

Telehealth Glossary

Analog – Information, electronic or otherwise, that is created and transmitted as continuous stream. Compare this to digital information generated by computers. Most home telehealth devices require the use of analog not digital phone lines to operate.

Application sharing - Application sharing is a feature that allows two people to work together when one of the individuals doesn't have the same application, or same version of the application. In application sharing, one user launches the application and it runs simultaneously. Both users can input information and otherwise control the application using the keyboard and mouse. Although it appears that the application is running on both PC's, it actually is running on only one, yet each user operates as though the application were running on both PC's. Files associated with the application can be easily transferred, so the results of the collaboration are available to both users immediately. The person who launched the application can lock out the other person from making changes, so the locked-out person sees the application running but cannot control it.

Asynchronous – Sometime referred to as store-and-forward, can include captured audio clips, video clips, still images, or data that are transmitted or received at a later time - anything not done in real time is asynchronous.

Bandwidth - A measure of the amount of data that can fit on a network. Commonly measured in bits per second.

BRI (Basic Rate Interface) - An ISDN access or subscriber line, consisting of two 64Kbps B ("bearer") channels and one 16Kbps D channel used for both data and signaling purposes.

CIF - A video format that supports both NTSC and PAL signals. CIF is part of the ITU H.261 videoconferencing standard. It specifies a data rate of 30 frames per second (fps), with each frame containing 288 lines and 352 pixels per line.

Codec / Coder Decoder - a device that encodes an incoming analog signal into a digital signal for transmission to another codec. The digital signal is decoded into analog format. In videoconferencing, codec typically code and decode video and audio.

Compression - Reduction of the amount of information to accommodate cost-effective digital transmission to another codec.

Dedicated Line - A permanently assigned path connecting geographically dispersed sites on a long distance network. Synonym: private line: leased line.

Delay - Refers to the slight delay that sometimes occurs when transferring video, data and audio signals.

DES - Digital Encryption Standard, an encryption method defined by the National Bureau of Standards.

Digital - Information contained in the form of 0s and 1s for transmission on digital media, including fiber, microwave, and satellite. Digital information may include video, audio, graphics, and data.

Encryption - Alteration of transmitting information to protect it from unauthorized tapping.

FCIF or (CIF) - Full Common Intermediate Format. A video resolution of 352 pixels horizontally and 288 pixels vertically. It is used primarily in higher bit rate (128Kbps and higher) video conferencing.

Flash Memory - Memory which occupies little space and does not need continuous power to be retained.

Frame Relay - A packet switched networking technology used for low speed (T1 - 1.5Mbps and lower) WAN connections. Primarily used to connect a company's routers on their data network.

Frames Per Second (fps) - Frequency with which video frames appear on a monitor. Broadcast-quality video generally consists of 30 frames per second. Full-motion videoconferencing typically offers video in the range of 10 - 15 frames per second. At very low bandwidths, such as 56 or 112 Kbps, the frame rate may be lower. Slower frame rates may be inadequate for some assessments, such as gait and balance activities.

Full-Duplex Audio - Audio that allows local and remote conference participants to speak simultaneously without losing audio contact. Full-duplex audio may be provided in a point-to-point or multipoint conference.

Full-Motion - In compressed video, picture quality that is generally acceptable to users although not of broadcast quality. Typically full-motion compressed video provides anywhere from 10 - 30 frames per second depending on the bandwidth allocated.

Graphics - Transmission of still images, usually from a video source, but in some cases PC-generated.

H.221 - The ITU standard relating to communications protocol for videoconferencing.

H.231 - Multipoint for linking three or more H.320 codecs.

H.261 - The ITU video coding standard originally designed for transmission over ISDN.

H.264 - A standard of video compression, also known as Mpeg-4.

H.230 - The ITU standard that defines call control and indication.

H.242 - Call set-up and disconnect of two point videoconferencing.

H.233 - Encryption.

H.243 - Defines call control procedures between H.231 MCU and H.320 codecs.

H.320 - Umbrella standard for videoconferencing over ISDN.

H.323 - Video over IP.

H.324 - Video over POTS.

Interactive - Communication in which all participating sites have equal capability. Interactive videoconferencing permits all sites to see and hear one another.

Interoperability - Communication between dissimilar codecs. The ITU-T Px64 standard is designed to permit interoperability.

Inverse Multiplexer (Imux) - A device that creates a single higher-speed transmission by combining and synchronizing two or more channels.

ISDN (Integrated Services Digital Networks) - A switched network service providing end-to-end digital connectivity for transmitting voice, data, and video simultaneously over a single line versus multiple. Uses high-speed, out-of-band signaling. There are two major forms of ISDN: BRI and PRI.

JPEG - Joint Pictures Experts Group. Still-frame graphics for multimedia.

Kbps (Kilobits per Second) - Measure of rate of digital transmission, often abbreviated Kbps.

LEC (Local Exchange Carrier) - provides local telecommunications service and access to long distance networks.

Local Loop - The communications lines between the long distance subscriber and the LEC switching center.

Loopback - A diagnostic test where a signal is transmitted over a communications link or network and then returned to the sending device. Loopbacks are used to make sure the video equipment is working properly and as a way to demonstrate videoconferencing.

Multiplexer - A device that permits subdivision of a given bandwidth. For example, a T1 Multiplexer may divide a T1 line (1,544Kbps) into two capacities of 768Kbps each.

MPEG - Motion Pictures Experts Group: This is a standard for motion video.

MCU (Multipoint Control Unit) - Device which allows more than two sites to be connected in a videoconference. Sometimes called a digital switch or video bridge.

NTSC - North American standard for analog video format. National Television Systems Committee.

PAL - European standard for analog video format.

Pixel - Picture element; a measure of resolution for video format.

PRI (Primary Rate Interface) - An ISDN subscriber line consisting of 23 64Kbps B channels and one 64Kbps D channel used for signaling.

POTS (Plan Old Telephone System) - The analog phone system (including telephones, modems, central offices switches, etc., currently in use around the world.

Px64 - The ITU-T's international video standard which provides a standard algorithm for video compression and decompression. Formally known as H.261, it was adopted in December 1990.

QCIF (Quarter Common Intermediate Format) - A video resolution of $\frac{1}{4}$ the size of FCIF - 176 pixels horizontally and 144 pixels vertically. It is used primarily on low bite rate (128Kbps and lower) videoconferencing.

RBOC (Regional Bell Operating Company) - controls a grouping of local exchange carriers.

Real-Time - The processing of information that returns a result so rapidly that the interaction appears to be instantaneous. Telephone calls and videoconferencing are examples of real-time applications.

Resolution - A measure of sharpness or clarity on a monitor.

SNMP (Simple Network Management Protocol) - the protocol governing network management and monitoring of network devices and their functions. SNMP came out of the TCP/IP environment.

Standards - Uniform specifications to permit interoperability in videoconferencing.

Store-and-forward – captured audio clips, video clips, still images, or data that are transmitted or received at a later time (sometimes no more than a minute).

Switched 56 - Transmission network at 56Kbps that allows dial- up videoconferencing. Because picture quality at 56Kbps is often not acceptable, most dial-up videoconferencing takes place on two 56Kbps lines, for a total of 112Kbps (see Dual 56).

Synchronous – Also known as real time, it is the processing of information that returns a result so rapidly that the interaction appears to be instantaneous. Telephone calls and videoconferencing are examples of synchronous.

TCP/IP - The international standard protocol used on the Internet and company data networks. It provides worldwide connectivity and includes services such as the World Wide Web, e- mail, file transfer and remote terminal login.

Transmission Speed - Data rate for videoconferencing, usually expressed in Kbps.

T1 - Commonly used transmission line for videoconferencing, with a capacity of 1,544Kbps.

T.120 - Multilayer protocols for graphics/data transmission.

T3 - A 45Mbps leased line. Usually obtained from a local or long distance telephone carrier.

Videoconferencing - Communication across long distances with video and audio contact.

Voice Activated Switching - In multiway videoconferencing, used so that all participating sites automatically see the site which is currently speaking.

Voice-tracking - camera automatically tracks the voice of the person speaking.

V.35 - Transmission interface between the codec and the transmission link that permits Switched 56 connectivity.