

# **GLOSSARY OF TELECOM TERMS**

**Telecommunications Pocket Guide**  
**85+ Common Terms & Phrases**

Blue Signal Search

# #

## 3G/4G/5G

Third-, fourth-, and fifth-generation wireless capabilities that allow for faster and broader access to information and services via mobile devices.

# A

## Access Tandem

Switching system that concentrates and distributes traffic originating from or terminating at end offices in the access/local service area.

## Alias

An alternative identification string for an IP address. An alias can be a name, a URL address, an e-mail address, a transport address in the form of "IP address port number," or a Party Number.

## Algorithm

Rule of thumb for doing something with a semblance of intelligence. For example, a descrambling algorithm will yield a clear, unscrambled message from an apparently meaningless one.

# B

## **Backhaul**

The portion of a hierarchical telecom network that makes up the links between the core network and smaller sub-networks (such as a telephone company and a cell tower).

## **Bandwidth**

The range of frequencies in a communication channel. Analog communications measure bandwidth in Hertz, whereas digital communications use bits per second (bps).

## **Base Station**

A fixed transceiver that is the main communication point for one or more wireless mobile client devices.

## **Bridge**

An interconnection device that can connect LANs using similar or dissimilar media and signaling systems such as Ethernet, Token Ring, and X.25.

## **Broadband**

A high-capacity transmission technique that allows for the communication of a large amount of information over a wide range of frequencies.

# C

## **Carrier**

Vendor of transmission services operating under terms defined by the FCC as a common carrier. Owns a transmission medium and rents, leases, or sells portions for a set tariff to the public via shared circuits. (AT&T, Sprint, MCI, Ameritech, etc.)

## **Cellular Technology**

This term, often used for all wireless phones regardless of the technology they use, derives from cellular base stations that receive and transmit calls. Both cellular and PCS phones use cellular technology.

## **Centranet/Centrex**

Phone switching system, usually installed in a service provider's central office, that provides dial tone and features to customers.

## **Circuit Switching**

A networking technology that provides a temporary but dedicated connection between two stations regardless of the number of switching devices through which data is routed. Analog circuit switching (FDM) has been replaced by digital circuit switching (TDM). The digital technology still maintains the connection until one speaker hangs up.

## **Citizens Broadband Radio Service (CBRS)**

Refers to the 150 MHz of spectrum in the 3.5 GHz to 3.7 GHz range that the FCC designated for sharing among 3 tiers of users: incumbent users, priority access license (PAL) users, and general authorized access (GAA) users.

## **D**

## **Data Encryption Standard (DES)**

An algorithm for encrypting (coding) data designed by the National Bureau of Standards so it is impossible for anyone without the decryption key to get the data back in unscrambled form.

## **Direct Broadcast Satellite (DBS/DISH)**

A high-powered satellite that transmits or retransmits signals which are intended for direct reception by the public. The signal is transmitted to a small earth station or dish mounted on homes or other buildings.

## **Distributed Antenna Systems (DAS)**

A network of spatially separated antenna nodes connected to a common source via a transport medium that provides wireless service within a geographic area or structure. These networks can be indoors (iDAS) or outdoors (oDAS).

## **Domain Name Server (DNS)**

On TCP/IP networks, DNS converts the domain name (URL) of a host computer into a numeric IP address using the following format xxx.xxx.xxx.xxx.

## **Dynamic Host Configuration Protocol (DHCP)**

A network management protocol used to automate the process of configuring devices on IP networks.

# **E**

## **Endpoint**

A network element at the end of the network such as an H.323 terminal, Gateway, Multipoint Controller Unit (MCU), PC terminal, IP or ISDN phone, or video conference.

## **Ethernet**

A LAN physical and data link protocol running over the lowest two layers of the OSI Reference Model at speeds of up to 10 or 100 Mbps.

## **Extended Port Network (EPN)**

A remote switching module of a telephone switch. Different vendors use different names. EPN is specific to Avaya and their Definity line of PBXs.

# F

## **Federal Communications Commission (FCC)**

An independent US government agency charged with regulating interstate and international communications by radio, television, satellite, and cable.

## **Fiber Optic Cable**

Glass strands used to transmit light signals for cell phone and Internet connections. These cables allow for connection speeds 10 to 100 times faster than copper wire.

## **Firewall**

A barrier device placed between two separate networks. A firewall can be implemented in a single router that filters out unwanted packets or it can use a variety of technologies in a combination of routers and hosts. Today, many firewalls combine filtering functionality with Network Address Translations (NAT) functions.

# G

## Gatekeeper

An optional server that is responsible for network-based services including a registration, admission, and status, for which it uses a special protocol called RAS. Gatekeeper functions include address translation, call authorization, and bandwidth management, as well as providing accounting information.

## Gateway

A network element that performs conversions between different coding and transmission formats. The gateway does this by having many types of commonly used transmission equipment and/or circuits from different carriers to provide a means of interconnection.

# H

## Hierarchical Routing

Routing based on a hierarchical addressing system. IP routing algorithms use IP addresses for example, which contain network numbers, host numbers, and frequently, subnet numbers.

## **High Speed Serial Interface (HSSI)**

Standard for a serial interface at high speeds (64 Kbps and higher up to 52 Mbps) between DTE and DCE equipment over very short distances. Used for a physical connection between a router and a DSU.



## **Inside Plant (ISP)**

A term used for the communications system installed inside a building. This can be copper or fiber and includes all the equipment and cabling which services the communications of the building.

## **Integrated Services Digital Network (ISDN)**

A set of standards that provide a common architecture for the development and deployment of digitally integrated communications services. A set of standardized customer interfaces and signaling protocols for delivering digital circuit-switched voice/data/video and packet-switched data services.

## **Internet Engineering Task Force (IETF)**

Formed in 1986, the IETF sets the technical standards that run the Internet. IETF working groups seek the advice of the Internet community through RFCs (requests for comment), and then submit recommendations to the IETF for final approval.

# Internet Protocol (IP)

A standard addressing scheme and message routing protocol for communication between nodes of a data network.

## J

### Jitter

The result of a change in latency or the tendency towards lack of synchronization caused by mechanical or electrical changes. Technically, jitter is the phase shift of digital pulses over a transmission medium.

## K

### Kilobits per second (Kbps):

A unit of measure of data of 1,000 bits per second.

## L

### Latency

A measure of accumulated waiting time or delay, representing the length of time required for information to pass through a network.

## **Local Area Network (LAN)**

A group of computer and peripheral devices that are connected in a limited area such as school, laboratory, home, or office building.

## **Long-Term Evolution (LTE)**

A standard for wireless communication that allows for high-speed data transmission for mobile phones and data terminals.

# **M**

## **Management Information Base (MIB)**

An SNMP structure that describes the particular device being monitored.

## **Megabits per second (Mbps)**

A unit of measure of data of 1,000,000 bits per second.

## **Multiplexing**

The process of combining several individual channels into a common frequency band or into a common bit stream for transmission. The converse equipment or process for separating a multiplexed stream into individual channels is called a demultiplexer.

# N

## **National Television System Committee (NTSC)**

Defined the 525-line color video frequency spectrum used in the US, Canada, Mexico, Japan, and a few other countries.

## **Network**

Any connection of two or more computers that enables them to communicate. Networks may include transmission devices, servers, cables, routers, and satellites. The phone network is the total infrastructure for transmitting phone messages.

# O

## **Open Network Architecture (ONA)**

The overall design of a carrier's basic network facilities and services to permit all users of the basic network, including enhanced service providers, to interconnect to basic network functions on an unbundled and "equal access" basis.

## **Open Video Systems**

An alternative method to provide cable-like video service to subscribers.

## **Outside Plant (OSP)**

All of the equipment, cables and infrastructure that are located outside of a building. It can be used when referring to communications networks like telephone, cable, or Internet.

## **P**

## **Packet Switching**

A network technology that breaks up a message into smaller packets for transmission and switches them to their required destination.

## **Personal Communications Service (PCS)**

Any of several types of wireless, voice, and/or data communications systems, typically incorporating digital technology. PCS licenses are most often used to provide services like advanced cellular mobile or paging services. However, PCS can also be used to provide other wireless communications services, including services that allow people to place and receive communications while away from their home or office, as well as wireless communications to homes, office buildings, and other fixed locations.

## **PORTL**

A pathway in and out of a computer or a network device, such as a switch or a router.

## **Private Branch Exchange (PBX)**

A private telephone exchange that serves a particular organization or business and has connections to the public telephone network. Newer PBXs have features that allow for data and video communications as well as voice.

## **Proxy Server**

An application that breaks the connection between sender and receiver. All input is forwarded out on a different port, closing a straight path between two networks, and preventing a cracker from obtaining internal addresses and details of a private network.

## **Public Network**

A network operated by the carriers (IXC and LEC) which includes network-based services and network-based switching.

# R

## **Radio Frequency (RF)**

A measurement representing the oscillation rate of electromagnetic radiation spectrum, or electromagnetic radio waves, from frequencies ranging from 300 GHz to as low as 9 kHz. With the use of antennas and transmitters, an RF field can be used for various types of wireless broadcasting and communications.

## **Remote Switching Module (RSM)**

A switch that is away from its host or control office.

## **Request for Proposal (RFP)**

A bid that specifies and describes a system in industry terminology which the vendors understand. An RFP will prompt vendors to respond to questions about installation, training, maintenance, warranty, purchase terms, and other relevant issues.

## **Router**

A device or setup that finds the best route between any two networks, even if there are several networks to traverse. Like bridges, remote sites can be connected using routers over dedicated or switched lines to create WANs.

# S

## Satellite

A radio relay station that orbits the earth. A complete satellite communications system also includes earth stations that communicate with each other via the satellite. The satellite receives a signal transmitted by an originating earth station and retransmits that signal to the destination earth station(s). Satellites are used to transmit telephone, television, and data signals originated by common carriers, broadcasters, and distributors of cable TV program material.

## Service Level Agreement (SLA)

A documented agreement between a service provider and a customer that identifies both the services required and the expected level of service.

## Simple Network Management Protocol (SNMP)

Standard for retrieving and transmitting management information (configuration, control, performance monitoring, etc.). Information is formatted according to MIBs (Management Information Bases).

## Switch

A mechanical or solid-state device that opens and closes circuits, changes operating parameters, or selects paths for circuits on a space or time division basis.

## Switch Module

Generic term used to describe a cabinet(s) containing the memory, processors, circuitry, and equipment necessary to support a group of stations.

## Switched Network

Any network in which switching is present and is used to direct messages from the sender to the recipient. Usually, switching is accomplished by disconnecting and reconnecting lines in different configurations to set up a continuous pathway between the sender and the recipient.

# T

## Tariff

Documents filed by a regulated telephone company with a state public utility commission (PUC) or the Federal Communications Commission (FCC). Document details services, equipment, and pricing publicly offered by the telephone company.

## Telecommunications

Communicating over a distance. Use of wire, radio, optical, or other electromagnetic channels to transmit and receive signals for voice, data, and video communications.

## **Telephony**

The word used to describe the science of transmitting voice over a telecommunications network.

## **Transmission Control Protocol/Internetworking Protocol**

A protocol developed to allow dissimilar devices to communicate across many kinds of networks. (TCP/IP)

## **TTY**

A type of machine that allows people with hearing or speech disabilities to communicate over the phone using a keyboard and a viewing screen. It is sometimes called a TDD.

## **U**

## **Unicast**

A means of transmitting a message from one station to another; contrast with IP.

## **Uniform Resource Locator (URL)**

An Internet address. The address that defines the route to a file on a computer connected to the Internet.

# V

## **Videoconferencing**

The use of digital video transmission systems to communicate between sites using video and voice. Digital video transmission systems typically consist of camera, codec, network access equipment, video, and audio system.

## **Virtual Private Network (VPN)**

VPN modules create closed secure tunnels for communication between two firewalled LANs. VPN technology is a common approach used today for providing secure communications over IP networks.

## **Voice Over Internet Protocol (VoIP)**

Telephone services provided over broadband Internet connections rather than traditional phone networks.

## **Voice Over LTE (VoLTE)**

Similar to VoIP, this system uses wireless LTE networks to transmit phone calls.

# W

## Web Conferencing

Enables two or more logged in users to set up a typed, real-time, online conversation across the world wide web.

## Wide Area Network (WAN)

An important computer network that is spread across a large geographical area. WAN network systems could be a connection of a LAN that connects with other LANs using telephone lines and radio waves.

# Resources

- [USC IT Services - Glossary of Telecommunications Terms](#)
- [FCC - Glossary of Telecommunications Terms](#)
- [Access One - Telecom 101: 15 Terms You Need to Know](#)
- [RAM Communications, Inc. - Telecom Glossary](#)
- [Verizon - Glossary of Telecom Terms](#)

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