

Technology for satellite surgery-viewing locations

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Distance learning and telemedicine are becoming increasingly important in academic medical centers. These clients wish to speak with colleagues around the world and to view surgeries in real time. To enable participation from audience members, microphones should be located on the desks. These microphones can be the small, flush-mounted style that can be permanently attached to the desks for security. Loudspeakers can be placed on either side of the projection screen and/or mounted in the ceiling. Electronic annotation devices can be provided to provide the ability to mark over computer or video sources. For rear projection systems, enough space should be given to the projection room to allow for the light path length.

To send audio signals from an operating room to the conference system, microphones need to be placed in the operating room. Due to the hard surfaces used in this type of space, location of the microphone is critical. One good location that we have seen work well is mounted off the main operating light fixture. This positions the microphone closer to the source providing a better signal-to-noise ratio that improves intelligibility for listeners at the receiving end. However, the best location is a head-worn microphone. This practice is becoming more and more commonplace in procedure rooms, especially in teaching hospitals where the surgeon is also the instructor.

While a room camera works well to provide a nice overall view of the procedure room, the critical imaging that needs to be relayed to the remote viewing areas is of the various scopes and imaging devices themselves. These are the images that both the doctor and student need to see both to perform the procedure and learn what to look for. With these imaging devices showing higher resolution and finer detail images, being able to display these images at the highest possible resolution at the remote site is also a key element in the transport and projection system used.

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