

Video Conferencing Basics

Video-enabled meetings happen in two distinct ways: either point-to-point or with multi-point.

Point-to-point video conferencing

In point-to-point, the simplest scenario is where one person or group is connected to another. The physical components (i.e. microphone and camera) that enable the meeting to take place are often integrated in to desktop computing solutions like a laptop or tablet, or can be combined into dedicated, room-based hardware solutions.

Where desktop solutions tend to be used by individuals, room-based solutions utilize dedicated video conferencing technology where groups of people can be seen, heard and can naturally participate in the meeting.

Multi-point video conferencing

In multi-point video calls, three or more locations are connected together, where all participants can see and hear each other, as well as see any content being shared during the meeting.

In this scenario, digital information streams of voice, video and content are processed by a central, independent software program. Combining the individual participant's video and voice traffic, the program re-sends a collective data stream back to meeting participants in the form of real-time audio and video imagery.

Protocols

As video conferencing technology has evolved, two main protocols have emerged to provide the signalling control for the establishment, control and termination of video conferencing calls: SIP (Session Initiation Protocol) and H.323.

For the encoding and decoding of visual information, the industry is moving towards the industry standard known as H.264, which was developed to provide high-quality video at lower bandwidth over a wide range of networks and systems. An extension to the H.264 protocol is Scalable Video Coding (SVC), which is established to facilitate the enablement of video conferencing on a wider range of devices, such as tablets and mobile phones.

Hardware

There are several companies that provide Video Conferencing hardware that can be used in a meeting room to allow a small group of people to communicate from that endpoint in a Video Conferencing Meeting. Some of these companies are:

- [Polycom](#)
- [Cisco](#)
- [Starleaf](#)
- LifeSize

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