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Frequently Asked Questions

Q: What is video conferencing?

A: It is a visual interactive medium for communication. There are many ways to transport one-way video and audio, but video conferencing is the two-way interaction between people using a visual medium. Personal video conferencing can be done very inexpensively utilizing a PC and an inexpensive camera. This type of conferencing typically does not produce "business quality" images and is more of a novelty than a tool.

Q: What is group video conferencing?

A: This is the differentiating term between personal conferencing that might be done on a personal computer and a system whereby a group of people (or a single individual) can communicate via video conferencing on a system that provides for up to life size images. Group video conferencing is usually on a monitor of 27" or larger so that the participants can be seen in life size or larger images.

Q: How good is the audio and video quality of a group video conferencing?

A: The quality of any video conference, stream, broadcast or virtually any video transmission is primarily a function of the bandwidth available for transmission and to some degree the quality of the compression and decompression of the images, if compressed as they are in video conferencing. Generally, the higher the bandwidth, the better the video. A typical corporate group video conferencing installation today is utilizing 384k (k is short for Kilobits) of bandwidth. Because almost all systems are designed to be compatible, they are all made to meet the ITU standards which for ISDN video is called H.320 and for IP video is H.323. This provides very near TV quality video and audio in a meeting environment and is generally chosen by most companies due to the right mix of quality and cost.

Q: What types of equipment are required for group video conferencing?

A: The great majority of video conferencing systems today are a dedicated appliance, meaning that they are not PC based. These systems, however, enable a PC to be connected to them to transmit any image on the PC in a live or still format. This has become the most successful type of video conferencing equipment due to the inherent instability of PC's and the rapid obsolescence of PC technology. Appliance type video conferencing systems are available and will operate on 128k of bandwidth for as little as 2,000 Euro for the basic systems. Systems delivering "business quality" video typically operate at 384k start at about 3,000 Euro and can go as high as 40,000 Euro depending on the manufacturer and features.

Q: Do the different brands of video conferencing systems work with each other?

A: Since the early 1990's with the adoption of the ITU standards for video conferencing, all systems from the major manufacturers are interoperable. The leading manufacturers of video conferencing hardware today are Polycom (also owners of PictureTel), Sony, TANDBERG and Vcon.

Q: What kind of telephone lines do I need to do video conferencing?

A: 95% of the Fortune 1000 today are using video conferencing on ISDN networks at a speed of 384k. There is a trend to utilizing IP (internet protocol) networks for video conferencing as the bandwidth is less expensive and theoretically therefore allow a user to operate at higher speeds to achieve better video quality. ISDN is available in over 90% of the U.S. / Europe and has proven to be reliable and relatively stable. The "public" Internet is not yet ready for video conferencing, but many expect that it will be within the next three years. Companies that are using IP for video conferencing are typically using an internal IP network or a VPN (virtual private network) that includes a guaranteed QOS (quality of service). They are not using the public Internet.



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Q: What do ISDN lines cost?

A: As in any telephone line, there are two charges. One for local access and another for the transport over the network. Local access typically costs 40 Euro per month per 128k ISDN circuit. Therefore to achieve 384k quality video conferencing, a company would typically spend 120 Euro per month. The transport of ISDN traffic typically costs substantially more than a phone call due to the requirement that the network is digital vs. analog as is used for a phone call. ISDN transport costs have dropped in recent years whereby a typical Fortune 1000 size company is paying about 60 Euro per hour for a 384k domestic ISDN call. International rates are substantially higher and vary by country.

Q: What does an IP Network Solution Cost?

A: IP video networks vary in cost based on the location and the bandwidth required. The cost is virtually the same as for a data network and similar equipment is required. Most companies new to video conferencing start with an ISDN based network and then, once the needs are determined, consider switching to IP. Virtually every video conferencing system sold today is capable or can be inexpensively upgraded from ISDN to IP and vice versa.

Q: How hard is it to use video conferencing systems?

A: Today's video conferencing systems are easier to use than a computer and only slightly more difficult than a VCR. In about one hour a user can be trained to utilize all the features of even the most complex video conferencing systems. Basic call launching can be trained in less than five minutes.

Q: How do I connect more than two sites at one time, like a conference call?

A: Theoretically, thousands of sites can be connected in a single video conferencing call. As with an audio conference call, an MCU (multi-point control unit) is required. This is a piece of hardware or software that connects the various sites into a single call. Some video conferencing systems have the option of a built in MCU for up to usually four sites. The limiting factor is the network connection into the MCU equipped video conferencing system. If a user wanted to make a four point call at 384k per site, the site initiating the call would have to have 1.54 Mbps of bandwidth available on either ISDN, typically provided by a T-1 or PRI (primary rate interface) line, or 1.54 Mbps of IP bandwidth. The fixed cost of this bandwidth availability is typically over 500 Euro per month.

For users without internal MCU capabilities or for those who desire to connect more than four sites, there are two options. The first is the purchase of a dedicated MCU. These systems can be purchased for as few as 8 simultaneous users or for hundreds of users. Most users however utilize service bureaus for a fixed fee per minute per site for their multi-point call needs. ActVisual provide these services on an ad-hoc basis to any user.

The buy vs. rent decision on MCU capability is typically a function of the users volumes and is a simple mathematical decision. Depending on the features required, an 8 point MCU starts at 15,000 Euro and can surpass 1,000,000 Euro for the largest systems used by service bureaus. A typical per call charge from a service bureau for a domestic multi-point call is about 70 Euro per hour per site for a 384k call, plus transport. Sites from anywhere in the world with an ISDN connection or an IP connection can utilize an MCU.

Q: What does a group video conferencing system cost?

A: A complete system typically includes a video conferencing system, a.k.a. the codec (coder-decoder), a pan/tilt/zoom camera, a microphone, a remote control, a NTSC or VGA monitor and a cart so that the system can be moved from room to room. Complete systems from the major manufacturers range in cost from 4,000 to 50,000 Euro depending on the options, transmission speeds required and monitors. Most complete systems sold today are in the 12,000 Euro per site range.



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Q: What are the additional costs?

A: Besides the access lines and transport charges, most users opt for an extended warranty and service/support package. Depending on the system, these packages can cost between 500 Euro per year and 3,000 Euro per year. In addition, there are peripheral pieces of equipment that can improve the utility of video conferences and collaboration including document cameras, scan converters, white boards, Automatic Line Routing Switches that allow multiple rooms to use the same system, VCR's to record the conferences, and devices to stream conferences to the internet and many other items.

Q: Where can I put video conferencing systems?

A: Typically group video conferencing systems are used in conference or meeting rooms, but some systems that are not PC based are available for desktop use and are the size of a computer monitor. Personal desktop systems that operate on ISDN are available at prices starting at 3,000 Euro. IP systems that utilize the desktop's computer start at prices of less than 700 Euro.

Q: What about international installations?

A: Surprisingly, many countries have better ISDN capabilities than the U.S. Europe for instance is virtually all ISDN even for voice calls. Most developed and many less developed countries have ISDN capabilities in all major cities and in many outlying areas. Video conferencing systems are now in use in over 100 countries.

Q: What kind of accessories are available?

A: There are many peripheral pieces of equipment that can improve the utility of video conferences and collaboration including document cameras, scan converters, white boards, ALRS switches that allow multiple rooms to use the same system, and many other items.

Q: What is a document camera?

A: A document camera is a specialized camera that allows a user to show paper documents, pictures or physical objects in a video conference. These typically cost less than 3,000 Euro each.

Q: What is an electronic whiteboard?

A: Like the whiteboard on the wall of your conference room, an electronic whiteboard enables a user to write on a board while electronically saving and/or sending the images to the user on the remote end or ends of a video call. Images can also be saved to a PC for future use or interactive modification with the far end users.

Q: What is a scan converter?

A: A scan converter converts the X VGA signal from a PC to NTSC/PAL signaling so that images on a PC can be transported within a video conference call. Some video conferencing systems offer internal scan converting capabilities or an external scan converter system can be purchased for about 1,000 Euro in the quality range necessary for video conferencing.

Q: What is an ALRS switch?

A: ALRS is short for Automatic Line Routing Switch. A typical video conferencing user has 3 ISDN lines or dedicated IP connection with QOS coming into the phone closet of their office. These lines are typically wired through the internal patch panel and directed to the conference room that contains the video conferencing system. If a user desires to use the video conferencing system in another room in the offices, a technician is required to manually re-route the lines for video conferencing from one room to the next.

This can be time consuming and potentially expensive in terms of labor. The ALRS is placed at the patch panel in the phone closet where the external network (ISDN, IP or both) is plugged into the ALRS. Multiple rooms are wired for video conferencing and connected to the ALRS in the phone closet. When the video conferencing system is moved into a room that is wired for



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the video conferencing, the ALRS detects the presence of the system and automatically directs the video conferencing network connection to the room now needed for video conferencing. This improves the utility of the video conferencing system and ALRS systems cost less than 2000 Euro in most configurations.

Q: Where can I buy video conferencing systems?

A: There are literally hundreds of video conferencing resellers in the U.S. alone. Some specialize in video conferencing and others sell computers and audio visual equipment.

Q: Where should I buy video conferencing systems?

A: We are prejudiced, but we believe that the best place to buy video conferencing systems is from a specialist reseller who carries all of the major brands of video conferencing systems and can provide installation, service and support either domestically or internationally depending on the user's needs.

Q: Why choose ActVisual?

A: By choosing a vendor that offers multiple brands of hardware and the service and support on multiple brands, a user can build a video conferencing network for their company that fits the specific needs of each site. Unlike the PC industry, there are differences between each brand of hardware. ActVisual sells and services all major brands of video conferencing systems in every major country in the world. We have a outstanding technical team and offer the only "one vendor, one call" solution in the industry.

Q:What is the difference between T1 and E1 PRI?

A: T1-PRI has 23 B-channels @ 64 or 56 Kbps (23B+D) E1- PRI has 30 B-channels @ 64 (30B+D)

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