

Videoconferencing: An introduction for the guest presenter

Videoconferencing is used extensively throughout the University for teaching purposes. There are 11 dedicated videoconference venues spread across the Sandy Bay, Newnham and North West Centre campuses. These rooms —of either 12 or 35 seat capacity —are used exclusively for videoconferencing. In addition videoconference systems are installed in a number of lecture theatres across the Newnham and Sandy Bay campuses, allowing for large group teaching and lecturing.

Most information about videoconferencing at UTas can be found at <http://www.its.utas.edu.au/videoconf/>

Here you can find location maps of the venues and a variety of 'help' sheets containing hints and tips for a successful videoconference. Your coordinating lecturer can give you hard copies of relevant information to assist you prepare for, and present your videoconference session or segment.

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An overview of videoconferencing

Welcome to videoconferencing. What is videoconferencing and how can we best use it for teaching?

What is videoconferencing?

Videoconferencing allows people in different locations to meet and share information without travelling.

Vide Conferencing

- As well as seeing and hearing each other you can:
- Display a close-up of pictures, graphs, maps, small objects.
- Play a video tape, DVD, CD
- Display your PowerPoint presentation or other computer files
- Record your session
- Collaborate on computer data with others in the session

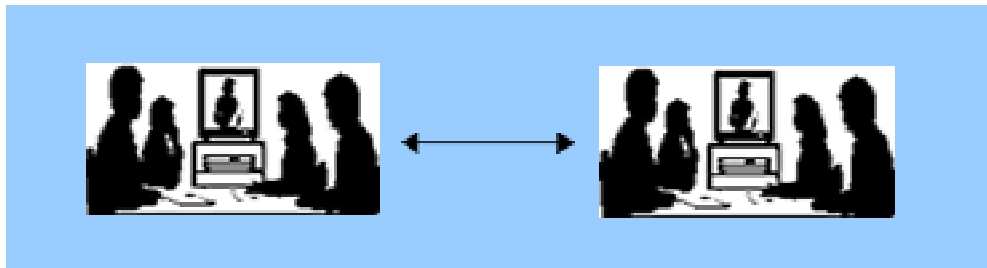


You can videoconference with just one other site (called point-to-point) or you can connect a number of sites together (called multipoint) – see later under ‘Operating modes’.

Vide Conferencing is widely used to conduct meetings and job interviews, deliver education and training, and generally overcome the barriers of distance.

How does videoconferencing work?

The high quality videoconferencing currently available uses ISDN lines or an IP connection. Pictures and sound are compressed and digitally transmitted to the other site/s.



This process affects picture quality and you will notice that when people move about the picture looks a little ‘fuzzy’. The videoconference system only replaces the parts of the picture that move, so if you are sitting relatively still, the picture will be quite clear. This doesn’t mean that you need to restrict your movements so that you become stiff and stilted – just behave naturally. The trade-off for this ‘fuzzy’ picture is that you can connect relatively cheaply.

Why use videoconferencing?

There are many applications and benefits of videoconferencing. It overcomes the costly, and sometimes impractical, element of travel. It won't substitute for all face-to-face meetings, but can reduce their frequency and effect savings in time, travel and accommodation costs.

Ease of communication

Videoconferencing can be more impromptu than organising face-to-face meetings - the lack of travel means that a videoconference can occur immediately, or within a very short period of time. However, while this may increase the contact with 'remote' sites, it may leave a sense of isolation as physical contact may be reduced even further if you replace all face-to-face contact with videoconferencing.

Videoconferencing works best with small groups and where visual communication is important. For example:

- You need to show pictures, diagrams or a practical demonstration to explain a concept.
- You need to share and discuss computer information.
- It is important to see facial expressions and body language.

Increase interaction

Probably the most important advantage of videoconferencing is the degree of interaction made possible. We have become very adept at telephone conversation and written communication, but so much more can be gained from actually seeing the person you are speaking to. The opportunities to observe body language, to make eye-contact (even though it is indirect), and to visually demonstrate your meaning, are invaluable. Videoconferencing allows you to do this when travelling to meet face-to-face is not feasible.

Advantages for teaching

In a teaching scenario, you can deliver to two or more groups of students at the same time, which not only saves you time and energy, but allows the students to interact with each other and broaden the scope of the class.

You can also easily:

- ask questions and get immediate feedback
- gauge how successfully you have presented an idea by taking cues from students' body language
- have guest presenters join from other sites

Videoconferencing

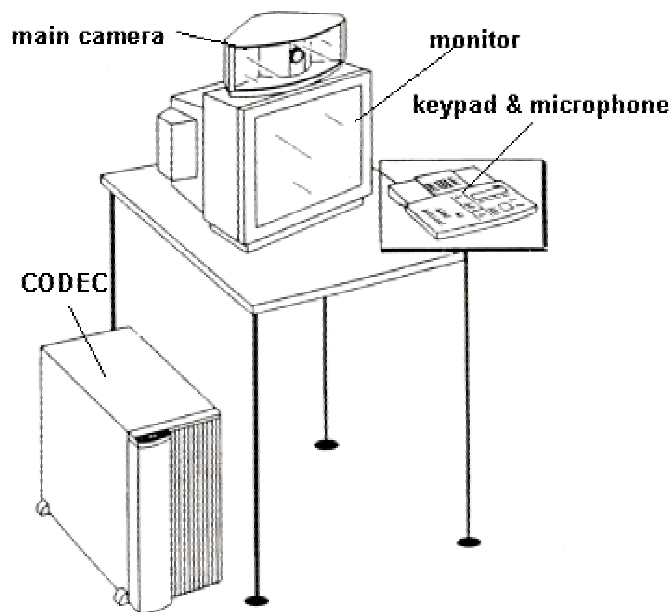
Students can:

- ask questions of you and other students, and get immediate feedback
- make presentations and gauge their performance from visual and aural cues.

Videoconferencing is a medium designed for dialogue and discussion about ideas and information presented by any of the participants - staff or students.

Videoconference equipment

Any videoconferencing system consists of the following major components:



Monitor/s

The monitor is a television screen on which you can see the people at the other site/s. It can also display a small window that shows the picture you are sending to the other site/s. Some systems use two monitors - one to display the people you are talking to and the other to display still images, which may be sent from either site.



Main camera

The main camera is usually positioned on or above the monitor. It can be controlled remotely to focus on participants and capture the images sent to other sites.

CODEC

The CODEC is a device responsible for compressing the signal down to a size whereby it can be transmitted – usually 2, 4 or 6 channels. Each channel transmits 64 kilobits per second (Kbps):

- 2 channels = 128 Kbps
- 4 channels = 256 Kbps
- 6 channels = 384 Kbps

The more channels, the better the quality, but the higher the line costs. When you are arranging a videoconference, the other party may ask you which data rate you wish to operate at. Most systems will be set at a default rate but can automatically negotiate to operate at the incoming rate.

Keypad/remote/tablet

The keypad (or remote or tablet) is used to operate the equipment. Included on the keypad are the call set-up buttons, video-control buttons, audio-control buttons and camera-control buttons. Keypads vary with different videoconference systems, but their basic function remains the same.



Microphone/s

There will be a microphone built into the system – either built into the unit or as a stand alone item that is placed on the table. Most table microphones are designed to pick up voices from around the room, so they are best placed in the middle, and towards the front of, the table.

Some videoconferencing systems have microphones that can track speakers and switch the camera to them. Every videoconference system has a very sophisticated echo cancelling system that allows microphone/s to work at peak performance. This will be adjusted when the system is installed - it is important NOT to vary this by adjusting the volume on your monitor.

Add-on equipment

It is also possible to add other pieces of equipment (peripherals) to your videoconference system. The following are the most common.

Document camera

The document camera acts as an overhead projector, blackboard or whiteboard, and can be used to display photographs, diagrams or small objects, as well as images from a computer (see below).

It can also be used by participants to demonstrate a technique or show an object they have been working with. The head of some document cameras can be swivelled to display a chart, large object etc.



Video cassette recorder

Video tapes can be played into a videoconference. However, long video sessions are not appropriate and would be better sent to the participants for viewing prior to the videoconference. It is better to play only a few minutes of a video and then discuss it.

Videoconferences can also be recorded, however, you should have the permission of all involved before you do this. Recording will include any supporting materials you show eg diagrams, graphics - you may be breaking copyright by recording these.

Computer

The computer can be used to generate graphics or you can run a software program through the computer and into the videoconference.

Laptop: You can bring in your laptop and plug it into the videoconference system. The images will either be routed through the document camera or displayed directly, depending on the particular equipment in the venue.

Extra microphones

These may be placed on the tabletop or near participants or may be lapel microphones for individual participants.

Auxillary camera

The 35 seat venues and videoconference enabled lecture theatres have an auxillary camera to show the participants at that site.

Equipment that has a video output

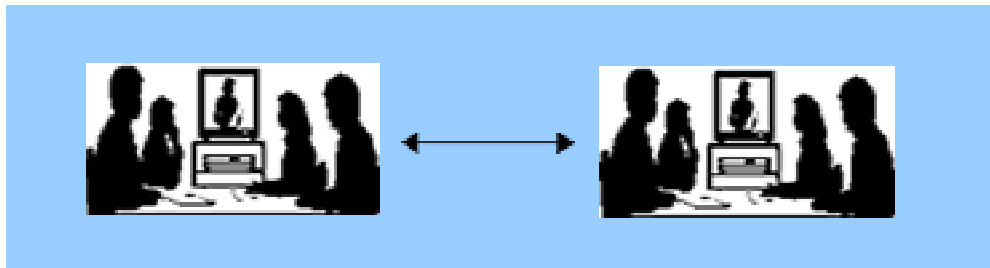
Any equipment that has a video output may be connected to the videoconference system (eg a video microscope).

Operating modes

You can videoconference with just one other site (called point-to-point) or you can connect a number of sites together (called multipoint).

Point-to-point

Videoconferencing between two sites is almost like being there. It is an ideal way for classes or small groups of people to meet and discuss issues. Meetings can be formal or informal because videoconferencing point-to-point is so easy to use that it won't interfere with the flow of conversation. Each of the parties 'meets' at the videoconference room and then it's as simple as a phone call. One group dials the other and the meeting or class is underway.

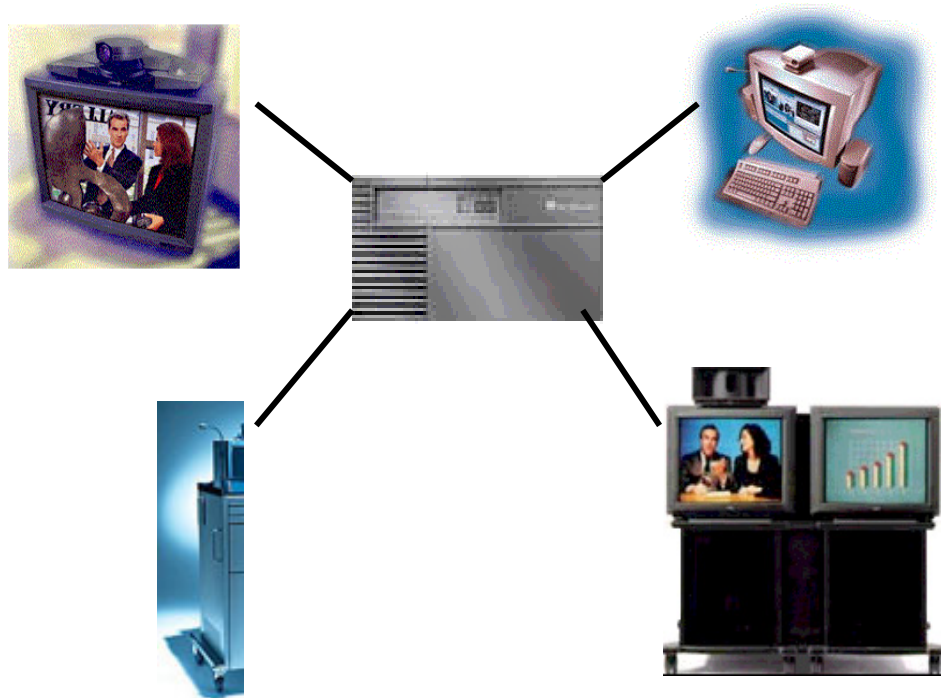


Multipoint

You can connect a number of sites if you need to hold a class or meeting between many different locations. It is technically possible to connect twenty or more sites, but not practical to do so as they become difficult to manage. Multipoint meetings are usually a little more formal than point-to-point simply because of the numbers involved. The chairperson (or coordinating lecturer) controls the meeting so that all sites have an equal opportunity to speak.

A multipoint videoconference is connected through a piece of equipment called a multipoint control unit (MCU) – commonly called a 'bridge'. The bridge can dial out to all sites or each site simply dials a central number and all parties are connected.

Videoconferencing



Multipoint modes

There are two common modes of operation for multipoint videoconferences:

Voice activated

In this mode of operating, any site that speaks will be automatically seen on the screen. The current speaker is seen by all sites and the current speaker sees the previous speaker. The system will also switch to a site at any continuous sound, so it is best for all sites to mute their microphones unless speaking.

It takes around 5 seconds of continuous speech for the switching to occur, so a short comment may not activate the change

Continuous presence

This mode allows you to see several sites on-screen at once. The screen is usually divided into four and one site appears in each rectangle. This mode is ideal if you are meeting with four other sites with 2-3 people at each site. (If there are larger numbers, people will be indistinguishable in the quarter screen picture.)

Getting ready for videoconference teaching

Teaching via videoconference offers exciting opportunities. It's as close as you can get to teaching face-to-face but it **IS** different. Many of the techniques you use in the classroom can be successfully used in teaching via videoconference. However, there are many other techniques which you can use to make your videoconference session more effective.

Operating the equipment

Your coordinating lecturer should advise you on what equipment you will need to operate yourself. See 'A Brief 'How To' For Presenters' for the basics of operating much of the equipment should you be required to do so.

If at all possible, see if you can arrange for a familiarisation session with your session coordinator and/or IT Resources technical support staff. (Hobart – phone 6226 7420; Launceston – phone 6324 3473. For the North West Centre ring either number.

Presenting yourself

Things you need to think about include dress, movement, what you want participants to see of you, and where to look. See 'Presenter Tips' and 'Good Camera Shots' for hints and tips here. [Contact your coordinating lecturer for a copy of these documents.]

Preparing visuals

Videoconferencing is a visual medium, so aim to support your presentation with a range of visuals – graphics, diagrams, photos, even small 3-dimensional objects. These can be prepared for direct presentation on the stage of the document camera, or via a computer. *However, you need to observe some basic principles to ensure your visuals can be read on screen* – See 'Good Visuals' for key advice here. [Contact your coordinating lecturer for a copy of these documents.]

Adapted from Module 1: Introduction to videoconferencing, in *Effective Videoconference Teaching*. Written for the University by Carol Daunt, *LearnTel*.

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