

V.24

ITU-T standard for a physical layer interface between DTE and DCE. V.24 is essentially the same as the EIA/TIA-232 standard. See also *EIA/TIA-232*.

V.25bis

ITU-T specification describing procedures for call setup and tear down over the DTE-DCE interface in a PSDN.

V.32

ITU-T standard serial line protocol for bidirectional data transmissions at speeds of 4.8 or 9.6 Kbps. See also *V.32bis*.

V.32bis

ITU-T standard that extends V.32 to speeds up to 14.4 Kbps. See also *V.32*.

V.34

ITU-T standard that specifies a serial line protocol. V.34 offers improvements to the V.32 standard, including higher transmission rates (28.8 Kbps) and enhanced data compression. Compare with *V.32*.

V.35

ITU-T standard describing a synchronous, physical layer protocol used for communications between a network access device and a packet network. V.35 is most commonly used in the United States and in Europe, and is recommended for speeds up to 48 Kbps.

V.42

ITU-T standard protocol for error correction using LAPM. See also *LAPM*.

variable bit rate

See *VBR*.

variable-length subnet mask

See *VLSM*.

VBR

variable bit rate. QOS class defined by the ATM Forum for ATM networks. VBR is subdivided into a real time (RT) class and non-real time (NRT) class. VBR (RT) is used for connections in which there is a fixed timing relationship between samples. VBR (NRT) is used for connections in which there is no fixed timing relationship between samples, but that still need a guaranteed QOS. Compare with *ABR* (*available bit rate*), *CBR*, and *UBR*.

VC

See *virtual circuit*.

VCC

virtual channel connection. Logical circuit, made up of VCLs, that carries data between two end points in an ATM network. Sometimes called a *virtual circuit connection*. See also *VCI*, *VCL*, and *VPI*.

VCI

virtual channel identifier. 16-bit field in the header of an ATM cell. The VCI, together with the VPI, is used to identify 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 network VCL that a cell needs to transit on its way to its final destination. The function of the VCI is similar to that of the DLCI in Frame Relay. Compare to *DLCI*. See also *VCL* and *VPI*.

VCL

virtual channel link. Connection between two ATM devices. A VCC is made up of one or more VCLs. See also *VCC*.

VCN

virtual circuit number. 12-bit field in an X.25 PLP header that identifies an X.25 virtual circuit. Allows DCE to determine how to route a packet through the X.25 network. Sometimes called *LCI* (*logical channel identifier*) or *LCN* (*logical channel number*).

vector

Data segment of an SNA message. A vector consists of a length field, a key that describes the vector type, and vector-specific data.

Versatile Interface Processor

See *VIP*.

VINES

Virtual Integrated Network Service. NOS developed and marketed by Banyan Systems.

VIP

1. Versatile Interface Processor. Interface card used in Cisco 7000 and Cisco 7500 series routers. The VIP provides multilayer switching and runs the Cisco IOS software. See also *Cisco 7000* and *Cisco 7500*.
2. virtual IP. Function that enables the creation of logically separated switched IP workgroups across the switch ports of a Catalyst 5000 running Virtual Networking Services software. See also *Virtual Networking Services*.

virtual address

See *network address*.

virtual channel

See *virtual circuit*.

virtual channel connection

See *VCC*.

virtual channel identifier

See *VCI*.

virtual channel link

See *VCL*.

virtual circuit

Logical circuit created to ensure reliable communication between two network devices. A virtual circuit is defined by a VPI/VCI pair, and can be either permanent (a PVC) or switched (an SVC). Virtual

circuits are used in Frame Relay and X.25. In ATM, a virtual circuit is called a *virtual channel*. Sometimes abbreviated *VC*. See also *PVC*, *SVC*, *VCI*, *virtual route*, and *VPI*.

virtual circuit connection

See *VCC*.

virtual circuit number

See *VCN*.

Virtual Integrated Network Service

See *VINES*.

virtual IP

See *VIP*.

virtualization

Process of implementing a network based on virtual network segments. Devices are connected to virtual segments independent of their physical location and their physical connection to the network.

virtual LAN

See *VLAN*.

virtual LAN internetwork

See *VLI*.

Virtual Networking Services

Software on some Catalyst 5000 switches that enables multiple workgroups to be defined across switches and offers traffic segmentation and access control.

virtual path

Logical grouping of virtual circuits that connect two sites. See also *virtual circuit*.

virtual path connection

See *VPC*.

virtual path identifier

See *VPI*.

virtual path identifier/virtual channel identifier

See *VPI/VCI*.

virtual path link

See *VPL*.

virtual ring

Entity in an SRB network that logically connects two or more physical rings together either locally or remotely. The concept of virtual rings can be expanded across router boundaries.

virtual route

In SNA, a logical connection between subarea nodes that is physically realized as a particular explicit route. SNA terminology for virtual circuit. See also *virtual circuit*.

VirtualStream virtual workgroups

Cisco workgroup architecture implemented on the LightStream 2020 ATM switch that allows geographically dispersed stations on connected LANs to be logically grouped. Such grouping provides easy access within the workgroup, while ensuring privacy between workgroups and limiting the impact of the work of each group on the others.

virtual telecommunications access method

See *VTAM*.

Virtual Terminal Protocol

See *VTP*.

VLAN

virtual LAN. Group of devices on a LAN that are configured (using management software) so that they can communicate as if they were attached to the same wire, when in fact they are located on a number of different LAN segments. Because VLANs are based on logical instead of physical connections, they are extremely flexible.

VLI

virtual LAN internetwork. Internetwork composed of VLANs. See *VLAN*.

VLSM

variable-length subnet mask. Ability to specify a different subnet mask for the same network number on different subnets. VLSM can help optimize available address space.

VNS

See *Virtual Networking Services*.

VPC

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

VPI

virtual path identifier. 8-bit field in the header of an ATM cell. The VPI, together with the VCI, is used to identify 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. The function of the VPI is similar to that of the DLCI in Frame Relay. Compare with *DLCI*. See also *VCI* and *VCL*.

VPI/VCI

See *VCI* and *VPI*.

VPL

virtual path link. Within a virtual path, a group of unidirectional VCLs with the same end points. Grouping VCLs into VPLs reduces the number of connections to be managed, thereby decreasing network control overhead and cost. A VPC is made up of one or more VPLs.

VTAM

virtual telecommunications access method. Set of programs that control communication between LUs. VTAM controls data transmission between channel-attached devices and performs routing functions.

VTP

Virtual Terminal Protocol. ISO application for establishing a virtual terminal connection across a network.