



Interactive videoconferencing

Help sheets

3: Videoconferencing room layout

Spaces dedicated to videoconferencing are often purpose built. Their design principles and environmental considerations help videoconferencing equipment to function optimally.

The room

- Should be located in the quietest part of a building.
- Doorways should not be visible to the camera.
- An exterior sign on the door indicates to others that a session is in progress.

Lighting

Direct light, particularly from strong sources (whether natural or artificial) may cause problems with contrast and/or silhouetting if it shines on the subject or the camera lens. Elimination of as much natural light as possible is recommended. Muting the light (e.g. with venetian blinds) can also work well.

Indirect light from shaded sources, or reflected light from pale walls, can assist a good screen image. A 60/40 split of diffused light from ceiling and wall-mounted sources has been found to work well.

When using artificial lighting, daylight type lamps will produce the most effective results. Avoid coloured lighting.

Equipment

The document camera and PC or laptop should be close to the presenter or operator for ease of use. Control of subsidiary devices i.e. DVD or roving microphone could be delegated to other participants and placed within their reach.

Cabling is either via a "cored floor" in permanent installations or 'across floor' in a cable channel to minimize OH&S issues whilst in use. Be aware of safety issues relating to the positioning of cables when relocating a roll-about system between classrooms.

Microphone placement should be at least 2 metres from the audio source (speaker system) to avoid feedback. Range of a microphone for acceptable sound quality is approximately 2 metres. Where more than one microphone is in use they might typically be placed 3 metres apart, with no individual seated further than 2 metres from one microphone.

Seating area (table)

- Should be configured to allow all participants to see the monitor/s. U-shaped seating layouts are typically recommended
- Should allow camera to "see" all participants.
- The farthest participant should be no more than 7 or 8 metres from the camera lens
- Surfaces should be of matt or satin finish, non-patterned and of neutral colour.
- Seating arrangements are sometimes flexible in videoconferencing rooms

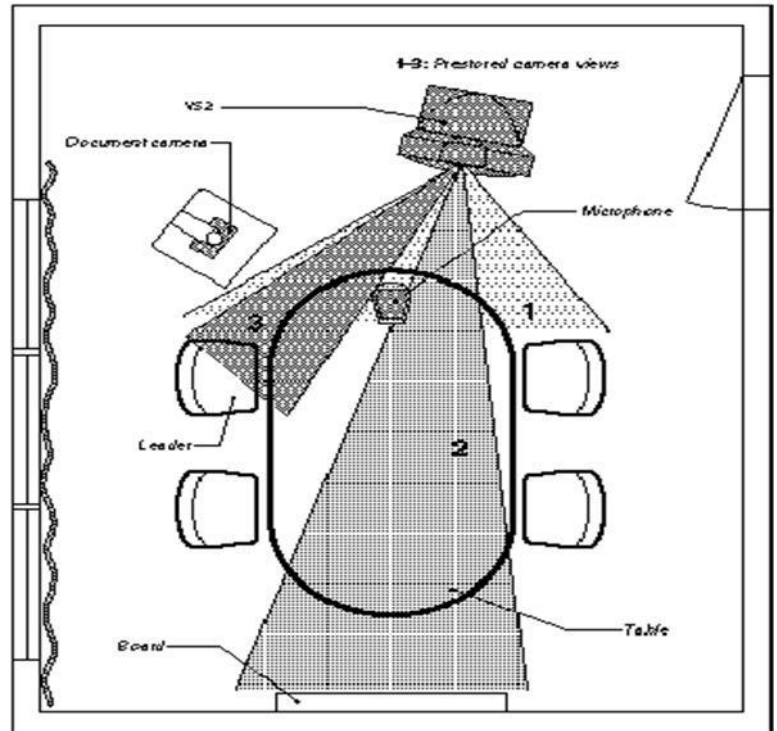
Walls and decor

The appearance of the background in picture is very important but easily overlooked.

The camera will attempt to show all that is in view: artifacts such as paintings, mirrors, bags and fans all require video compression processing, resulting in reduced video signal quality.

Keeping the area within the camera's view uncluttered will help to maintain quality of signal resulting in less fatigue for participants. To ensure a suitable background we recommend you consider the following:

- Use a neutrally coloured background with a medium contrast and a soft texture, e.g. a plain curtain with no heavy patterns or strong colours that may adversely tint the whole scene.
- Avoid objects or people moving in the background as this may reduce image quality and distract the attention of the other site.
- Display the name of the campus on a sign within the room visible to the camera for ease of identification in multi-point conferencing.
- Cover acoustically reflective surfaces (such as glass or concrete) with curtains or sound treatment.



An example of a typically set up roll-about system videoconferencing room. Shaded areas 1-3 represent room camera presets to full room, white board and lead presenter, respectively. (Reproduced from Tandberg MXP user manual Appendix 4.)

Notes adapted from

Tandberg MXP user manuals, Video Conference Room Design, Installation and Maintenance Services, Information Technology Services, Penn State University available at <http://tns.its.psu.edu/Services/vidconf/viddesign.html>

Resources

Videoconferencing cookbook: <http://www.videonet.com/cookbook/cookbook.en/> Select 'Related Topics' from the menu at left of the window and click on 'Developing a productive videoconferencing room'.