

Video Conferencing

“Video conferencing is the use of video and audio to connect two or more points across the Internet for two-way conferencing over distance.” It is also known as “Videoteleconference”.

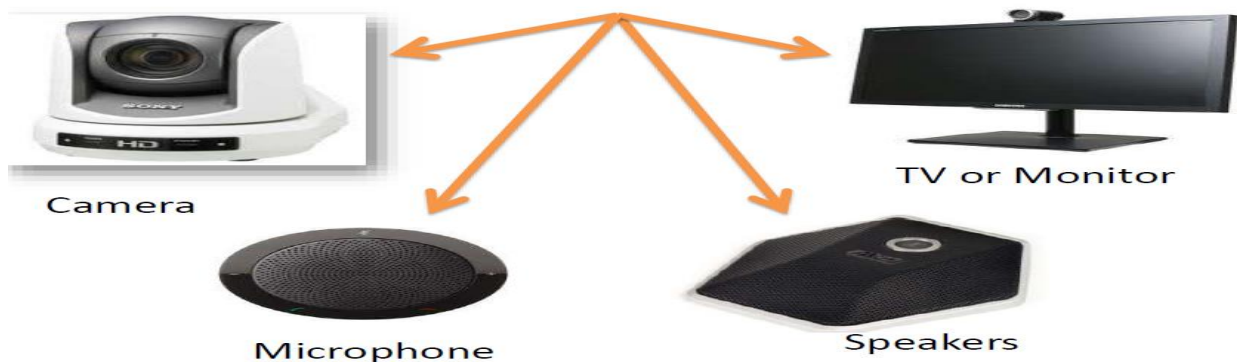


Video conferencing is simply a vehicle for interactive communication. Enables one set of people to see and hear people in a different location. In its most basic form is the transmission of image (video) and speech (audio) back and forth between two or more physically separate locations.

Basic features

- ✓ Very straightforward approach.
- ✓ Calls can be made locally, nationally or across the world

Components of Video Conferencing



Camera: To capture & send video during video conferencing.

Microphone: To capture & send audio during video conferencing.

Speakers: To play the audio received during video conferencing.

Monitor: To display the video received during video conferencing.

Additional Requirement for Video Conferencing

CODEC:



- ❖ Codec: “COder-DECoder”(COmpressor- DECompressor)- makes the audio/video data "small enough" to be practical for sending over expensive network connections.
- ❖ A codec takes analog signals, compresses and digitizes them, and transmits the signals over digital phone lines. Compression rates of up to 1:500 can be achieved.
- ❖ The resulting digital stream of 1s and 0s is subdivided into labeled packets, which are then transmitted through a digital network.

Types of Video Conferencing

There are two types of video conferencing those are as

- Point-to-point Video conferencing and
- Multi-point Video conferencing

Point-to-point Video conferencing: A videoconference that connects two locations. Each site sees and hears the other sites at all times.

Multi-point Video conferencing: A videoconference that connects to more than two sites through the use of a multi-point control unit (MCU) or video hub. Participants at all sites can hear one another at all times and see the site that is currently speaking. (Voice activated switching) This is a bridge that interconnects calls from several sources.

Uses of Video Conferencing

- Business
- E-Meetings
- E-Learning
- Presentations
- Chatting with friend

- Family talk
- Telemedicine
- Transmission of medical images
- Diagnosing and Consulting

Advantages of Video Conferencing

- **Student learning is impacted in several ways:**
 - ✓ Enhances student motivation.
 - ✓ Is exciting or different, catches the student's attention.
 - ✓ Connects with the real world.
 - ✓ Promotes student retention and learning.
 - ✓ Accesses information from primary sources.
 - ✓ Accommodates many learning styles.
- **Students have the opportunity to interact with the experts in a particular field of study.**
- **Videoconferencing accommodates a variety of different learning styles through several modalities.**
 - ✓ Videos
 - ✓ Animations
 - ✓ Audio
 - ✓ Graphics
 - ✓ Collaboration
- **Videoconferencing affords students the opportunity to develop and improve various communication skills.**
 - ✓ Presentation and speaking skills.
 - ✓ Communication and management skills.
 - ✓ Questioning and interviewing skills.
 - ✓ Use of sign language communications for deaf, hard-of-hearing and mute.
 - ✓ Can improve work quality

- ✓ Reduce costs
- ✓ Improves communication
- ✓ Groups can meet more frequently
- ✓ Critical meetings can be conducted in less time
- ✓ More faculty and staff can be involved

Limitations of Video Conferencing

- **Initial cost of the equipment is high.**
- **Ghost/Blurred images seen when rapid movement occurs :**
 - ✓ Wear neutral, solid colors.
 - ✓ Avoid checks and stripes.
 - ✓ Avoid white and shades of red.
 - ✓ Red is not codec-friendly.
 - ✓ Use plain background.
 - ✓ Avoid glass in the background.
- **Audio echo effect seen when system is not properly installed :**
 - ✓ Switch OFF microphone when not in use.