



Room Design

Overview

Each videoconference room is a custom configuration. They all have unique quirks and features about them. Each one can dramatically affect the way people interact through videoconferencing. This section explains the basic variables in room design.

Room arrangement depends on the meeting content and interactions. Different types of meetings require different types of positions. A lecture would require the local audience to be facing her. However, an interactive meeting would require all audience members to be visible.

The keys to a configuration are:

- 1) Knowing the purpose of the videoconference sessions
- 2) Understanding your audience.

Basic Room Designs

The goal of room design is seamless integration with the meeting. Videoconferencing applications should be built around the needs of the conference. Typical questions include:

- How large is the audience?
- What is the purpose of the videoconference?
- What is the available room space?
- Will it be necessary to read PowerPoint slides?
- How will media display through the system?

Room design for videoconferencing is more than just positioning participants in front of a camera. It is a question of what invites participation and facilitates learning. The participants in a videoconference must focus on the content, but are bombarded with distractions. Poor lighting, bad audio, and forgetting to manage camera control turn off participants very quickly.

It is necessary in any room to post instructions for contacting technical support. Telephones are common in the room so that users may get help.

Ambient noise is also critical to remove. Overhead pages, fans, and open doors are all distractions.

Room Design for Lecture Rooms

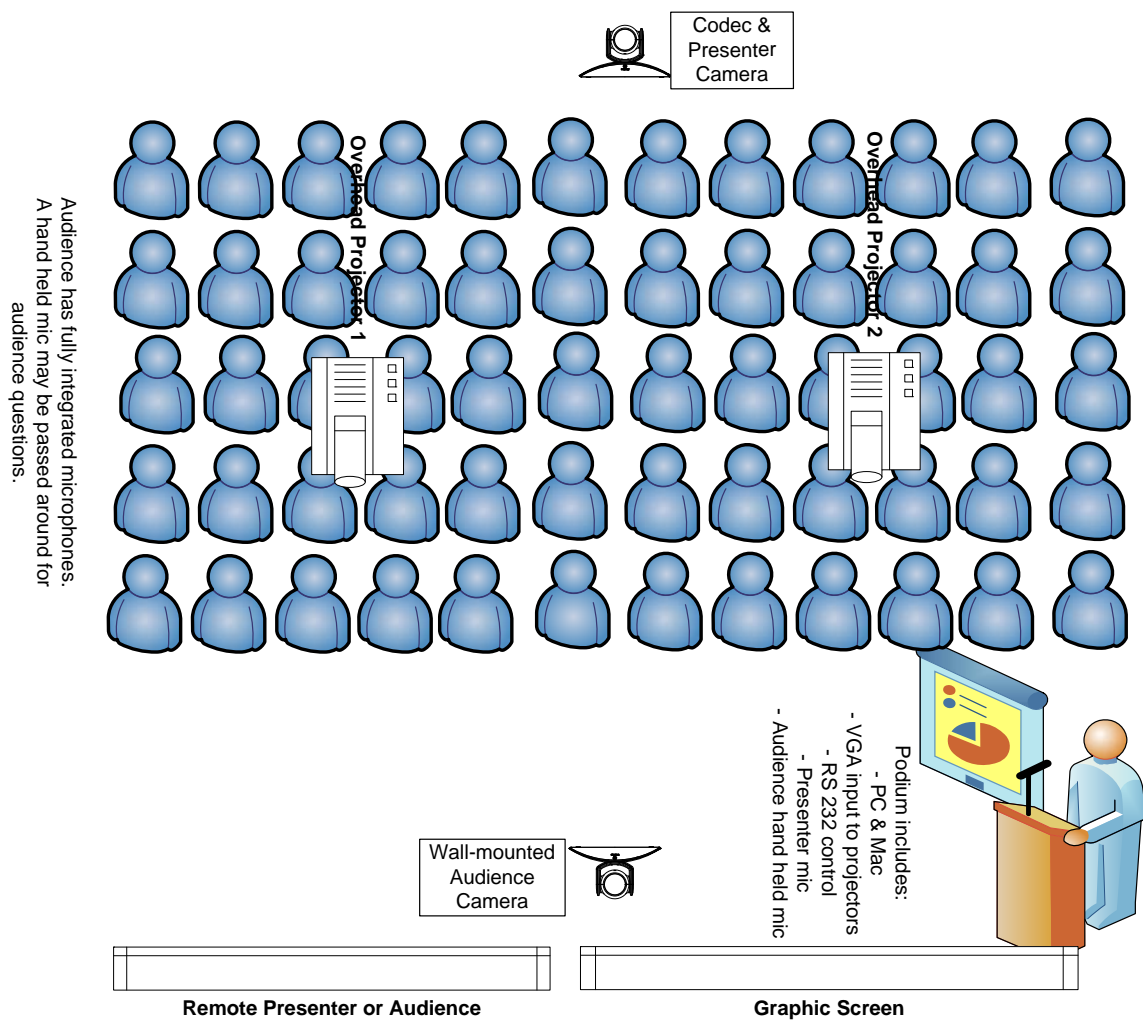


Utah Telehealth Network

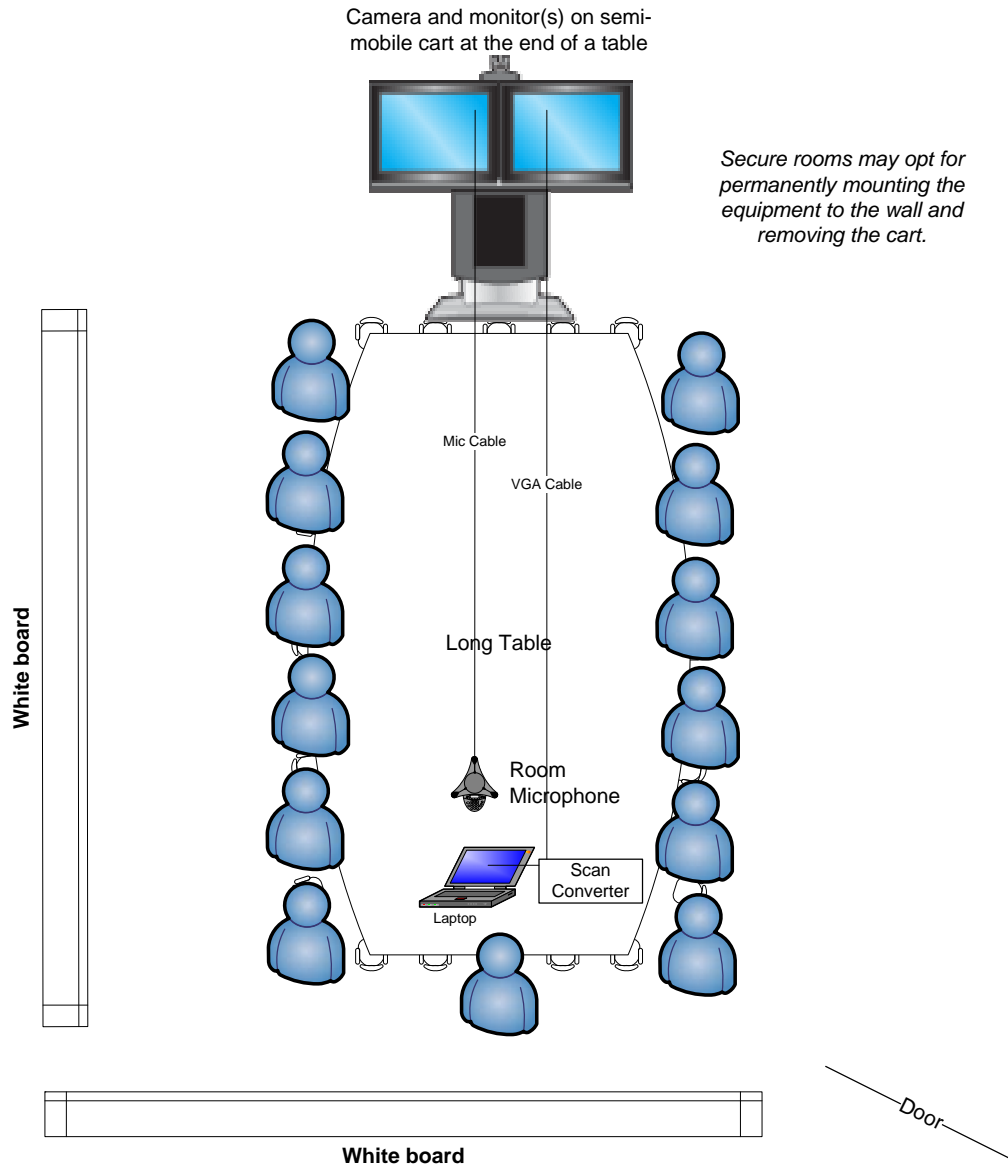
Presentations such as lectures with just one-way communication are common in education and healthcare. In these cases, the camera should face the presenter and the possibly the screen. Most sites now have scan converters or pc's dedicated to web collaboration that capture computer graphics.

Remote audiences need special attention because a camera faces them. The amount of people may force the need for a bigger screen. It may become a simple matter of practicality.

The next determinant is the videoconferencing application. If the remote speaker presents detail oriented PowerPoints, then the audience needs to read it. If the presentation media is small, a big screen can display it more effectively.



Smaller rooms often require placing the system at the front of the audience. In those cases, the microphone goes in the center of the room or beside the lecturer. The meeting tables are generally in a long oval, upside down U, or classroom format.



Room Designs for Doctor to Patients Consultations



Doctor to patient room designs must consider HIPAA security and physical room security.

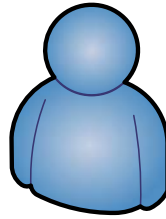
- The noise should not leak into the hallway
- The doctor must be able to control the patient's camera
- The patient should not be able to use the equipment as a weapon

Mental Health Design

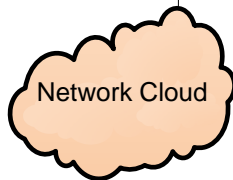
Professional's Room



Desktop Video

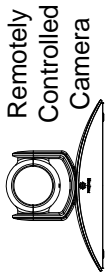


Medical Professional
in front of
desktop system



Network Cloud

Patient's Room



Remotely
Controlled
Camera

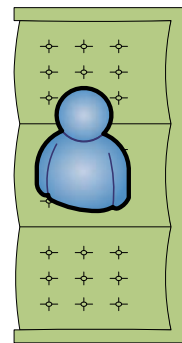


42"-50" Monitor either
mounted on wall or on a
mobile cart

Mic Cable



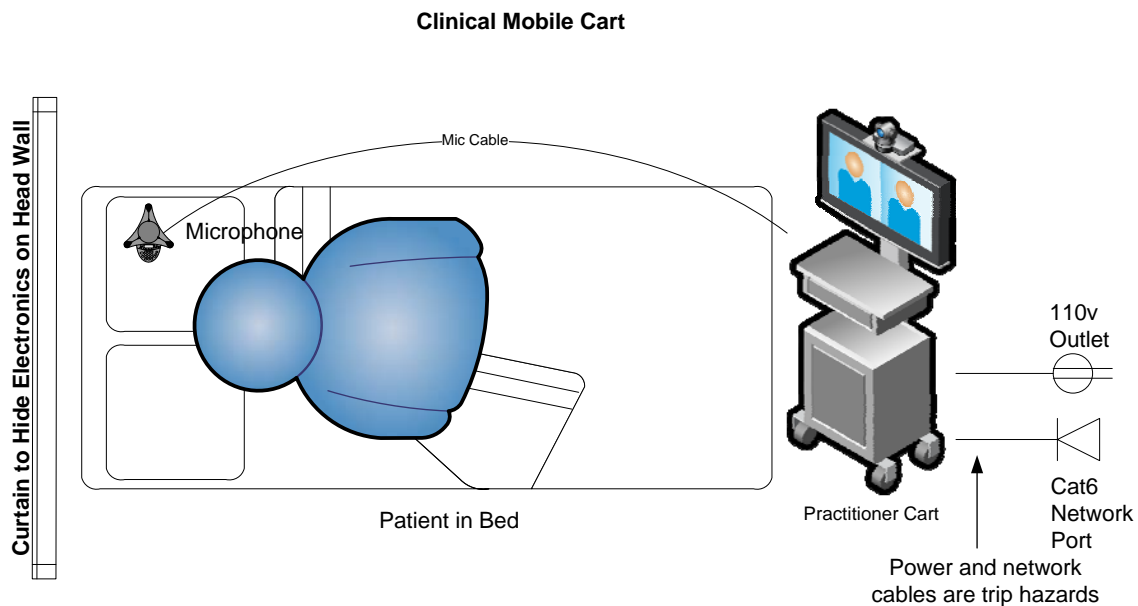
Room
Microphone



Couch, Chair, or Bed

Secure rooms may opt for permanently mounting the camera and monitor to the wall and removing the cart.

Telestroke consultations require a videoconferencing system at the foot of a bed. Considerations include the cables as trip hazards and removing visual clutter by the patient's head.



Checklist for Testing

1. Understand the Meeting
 - a. Collect who will be in the meeting, their IP addresses, and contact information for the site technician
 - b. Collect all required media such as PowerPoints, DVD's, Internet access, or documented files
 - c. Determine who is presenting
 - d. Determine the desired onscreen layout
 - e. Collect the start and end times, then determine the setup time by adding 30-60 minutes to the start.
2. Evaluate the Rooms
 - a. Have the site technicians visit each room to determine the following:
 - i. the location of the presenter
 - ii. the position of the videoconferencing equipment
 - iii. if power and network are close enough to the video equipment
 - iv. if the microphone will reach the presenter or audience and that it is away from the loud speaker



- v. if the lighting is adequate, or horribly backlit
 - vi. if the videoconferencing equipment works and that its settings and option keys are fully functional
 - vii. that the presenter's laptop reaches the videoconferencing equipment and the room projector
 - viii. all cables are secured and not trip hazards
3. Test
- a. Work with each site individually prior to the meeting to ensure they can connect to the bridge
 - b. Schedule each room for a test
 - c. Rehearse the meeting. PLEASE no shortcuts
 - d. Position the videoconferencing equipment
 - e. Connect all necessary media including:
 - i. Microphones
 - ii. VGA splitter or projector
 - iii. Visual Concert
 - iv. Laptops including adapters for Apple PC's
 - v. DVD/VCR
 - vi. Second monitor – but configure the codec's monitor settings first!
 - f. Ensure the lighting is correct and no one is backlit
 - g. Dial to the bridge
 - h. Verify that the colors are correct and audio is adequate with the bridge operator
 - i. Verify the layout is correct with the bridge operator
 - j. Verify that the other sites connected
 - k. Run through the meeting
 - i. If necessary, activate the H.239 and ensure the layout is correct.
 - l. Document all problems
 - m. Troubleshoot at appropriate times
 - n. Certify each site as ready to schedule conferences
4. Schedule
- a. Schedule each room for the actual meeting date plus 30-60 minutes of setup time.
5. Collect all presentations
- a. Good luck getting the media before the meeting. Prepare for people to show up with materials.
 - b. Post to an appropriate web site
 - c. Announce the site
6. Meet
- a. Call the bridge operators with any problems
 - b. Bridge will record the presentation upon request
7. Meeting Post Production
- a. UTN will post the meeting online, upon request



8. Evaluate
 - a. Send out surveys for the meeting quality

Staff

Site coordinator- This person schedules the room and announces events. Administrative assistants and nurses are commonly assigned this role.

Superuser- This person runs the videoconferencing system during meetings. It places calls and controls the camera.

IT support- These people manage the network and often set up the equipment.

Extra Equipment

Scan converters- This \$500 device converts VGA signals (monitors) into videoconferencing.

Lapel microphone- A clip-on microphone allows the presenter to walk around the room and still be heard.

Requirements for UTN Technical Support

If a site chooses to have UTN manage its videoconferencing, then the following is required:

- Firewalls opened to 155.100.0.0/16 on port 80
- Register the videoconferencing system to UTN's gatekeeper
- Have enough bandwidth for the application
- Work with UTN to troubleshoot technical issues