (switch open). The central matrix switch providing the switching matrix for traffic routing by the BPX node.

CSU (Channel Service Unit)

A network protection unit that terminates any T1 span line connected to the carrier's central office, providing receive direction regeneration and maintenance loopback for the 1.544 Mbps signal.

D

D4-format

A digital signal format with 24 eight-bit channels plus one synchronizing bit per T1 line. Channels are assigned in a straight, numeric sequence.

DACS (Digital Access and Control System)

Equipment, usually found in the telephone company central office, that is used to groom and retime the 24 channels in a DS1 signal. Individual DS0 channels can be cross-connected from one DS1 source and inserted in another DS1 source either with the same or with a different channel number.

DAS Server Shelf

The adjunct processor used in INS Dial-Up Frame Relay application to provide frame relay dial-up and dial-backup circuits. The DAS Server Shelf is co-located with and connected to an IPX or IGX.

DCE (Data Communications Equipment)

As defined by the RS-232 standard, any device that transmits or receives information. Usually used with data terminal equipment (DTE, like a computer or network node).

D channel

A message-oriented ISDN signalling channel, typically carried in DS24 of a PRI on T1 facilities or TS16 of a PRI on E1 facilities. Compare to B channel.

DDS (Digital Data Service).

An AT&T dial-up data service offering for 2.4 to 56 Kbps over subscriber loop cable. Requires a Data Service Unit, DSU, at customer premise for interface to the DDS trunk.

Device Code

The first 8 bits of a FastPacket Address.

DFM (Data Frame Multiplexing).

A StrataCom optional feature that saves data channel bandwidth by analyzing data channel content and suppressing repetitive data patterns.

Dial Access Switching

Another name for the INS Dial-Up Frame Relay application.

Dial-Up Frame Relay

An INS application that uses a DAS Server Shelf and software to enhance StrataCom networks with frame relay soft permanent virtual circuits (SPVCs) for dial-up dial-backup connections.

DLCI (Data Link Connection Identifier)

A field in a frame relay data packet that identifies the destination for the data.

DNS

The adjunct processor used in the INS Dynamic Network Switching application. The DNS is co-located with and connected to an IGX or IPX.

domain

A grouping of nodes sharing common interests or attributes.

domain name

A unique name consisting of the letter “D” immediately followed by a number (1–8) delineated by a “.” (period) from the node name (1–8 characters maximum). Example: D1.alpha

domain number

A number from 1–8 assigned with the **cnfdmn** command. The number assigned is part of the domain name.

DPNSS

Digital Private Network Signalling System. A common-channel message-oriented signalling protocol commonly used by private branch exchanges (PBXes). The INS Dynamic Network Switching application supports DPNSS signalling to the StrataCom network.

DS0 (Digital Signal 0)

A 64 Kbps channel used to transmit encoded voice and/or data. There are 24 DS0 channels in a circuit T1 (DS1) line. DS0 data is transmitted using one or more DS0 circuits in a T1 or E1 circuit line.

DS0A

An extension of DS0 that defines the format for assembling various low-speed data circuits (1.2 to 19.6 Kbps) into a single 64 Kbps DS0 channel.

DS1 (Digital Signal 1)

A digital transmission standard that carries 24 individual channels in a bipolar, high-speed line signal at 1.544 Mbps. DS1 signal level is ±3V.

DSI (Digital Speech Interpolation)

An algorithm that analyzes DS0 voice bits for non-speech codes. Suppresses these bits to conserve packet line bandwidth and inserts a code to indicate to the far end that these bits have been removed. Similar to DFM for data channels. Also, referred to as VAD (Voice Activity Detection(.

DTE (Data Terminal Equipment)

As defined by the RS-232 standard, any device that generates or utilizes information. See also, DCE.

Dynamic Network Switching

An INS application used to provide voice switched virtual circuits over a StrataCom network for PBXes using either QSIG or DPNSS signalling.

E

ECN (Explicit Congestion Notification)

A frame relay feature to signal the onset of network congestion to external devices. Sets FECN and BECN bits in frame relay header to indicate forward and backward congestion.

F

Fast EIA

Same as interleaved EIA. Seven data circuit control leads in each direction are transmitted in alternating bytes with data. For fast control lead response to data being turned on and off but with a sacrifice in packet line bandwidth.

FGCRA (Frame Based Generic Cell Rate Algorithm)

An enhancement option to GCRA that allows an entire frame to be discarded if any of its cells are non-compliant, rather than transmitting a partial frame over the network.

flat network

A non-structured network, a network in which there are no junction nodes or domains.

foreign network

An adjacent network that is owned and managed by a different party than the one that owns the local network.

ForeSight

An optional feature that uses feedback techniques to dynamically allocate extra bandwidth to frame relay and ATM connections when the network bandwidth is available and not used by other connections.

frame forwarding

A software feature allowing point-to-point frame relay type connection for various data applications that do not conform to the Frame Relay Interface Specification.

frame relay connection class

A tag for a frame relay circuit which indicates the class of service to be provided for this connection. Parameters associated with a connection class include minimum information rate guaranteed, peak information rate expected, maximum network delay, etc.

frame relay Service

A packet interface data transmission protocol used for connecting widely-separated LANs. Characterized by long intervals of no data to be sent interspersed with bursts of large volumes of data; sometimes referred to as “bursty data”.

frame slip

A T1 error condition caused by a timing problem between the network and the IPX. When this happens, the IPX inserts a blank DS1 frame or drops an idle DS1 frame so there is no loss of customer data.

Full Status Report

A message sent across the NNI indicating the A-bit status of all connections routed across this NNI frame relay port.

G

gateway

An IPX node that is configured to handle both T1 and E1 packet and circuit lines for direct interface international circuits. (See also Seamless International IPX Network.)

GCRA (Generic Cell Rate Algorithm)

GCRA is a “continuous leaky-bucket” process that monitors the cell depth in the input queue for each PVC to determine whether to admit a new cell to the network without setting the Cell Loss Priority bit.

global addressing

A frame relay addressing convention that uses the DLCI to identify a specific end device somewhere else in the frame relay network. In a global addressing scheme, the DLCI is a unique number for each IPX port in the network.

grouped connections

Frame relay connections grouping a number of ports onto one permanent virtual circuit. Similar to bundled connections except the grouped connections do not have to be contiguous, nor do they all have to be added simultaneously.

H

HDB3 (High Density Bipolar Three)

A new line interface for E1, similar to B8ZS for T1, which eliminates patterns with eight or more consecutive zeros. Allows for 64 Kbps clear channel operation and still assure the ones density required on the E1 line.

I

IGX

A multi-service, multi-band ATM cell relay network switch from StrataCom for private and public networks.

Intelligent Network Server (INS)

INS is the broad name for a range of products that enhance traditional StrataCom networks. These products include Dial-Up Frame Relay, Dynamic Network Switching, and ATM Switched Virtual Circuits.

intra-domain

Connections within a domain including but not going beyond the junction nodes.

inter-domain

Connections between domains through junction nodes.

interleaved EIA

Same as “Fast EIA”.

IPX (Integrated Packet Exchange)

A narrowband cell relay network switch from StrataCom for private and public networks.

ISC (International Support Center)

The customer support group at StrataCom that provides assistance in solving network or equipment problems over the telephone.

ISDN (Integrated Services Digital Network)

A service provided by the telephone company or OCC that supports combined customer voice and data connections over the twisted pair subscriber loop. Requires special equipment at the customer premise and a connecting central office switch that is capable of providing ISDN.

J

J1

A. multiplexed 24-channel circuit line to a PBX conforming to the Japanese TTC-JJ-20 circuit standard. Similar to E1, it operates at 2.048 Mbps.

junction node

A node handling inter-networking of domains.

junction trunk

A packet line connecting junction nodes.

L

line

Connects a user device to a service interface, for example, a router to an ASI or AUSM card, a data line to a data card, a frame relay line to an FRP or a port concentrator, or a T1 or E1 line to a CDP card.

link

The network connection between two nodes.

LMI (Local Management Interface)

The protocol and procedures for control of IPX frame relay connections. Used for configuration, flow control, and maintenance of these connections.

local addressing

A frame relay addressing convention that uses the DLCI to identify the IPX frame relay port at the interface between the user device and the frame relay network. In local addressing, a particular DLCI is used only at the local FR connection. The DLCI may be reused at any other IPX node in the network.

local alarm

An IPX alarm indicating that the associated T1 line is down due to a local failure of the its receive path.

local bus

An IPX utility bus (LB/0 or LB/1**)**, located on the midplane, which provides the electrical connections between various front and back cards. For example, the front and back cards of the Low Speed Data PAD group (LDP and LDI) plug into this utility bus.

logical port

A frame relay circuit consisting of either 1, 6, 24 (T1), or 31 (E1) contiguous DSO's on a T1 or E1 physical port.

M

major alarm

A local or remote failure that is affecting operation of the network.

minor alarm

A local or remote failure that is not affecting operation of the network, but nonetheless should be investigated.

MUXBUS

A high-speed IPX backplane bus that carries data and timing between card slots for both circuit line and packet line data. Consists of the TDM bus carrying the data and the system clock bus that is used to synchronize all data flowing on and off the TDM bus.

N

n+1 redundancy

A redundancy method in which a group of cards share the same standby redundant card.

Network-to-Network Interface (NNI)

The protocol at a frame relay port that serves as a bidirectional interface between a local StrataCom network and a separate and independent "other" network.

node

An IPX/IGX/BPX serving as a connection point to the network. At a node, connections from service lines are routed to trunks for transmission to other nodes in the network.

NPC (Network Processor Card)

The controller card for the IPX node.

O

OCC (Other Common Carrier).

In the United States, reference to all the other telecommunications companies providing various transmission services other than AT&T.

P

packet line

Packet line referred to a line used to carry FastPackets between IPX nodes in a network. The term in these documents is replaced by the more general “trunk” which is defined as a physical link from node to node, node to shelf, or node to network. The trunk may be one that supports 24-byte FastPackets (packet trunk), or one that supports 53 byte ATM cells (cell trunk).

packet switching

A system that breaks data strings into small units (packets), then individually addresses and routes them through the network.

PAD (Packet Assembler/Disassembler)

A device that converts a serial data stream into discrete packets in the transmit direction and converts the received packets back into a serial data stream. Adds header information in the transmit packet to allow it to be routed to the proper destination.

PBX (private branch exchange)

Digital or analog telephone switchboard, classified as customer premise equipment (CPE), used to connect private and public telephone networks

partially-interleaved EIA

One control lead in each direction, generally RTS-CTS, is transmitted in same byte as seven data bits. For fast control lead response to data being turned on and off.

PCM (Pulse Code Modulation)

The system for transmitting telephone signals digitally. Voice is sampled 8000 times per second and converted to an 8-bit digital word.

PLCP (Physical Layer Convergence Protocol)

A protocol defined for use with Switched Megabit Data Service. Used on DS3 ATM trunks in the BPX.

PLPP (Physical Layer Protocol Processor)

A custom VLSI processor used in the T3 ATM port interface of the BPX BNI card to handle the coding and decoding of the PLCP bit structure. Functions handled by the PLPP include header check sequence generation and checking, DS3 framing, and optional payload scrambling/descrambling.

plesiochronous network

A network where there is more than one source of network timing. The multiples sources must be operating at the same frequency but are not phase locked (synchronous) with each other.

port

Refers to a signal connection on a data back card that interfaces to a customer circuit or data device. The number of ports on a card ranges from 1 to 8 depending on the particular card type.

PRI (Primary Rate Interface)

An ISDN interface to primary rate access. Primary rate access consists of a single D channel for signalling and 23 (T1) or 30 (E1) B (bearer) channels for user data. A PRI is typically carried on T1 or E1 facilities.

priority bumping

An optional software feature of the IPX that restores service to a failed high priority connection by replacing or “bumping” a lower priority connection when there is not enough network bandwidth to reroute the higher priority circuit normally.

privilege level

A level between 1 and 6 that is assigned to each IPX command. Each operator is assigned a privilege level by the system administrator. The operator may only access and execute commands equal to or lower than his or her own privilege level. Level 1 is the highest and level 6 is the lowest.

PVCs

Permanent Virtual Connections (circuits). Connections that are assigned but not connected until data is sent, thereby not using bandwidth when idle.

Q

Q.921/Q.931

ITU-T specifications for the ISDN use network interface (UNI) data link layer.

QSIG

A common-channel message-oriented signalling protocol, defined by the European Telecommunications Standard Institute (ETSI), commonly used by private branch exchanges (PBXes). The INS Dynamic Network Switching application supports QSIG signalling to the StrataCom network.

queue

A buffer that is used to temporarily hold data while it waits to be transmitted to the network or to the user.

R

red alarm

Another name for local alarm as the local alarm lamp on most digital transmission equipment is red in color.

remote alarm

An IPX alarm indicating that the associated T1 line is down due to a receive line failure on another node. See also yellow alarm.

RPS (repetitive pattern suppression)

Also called data frame multiplexing (DFM). An option for data circuits where repeating strings of data are replaced on the packet line by a single occurrence of the data string and a code that indicates to the far end how may repetitions of the string was being transmitted. Used to conserve network bandwidth.

robbed bit signaling

A type of signaling used on T1 lines where the signaling bits for each channel are substituted for the least significant voice bit in each channel word during frames 6 and 12.

RS-232

A physical and electrical interface standard for a low-speed, unbalanced, serial, data interface adopted by the EIA committee on data communications. Generally used for data circuits operating at data rates below 56 Kbps.

RS-422/423

Another EIA standard electrical interface for serial data circuits operating at higher data rates than RS232. RS422 is a balanced interface; RS423 is unbalanced. Uses RS-449 for the physical interface (connector).

RS-449

The physical interface for the RS422 and R423 electrical interfaces. Contains the Processor Controller Card and the PCC utility bus, and provides system timing and control via the system bus.

S

SAR (Segmentation and Reassembly)

The process of breaking a dataframe containing data from a number of virtual paths or circuits apart so that the individual paths/circuits can be switched by reassembling the data into a new frame with a different sequence.

seamless international network

An IPX network that is configured to carry traffic over international borders (E1-T1 or T1-E1)—see also gateway.

Soft PVC

A PVC in the INS Dial-Up Frame Relay application that is dormant in the networks database until it is activated by a call into the network by a user.

spanning tree

An IPX network topology in which there is only one path available between any two sources in a frame relay multicast group. Spanning trees are required to prevent frames broadcast from a single source to multiple receptors from circulating endlessly around the network a result of frame relay circuits not having properly closed loops.

Simple Gateway

Refers to FastPacket to ATM interworking with respect to the IPX and IGX nodes. In the simple gateway mode, FastPackets are encapsulated in their entirety into cells. See also, complex gateway.

SIU (Serial Interface Unit)

A set of circuits common to all BPX cards used for transmitting and receiving via the crosspoint switch on the BCC.

speech detection

Determining the presence or absence of speech for Digital Speech Interpolation. Performed in either the CDP card or VDP card in an IPX node.

split clock

A data clocking configuration where the timing for the transmit data is obtained from one source (e.g. user device) and the timing for the receive data is obtained from another source (e.g. IPX).

Status Enquiry

A message transmitted by a FR NNI port requesting an updated status from the attached foreign network. This message is used as a heartbeat to detect when a port has failed.

StrataBus

On the BPX, contains crosspoint wiring used to carry ATM trunk data between both the network interface and service interface modules and the crosspoint switch as well as providing control, clock, and communications.

StrataView Plus

A Unix-based workstation and software used as a network management system (NMS) for StrataCom networks. It is part of the StrataSphere group. Provides a graphical user interface for configuration, maintenance, administration of the network. Collects and displays network statistics.

StrataSphere

A standards based multi-protocol management architecture that includes StrataView Plus, StrataSpere Connection Manager, StrataSphere BILLder, StrataSphere Modeler, and StrataSphere Optimizer.

subrate data

Multiple low-speed data circuits carried in a single DS0 timeslot.

superrate data

Single high-speed data circuit carried in multiple DS0 timeslots.

SVC (switched virtual circuit)

A virtual circuit that is dynamically established on demand and torn down when transmission is complete. SVS do not need to reserve any network resources when they are not in use. Called a switched virtual connection in ATM terminology. Compare with PVC.

system bus

A two-part IPX data bus. One part carries system commands between the PCC all other IPX cards; the other carries time division multiplexed data.

T

T1

The standard US. multiplexed 24-channel voice/data digital span line. Operates at a data rate of 1.544 Mbps.

T3

Transmission service at DS3 rate of 47.36 Mbps

TDM (time division multiplexing)

The process of combining several communication channels by dividing a channel into time increments and assigning each channel to a timeslot.

timestamp

A field in certain FastPacket formats that indicates the amount of time the packet has spent waiting in queues during the transmission between its source and destination nodes. Used to control the delay experienced by the packet.

trunk

A physical link between two nodes. The trunk may be one that supports 24-byte FastPackets (packet trunk), or one that supports 53 byte ATM cells (cell trunk)

trunk conditioning

A set of signalling and information bits that indicate a DS1 line failure.

trunk queues

The buffers in packet line cards (NTC, TXR) where the various FastPackets are queued up for transmission over the packet line(s). The buffers attempt to prioritize each packet so it experiences minimum delay.

U

µ-law

An analog to digital encoding scheme used to convert voice samples to an 8-bit data word used in D3/D4 T1 multiplex equipment.

UNI (User to Network Interface)

The user to network interface, as for ATM connection to CPE. See also NNI.

UPC (Usage Parameter Control)

A general procedure for controlling the rate of user data applied to an ATM network. There are a number of different algorithms for performing UPC. See also GRCA.

USART (Universal Synchronous/Asynchronous Receiver Transmitter)

A single-chip device used in certain applications that allows microprocessors to communicate with input/output (I/O) devices.

User to Network Interface (UNI)

The protocol at a frame relay port that passes information between the network and the user device attached to the port.

V

V.21

A CCITT interface standard often used for data transmission over modems.

V.35

A data communications interface standard adopted by the CCITT. Often used for data circuits operating at 56 Kbps and above.

VAD (Voice Activity Detection).

Used to statistically compress voice by not sending packets in the absence of speech.

VBR (Variable Bit Rate)

Connection type for variable bit rate traffic such as bursty data. See also, CBR and ABR.

VC_Q

Frame relay buffer allocation parameter that specifies the maximum queue size reserved in the FRP card for the FR connection.

virtual circuit

A circuit that acts like it is an individual transmission path but is actually shared with other circuits over a single transmission path. See also PVCs.

vt (virtual terminal)

An IPX control terminal that is the active control terminal at one node but is physically attached to another node.

W

WAN (Wide Area Network)

A network of transmission circuits generally spanning a large region or territory for transmission of voice and data between widespread end users. An IPX network is an example of a WAN.

X

X.21

A CCITT standard for data interfaces transmitting at rates up to approximately 2 Mbps.

X.25

A commonly-used standard that defines the protocol for low-speed data packet networks

XON/XOFF

A simple communications protocol for controlling the flow of data from one device to another. An XON sent from a receiving device indicates it is ready to accept data and the transmitting device may begin to output data. An XOFF from the receiving device indicates that it can no longer store any more data and the transmitting device should temporarily cease transmitting.

Y

Y-cable(s)

A short adapter cable forming an electrical branch (thus the term Y) for connecting a single customer data or trunk connection to two identical back cards to provide hardware redundancy on the IPX.

Y-cable redundancy

A redundancy type used in the IPX when a 1:1 card redundancy is implemented using a split or Y-cable for the data connection between the user device and the primary and standby IPX interface card.

Y1

A digital trunk conforming to the Japanese “Y” circuit standard, for use as a packet line. Similar to T1, it operates at 1.544 Mbps.

yellow alarm

Another name for remote alarm as the remote alarm lamp on digital transmission equipment is always yellow in color.