GLOSSARY OF NET-WORKING TERMS

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The networking field is pockmarked with acronyms that are often used inconsistently throughout the trade. Following is a brief glossary of some of the terms used within this documentation.

10BaseT – An IEEE standard (802.3) for operating 19 Mbps Ethernet networks with twisted pair cabling and a wiring hub. See also UTP.

1TR6 – An ISDN D-channel protocol that was used in Germany prior to the widespread implementation of the DSS1. Currently 1TR6 is being replaced by the DSS1 protocol.

ARP (Address Resolution Protocol) – The protocol in the TCP/IP suite that is used to obtain the network point of attachment address (usually the MAC or ethernet address) of a host corresponding to it's internet address.

AUI (Autonomous Unit Interface) – Also called an Attachment Unit Interface. This refers to the 15 pin D connector and cables that connect single and multiple channel equipment in an Ethernet transceiver.

Address Resolution Protocol – See ARP.

Agent – The client-server model, the part of the system that performs information preparation and exchange on behalf of a client or server application.

Autonomous Unit Interface – See AUI.

B-Channel – ISDN bearer service channel operating at 64 kbps, carrying user voice or data; circuit-, packet-, or frame-mode services may be obtained on this channel.

BRI (Basic Rate Interface) – One of the access methods to an ISDN, comprising two B-channels and one D-channel (often referred to as 2B+D).

Bandwidth – The width of a channel's passband (e.g., the bandwidth of a channel with a 300- to 3400-Hz passband is 3100 Hz, or 3.1 kHz).

Basic Rate Interface – See BRI.

Bearer service – The basic set of services offered over the B-channel that provides the capability to exchange signals between two user-network interfaces.

BootP – The Bootstrap Protocol is a UDP/IP-based protocol which allows a booting host to configure itself dynamically and without user supervision.

Bridge – Bridges can usually be made to filter packets, that is, to forward only certain traffic. Related devices are: repeaters which simply forward electrical signals from one cable to another, and full-fledged routers which make routing decisions based on several criteria.

Broadcast – A means of transmitting a message to all devices connected to a network. Normally, a special address, the broadcast address, is reserved to enable all the devices to determine that the message is a broadcast message.

Bus – A network transmission medium to which all the devices are attached. Each transmission propagates the length of the medium and is therefore received by all other devices connected to the medium.

CAPI (Common ISDN Application Programming Interface) – An application programming interface standard resulting from close cooperation with leading ISDN manufacturers. CAPI defines the entity and the protocol that applications must use when communicating with this entity.

CGI (Common Gateway Interface) – A standard for running external programs from a World-Wide Web (HTTP) server. CGI specifies how to pass arguments to the exe-

cuting program as part of the HTTP request. Commonly, the program will generate an HTML document which will be passed back to the browser but it can also request redirection to a different document.

CCIT (Intergraph and Telephone Consultative Committee) – A committee of the ITU, creating recommendations regarding public telegraph, telephone, and data networks. Renamed ITSS in March 1993.

CHAP (Challenge Handshake Authentication Protocol) – Under PPP, each system may require it's peer to authenticate itself using the CHAP protocol or the PAP protocol.

CLID (Calling Line ID) – A telephone company service that delivers the calling party's telephone number to the called party during the ring cycle; also called "automatic number identification".

CRC (Cyclic Redundancy Check) – A method used for the detection of errors when data is being transmitted. A CRC is a numeric value computed from the bits in the message to be transmitted. It is appended to the tail of the message prior to transmission and the receiver then detects the presence of errors in the received message by computing a new CRC.

CSMA/CD – An abbreviation for carrier sense, multiple access with collision detection. It is a method used to control access to a shared transmission medium such as coaxial cable bus to which a number of stations are connected. A station wishing to transmit a message first senses (listens) the medium and transmits a message only if the medium is quiet—no carrier present. Then, as the message is being transmitted the station monitors the actual signal on the transmission medium. If this is different from the signal being transmitted, a collision is said to have occurred and

been detected. The station ceases transmission and retries again later.

Calling Line ID – See CLID.

Challenge Handshake Authentication Protocol – See CHAP.

Coaxial Cable – A type of transmission medium consisting of a center conductor and a cocentric outer conductor. It is used when higher data transfer rates (greater than 1 Mbps) are required.

Common Gateway Interface – See CGI.

Common ISDN Application Programming Interface – See CAPI.

Cyclic Redundancy Check – See CRC.

DCE (Data Circuit-terminating Equipment) – The name given to the equipment provided by the network authority (provider) for the attachment of user devices to the network. It takes on different forms for different types of networks.

DHCP (Dynamic Host Configuration Protocol) – A protocol introduced by Microsoft. The protocol provides a means to dynamically allocate IP addresses (and other network information) to PCs running on a Microsoft Windows local area network. The system administrator assigns a range of addresses to a DHCP server and each PC is configured to request its IP address from the server. The request and grant process uses a lease concept with an adjustable time period.

DLCI (Data Link Connnection Identifier) – In a Frame Relay network, a DLCI uniquely identifies a single virtual circuit. It is important to note that a DLCI is only significant to the local side of a point-to-point link.

DSS1 (Digital Subscriber Signalling System) – The ISDN user-network interface, comprising a data link layer and network layer; described in CCITT (now ITU) Recommendations Q.920-series (LAPD/LAPF) and Q.930-series recommendations, respectively.

DTE (Data terminal equipment) – A generic name for any user device connected to a data network. It thus includes such devices as visual displays, computers, and office workstations.

D-Channel – The ISDN out-of-band signalling channel, carrying ISDN user-network messages; it can also be used to carry packet- or frame-mode user data. The D-channel operates at 16 kbps in the BRI and 64 kbps in the PRI.

Data Circuit-terminating Equipment – See DCE.

Data Link Connnection Identifier – See DLCI.

Data Link Layer – It is concerned with the reliable transfer of data (no residual transmission errors) across a data link being used.

Data Link Connection Identifier – See DLCI.

Data terminal equipment – See DTE.

Datagram – A self-contained packet of information that is sent through the network with minimum protocol overheads.

Digital Subscriber Signalling System – See DSS1.

Domain – In the Internet, a part of a naming hierarchy. Syntactically, an Internet domain name consists of a sequence of names (labels) separated by periods (dots), e.g., "tundra.mpk.ca.us." In OSI, "domain" is generally used as an administrative partition of a complex distributed sys-

tem, as in MHS Private Management Domain (PRMD), and Directory Management Domain (DMD).

Dotted decimal notation – The syntactic representation for a 32-bit integer that consists of four 8-bit numbers written in base 10 with periods (dots) separating them. Used to represent IP addresses in the Internet as in: 192.67.67.20

Dynamic host configuration protocol – See DHCP.

EAZ (Endgeräteauswahlziffer) – In the 1TR6 protocol, the last digit of the ISDN number, which combined with the service indicator allows a specific end station to be identified.

ET (Exchange Termination) – That portion of the local exchange that assumes the responsibility for LE's communication with the other network components of the ISDN.

ETSI (European Telecommunications Standards Institute) – An organization, headquartered in France, responsible for creating common telecommunications standards for the European market.

Ethernet – A local area network that connects devices (computers, printers, etc.) via twisted pair or coaxial cabling.

Encapsulation – A technique used by layered protocols in which a layer adds header information to the protocol data unit (PDU) from the layer above. As an example, in Internet terminology, a packet would contain a header from the physical layer, followed by a header from the network layer (IP), followed by a header from the transport layer (TCP), followed by the application protocol data.

Endgeräteauswahlziffer – See EAZ.

European Telecommunications Standards Institute – See ETSI.

Exchange Termination – See ET.

FCS (Frame check sequence) – A general term given to the bits appended to a transmitted frame or message by the source to enable the receiver to detect possible transmission errors.

FTP (File Transfer Protocol) – The TCP/IP protocol (and program) used to transfer files between hosts.

File Transfer Protocol – See FTP.

Filter – A rule that defines a set of packets. Filters can be used to specify a set of packets that may or may-not-be routed.

Firewall – A mechanism consisting of hardware and/or software that let's an administrator control the types of packets may access the network (pass through a router).

Fragmentation – The process in which an IP datagram is broken into smaller pieces to fit the requirements of a given physical network. The reverse process is termed reassembly. Also see MTU.

Frame check sequence – See FCS.

Frame – The unit of information transferred across a data link.

Frame Relay – A form of packet switching that uses smaller packets and less error checking than traditional packet switching such as X.25. Due to these characteristics Frame Relay is effective for handling high-speed, bursty traffic over Wide Area Networks.

Full Duplex – Bidirectional communications facility where transmissions may travel in both directions simultaneously. Also called duplex.

Gateway – The original Internet term for what is now called router or more precisely, IP router. In modern usage, the terms "gateway" and "application gateway" refer to systems which do translation from some native format to another. Examples include X.400 to/from RFC 822 electronic mail gateways. See router.

HTTP (HyperText Transfer Protocol) – The TCP/IP protocol used on the World-Wide Web for the exchange of HTML documents between client and server systems. It conventionally uses TCP port 80.

HDLC (High level data link control) – An internationally agreed standard protocol defined to control the exchange of data across either a PPP data link or a multidrop data link.

Half Duplex – Bidirectional communications facility where transmissions may travel in either one direction or the other at any given time. Sometimes referred to as simplex, outside on North America.

High level data link control – See HDLC.

Host – This is normally a computer that contains (hosts) the communication hardware necessary to connect the computer belonging to a data communication network.

Hypertext Transfer Protocol – See HTTP.

ICMP (Internet Control Message Protocol) – The protocol used to handle errors and control messages at the IP layer. ICMP is actually part of the IP protocol.

IGP (Interior Gateway Protocol) –

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

IP (Internet Protocol) – The network layer protocol for the Internet protocol suite.

IP datagram – The fundamental unit of information passed across the Internet. Contains source and destination addresses along with data and a number of fields which define such things as the length of the datagram, the header checksum, and flags to say whether the datagram can be (or has been) fragmented.

IPX (Internetwork Packet exchange) – A network layer protocol initially developed at XEROX Corporation and made popular by Novell, Inc. It is the basic protocol in Novell NetWare's file server operating system and allows Novell clients and servers to communication over LAN/WAN links.

ISDN (Integrated Services Digital Network) – A technology which combines, or "integrates", various services including telephony, telex, data transfer, fax, teletex, and videotex in a single digital medium. ISDN makes it possible for customers to access all of these digital data services through a single "wire." The standards that define ISDN are specified by ITU.

ISO (International Organization for Standardization) –

An international standards organization that comprises national standards bodies; ANSI, for example, is the U.S. representative to ISO.

ISP (Internet Service Provider) – A company which provides other companies or individuals with access to, or presence on, the Internet.

ISDN address – An address of a specific ISDN device; comprises an ISDN number plus additional digits that identify a specific terminal at a user's interface (e.g. 47117).

ISDN number – The network address associated with a user's ISDN interface (e.g. 4711).

ITU (International Telecommunication Union) – An agency of the United Nations, the parent organization of the CCITT (now called the ITSS).

Integrated Services Digital Network – See ISDN.

Interior Gateway Protocol (IGP) – See IGP.

International Organization for Standardization – See ISO.

International Telecommunication Union – See ITU.

Intergraph and Telephone Consultative Committee – See CCIT.

Internet Control Message Protocol – See ICMP.

Internet (with a capital "I") **–** The largest internet consisting of large national backbone nets (such as MILNET, NSF-NET, and CREN) and a myriad of regional and local campus networks worldwide. The Internet uses the Internet protocol suite. To be on the Internet you must have IP connectivity, i.e., be able to Telnet to--or ping--other systems. Networks with only e-mail connectivity are not actually classified as being on the Internet.

Internet Protocol – See IP.

Internet Service Provider – See ISP.

ISDN (Integrated Services Digital Network) – A technology which combines, or "integrates", various services including telephony, telex, data transfer, fax, teletex, and videotex in a single digital medium. ISDN makes it possible for customers to access all of these digital data services through

a single "wire." The standards that define ISDN are specified by ITU.

LAPB (Link Access Procedure Balanced) – The X.25 data link layer protocol.

LCP (Link Control Protocol) – A protocol used by PPP to automatically agree upon encapsulation format options, handle varying packet size limits, authenticate the identity of its peer on the the link, determine when a link is functioning properly and when it is defunct, detect common misconfiguration errors, and terminate the link. See RFC 1570.

LE (Local Exchange) – An ISDN central office.

LLC (Link Layer Control) – The upper portion of the data link layer, as defined in IEEE 802.2. The LLC sublayer presents a uniform interface to the user of the data link service, usually the network layer. Beneath the LLC sublayer is the Media Access Control (MAC) sublayer.

LT (Local Termination) – That portion of the local exchange responsible for functions related to the termination of the local loop.

Link Access Procedure Balanced – See LAPB.

Link Access Procedure on the D-channel – The ISDN data link layer protocol specified for the D-channel.

Link Control Protocol – See LCP.

Link Layer Control – See LLC.

Local Exchange – See LE.

Local Termination – See LT.

MIB (Management Information Base) – A collection of objects that can be accessed via a network management protocol. See SMI.

MTU (Maximum Transmission Unit) – The largest possible unit of data that can be sent on a given physical medium. Example:
 The MTU of Ethernet is 1500 bytes. See fragmentation.

MAC (Medium access control) – Many local area networks utilize a single transmission medium – a bus, or ring for example. to which all the connected devices are attached. A procedure must be followed for each device to ensure that transmissions occur in an orderly manner. In general, this is known as the medium access control procedure. Two examples are CSMA/CD and token ring.

MSN (Multiple Subscriber Number) – In Q.931 compatible D-channel protocols, multiple telephone numbers can be used to establish a connection with a single endpoint. Using these MSNs and an appropriate service indicator a specific piece of terminal equipment or a service provided by that equipment can be identified.

Management Information Base – See MIB.

Maximum Transmission Unit – See MTU.

Medium access control – See MAC.

Modem – (Modulator/demodulator) An electronic device (DCE) typically used for converting serial data between computing equipment (DTE) and and an analog transmission channel such as a phone line.

Multi-homed host – A computer in an IP network that is connected to more than one interface can have more than one IP address (or MAC address). Such a host can be called

a "multi-homed" host. The interfaces may or may not be attached to the same network.

Multicast – A special form of broadcast where copies of the packet are delivered to only a subset of all possible destinations. See broadcast.

Multiple Subscriber Number – See MSN.

NMS (Network Management Station) – The system responsible for managing a (portion of a) network. The NMS talks to network management agents, which reside in the managed nodes, via a network management protocol. See also: Agent, SNMP.

NAT (Network Address Translation) – (Sometimes called Virtual LAN) A software mechanism (provided by an IP router) that allows one to extend the Internet address already in use. IP addresses used on a LAN are "translated" to differed address when packets traverse the translating device.

NSAP (Network Service Access Point) – NSAP is an alternative addressing scheme used in a few X.25 data networks. The format of an NSAP address is defined in the X.213 recommendation and includes both OSI-conformant and non OSI-conformant versions.

NT1 (Network Termination Type1) – The ISDN device responsible for the termination of the ISDN transmission facility at the customer premises.

NT2 (Network Termination Type2) – An ISDN device responsible for on-premises communication distribution, such as a PBX, LAN, or host computer.

NetBEUI – NetBIOS Extended User Interface. The network transport protocol used by all of Microsoft's network systems and IBM's LAN Server based systems. NetBEUI is of-

ten confused with NetBIOS. NetBIOS is the applications programming interface and NetBEUI is the transport protocol.

NetBIOS – (Note: BIOS from Basic Input Output System) An applications programming interface (API) which activates network operations on a PC running under Microsoft's DOS. It is a set of commands that the application program issues in order totransmit and receive data to another host on the network. The commands are interpreted by a network control program or network operating system.

Network Address Translation – See NAT.

Network Management Station – See NMS.

Network Termination Type1 – See NT1.

Network Termination Type2 – See NT2.

OSPF (Open Shortest Path First) – One of the Internet standard Interior Gateway Protocols (IGP) defined in RFC 1247. OSPF is a link state routing protocol, as opposed to a distance vector routing protocol (used by RIP, the most common IGP).

Octet – Eight data bits.

PABX (Private Automatic Branch eXchange) – An automatic PBX.

PAP (Protocol Authentication Protocol) – Under PPP, each system require it's peeMr to authenticate itself using either PAP or CHAP.

PBX (Private Branch exchange) – A customer site telephone switch. Common usage of this term today implies that a PBX is an automatic switch, although a PBX could be under the control on an operator (or attendant).

PDF (Portable Document Format) – The native file format for Adobe Systems' Acrobat. PDF is the file format for representing documents in a manner independent of the original application software, hardware, and operating system used to create those documents.

PH (Packet Handler) – A packet switch (or X.25 DCE equivalent device) in an ISDN.

POTS (Plain Old Telephone Service) – The plain old telephone service is a reference to the traditional analog telephone system.

PPP (Point-to-Point Protocol) – The successor to SLIP, PPP provides router-to-router and host-to-network connections over both synchronous and asynchronous circuits.

PRI (Primary Rate Interface) – (a.k.a T1 PRI Line in USA) An ISDN PRI interface consists of a D-channel for signalling and 23 (USA) or 30 (Europe) B-channels for user data. The B-channels may be switched or combined depending on services from the local provider.

PSN (Packet Switched Network) – A data communications network using packet switching technology; commonly supports the X.25 interface.

PSTN (Public Switched Telephone Network) – The public switched telephone network is just another term for the analog telephone system.

Packet Handler – See PH.

Packet Switched Network – See PSN.

Packet switching – A switching procedure whereby two parties have a logical connection across a network, but no dedicated facilities, and where units of transmission are variable in length but have a maximum size. This is a store-and-forward technique where nodes in the network may

store a packet for some time before forwarding it to the next node in line.

Ping (Packet INternet Groper) – A program used to test reachability of destinations by sending them an ICMP echo request and waiting for a reply. The term is used as a verb: "Ping host X to see if it is up!"

Point-to-Point Protocol – See PPP.

Point-to-multipoint ISDN Configuration – A physical connection in which a single network termination supports multiple terminal equipment devices; only supported by the BRI.

Point-to-point ISDN Configuration – A physical connection in which a single network termination supports one terminal equipment device; supported by the BRI or PRI.

Port – The abstraction used by Internet transport protocols to distinguish among multiple simultaneous connections to a single destination host. See selector.

Primary Rate Interface – See PRI.

Private Automatic Branch exchange – See PABX.

Private Branch exchange – See PBX.

Protocol Authentication Protocol – See PAP.

Protocol – A formal description of messages to be exchanged and rules to be followed for two or more systems to exchange information.

Public Switched Telephone Network – See PSTN.

Q.930 – A CCITT recommendation describing the general aspects of the D-channel level 3 protocol; also called recommendation I.450; the Q.930 series recommendations form the DSS1 network layer.

RADIUS (Remote Dial In User Service) – A Client-Server based security system often used by Internet ServicePro-viders (ISPs). RADIUS defines a mechanism by which dial-in users can be granted (or denied) access to network serv-ices using a centrally managed server that exchanges au-thentication information (usually UDP/IP) about the user with a RADIUS client.

RARP (Reverse Address Resolution Protocol) – For hosts that can't store their IP address locally (diskless work-stations) RARP is often used. When such a workstation comes into service it asks for its IP address by broadcasting a RARP-request that contains its own hardware address. A RARP server usually responds by replying with the IP/MAC address pair of the workstation. (Also see ARP).

Remote CAPI – Remote CAPI is a client-server system that allows CAPI applications running on any PC (where Re-mote CAPI is is installed) to utilize the ISDN interfaces of a BinTec router. The remote CAPI client (Windows dll) for-wards all CAPI messages to the BinTec router via a TCP data stream. The Remote CAPI server (capid process on the BinTec router) forwards all CAPI messages to connected cli-ents via a TCP stream.

Remote TAPI – Remote TAPI is a client-server system that allows TAPI applications running on a PC to access the te-lephony functionality of a BinTec router. The remote TAPI client (Windows dll) forwards all TAPI messages to the BinTec router via a TCP data stream. The Remote TAPI server (the tapid on the BinTec router) forwards all TAPI messages to connected clients via a TCP stream. See also TAPI.

Repeater – A device which propagates electrical signals from one cable to another without making routing deci-sions or providing packet filtering. In OSI terminology, a re-

peater is a Physical Layer intermediate system. See bridge and router.

Reverse Address Resolution Protocol – See RARP.

RFC (Request For Comments) – The document series, begun in 1969, which describes the Internet suite of protocols and related experiments. Not all (in fact very few) RFCs describe Internet standards, but all Internet standards are written up as RFCs.

RIP (Routing Information Protocol) – An Interior Gateway Protocol (IGP) supplied with Berkeley UNIX. RIP is distance vector algorithm, as opposed to link state, routing protocol. RIP is defined in STD 34, RFC 1058 and updated by RFC 1388.

Request For Comments – See RFC.

Router – A system responsible for making decisions about which of several paths network (or Internet) traffic will follow. To do this it uses a routing protocol to gain information about the network, and algorithms to choose the best route based on several criteria known as "routing metrics." In OSI terminology, a router is a Network Layer intermediate system. In TCP terminology, a router is often referred to as a gateway. See gateway, bridge and repeater

Routing Information Protocol – See RIP.

SAP (Service Advertising Protocol) – A Novell NetWare protocol that permits file, print, and gateway servers to advertise their services and addresses to other servers and cients.

SAPI (Service Application Identifier) – A subfield in the LAPD address field which carries the type of level 3 service being obtained.

SNMP (Simple Network Management Protocol) – An application protocol in a TCP/IP suite used to send and retrieve management related information across a TCP/IP network. The network management protocol of choice for TCP/IP-based internets.

STAC – An enhanced compression algorithm as defined in RFCs 1974 (*PPP Stac LZS Compression*). The Stacker LZS algorithm was originally developed by Hi/fn, Inc.

SMI (Structure of Management Information) – The rules used to define the objects that can be accessed via a network management protocol. See also MIB.

SPI (Service Provider interface) – In TAPI

SPID (Service Profile Identifier) – SPIDs are used in National ISDN 1 (USA) to identify an ISDN B-channel. Though normally based on your telephone number the format (prefix and suffix digits) and number (one SPID per B-channel, or one for both) of SPIDs depends on your service provider.

SPX (Sequenced Packet Exchange) – SPX is a transport layer protocol used by Novell NetWare systems on top of IPX. See also IPX.

SS7 (Signalling System 7) – The high speed, digital common channel signalling network required for ISDN applications; also provides a myriad of services based on the calling party's ISDN number.

SVC (Switched Virtual Circuit) – A virtual circuit service that is established on demand as needed and relinquished when the data exchange is complete; requires call control procedures for the establishment and termination of the call; SVCs are supported by both X.25 and frame relay.

Service Application Identifier – See SAPI.

Service Indication – Service indication is a part of the ISDN address that describes the type of ISDN service to be used. In DSS1, service indication consists of the BC (bearer capability), HLC (High Layer Compatibility), and LLC (Low Layer Compatibility), elements. In 1TR6, service indication consists of the SI (service indicator), and AI (additional information) elements.

Service Profile Identifier – See SPID.

Signalling System 7 – See SS7.

Spanning Tree Algorithm – An IEEE 802.1 standard (IEEE802.1d-1990) under consideration that provides distributed routing over multiple LANs connected by bridges.

Simple Network Management Protocol – See SNMP.

Structure of Management Information – See SMI.

Subnet – In TCP/IP terminology, a working scheme that divides a single logical network into smaller physical networks to simplify routing.

Subnetwork – A collection of OSI end systems and intermediate systems under the control of a single administrative domain and utilizing a single network access protocol. Examples:
 private X.25 networks, collection of bridged LANs.

Switched Virtual Circuit – See SVC.

TA (Terminal Adapter) – A protocol converter used to allow a non-ISDN terminal to access the network using ISDN protocols and procedures.

TAPI (Telephony Applications Programming Interface) – TAPI is a software interface defined by Microsoft and Intel for developing Windows-based telephony applications. TAPI applications can make, accept and monitor

calls. The Microsoft Dialer (part of Windows) is an example of a TAPI application. If the Telephony Service Provider (see TSP) supports supplementary services the TAPI application will also be able to redirect, hold, and make conference calls.

TCP (Transmission Control Protocol) – The major transport protocol in the Internet suite of protocols providing reliable, connection- oriented, full-duplex streams. Uses IP for delivery.

TFTP (Trivial File Transfer Protocol) – A simple file transfer protocol often used by diskless workstations to download their boot code. Note: TFTP is implemented on the BinTec router and is used to exchange configuration files and upgrade system software.

TEI (Terminal Endpoint Identifier) – A subfield in the LAPD address field that identifies a given TE device on the ISDN interface.

TSP (Telephone Service Provider) – A TSP uses the TSPI (Telephony Service Provider Interface) defined by Microsoft to support TAPI services for a specific piece of hardware. TAPI supports multiple TSPs allowing the end-user to access differnt hardware at the same time.

Telephony Applications Programming Interface – See TAPI.

Telephony Service Provider Interface – See TSP.

Telnet (Telecomunications Network) – The virtual terminal protocol in the Internet suite of protocols. Allows users of one host to log into a remote host and interact as normal terminal users of that host.

Terminal Adapter – See TA.

Terminal Endpoint Identifier – See TEI.

Transceiver/Transmitter-receiver – The physical device that connects a host interface to a local area network, such as Ethernet. Ethernet transceivers contain electronics that apply signals to the cable and sense collisions.

Transmission Control Protocol – See TCP.

Trivial File Transfer Protocol – See TFTP.

Twisted pair – A type of transmission medium consisting of two insulated wires twisted together to improve the immunity to interference from other (stray) electrical signals which might otherwise corrupt the signal being transmitted.

UDP (User Datagram Protocol) – A transport protocol in the Internet suite of protocols. UDP, like TCP, uses IP for delivery; however, unlike TCP, UDP provides for exchange of datagrams without acknowledgements or guaranteed delivery.

UTP (Unshielded Twisted Pair) – A tranmission medium consisting of two insulated wires twisted together to protect it from other electrical signals that might otherwise corrupt the transmitted signal.

UUCP (UNIX to UNIX Copy Program) – A protocol used for communication between consenting UNIX systems.

UNIX to UNIX Copy Program – See UUCP.

User Datagram Protocol – See UDP.

V.110 – A rate adaption scheme to convert asynchronous or synchronous transmission at rates from 50 bps to 19.2 kbps to the B-channel 64kbps rate; limited to only one low-speed device per B-channel; widely used outside of North America; also called recommendation I.465.

V.42 bis – A widely accepted standard that describes a compression procedure used for transmitting data over telephone networks. See also STAC (an alternative compression algorithm).

VC (Virtual Circuit) – In a store-and-forward network, a logical end-to-end connection between two hosts; the VC must be established at service subscription time or on demand by the user, but the network does not dedicate a transmission facility to this connection.

Virtual Circuit – See VC.

X.21 – The X.21 recommendation describes the physical interface between two DTEs in circuit-switched data networks such as Datex-P in Germany.

X.25 – An internationally agreed standard protocol defined for the interface of a data terminal device, such as a computer, to a packet-switched data network.

X.75 – A CCITT recommendation describing layers 1 through 3 of the interface between PSNs, including PSP-DNs and ISDNs.