

Videoconferencing Guidelines

Guidelines are issued by the Department of Information Resources (DIR) to offer technical and operational guidance for Texas state agencies and institutions of higher education. This publication provides technical and operational standards and recommendations to support [1 TAC 209 – Minimum Standards for Meetings Held by Videoconference](#).

Objective

These guidelines offer technical and operational standards and recommendations to enable entities subject to the Texas Open Meetings Act to deploy videoconferencing technology in facilitating open meetings. Law allows one or more members of a governmental body to participate remotely to achieve a quorum.

Technical and Operational Standards

DIR requires that state agencies adhere to the following minimum standards for meetings subject to the Open Meeting Act that are held by videoconference:

- 1) Videoconferencing equipment must meet International Telecommunications Union (ITU) standards for appropriate transmission medium:
 - (a) ITU H.320 or H.324 for videoconferencing over a public switched telephone network (PSTN) or integrated switched digital network (ISDN).
 - (b) ITU H.323 for videoconferencing over the public Internet.
 - (c) Use of videoconferencing equipment with proprietary vendor protocols may be used if the vendor certifies that its equipment and proprietary software protocol release version meets or exceeds ITU standards. Prior to use, DIR recommends reviewing technical specifications and contacting the vendor to inquire as to whether the deployed technology meets ITU standards.
- 2) All videoconferencing shall employ a minimum 384 KB transmission speed. Note that bandwidth requirements for various resolutions of high-definition video are vendor specific based on the manufacturer's equipment.
- 3) At least one monitor must be available at the primary meeting site for the audience to view remote meeting participants, and be a minimum of 27 inches in size (as measured by the industry). When using a computer web conferencing system at the primary site, a large monitor and adequate speakers shall be used.
- 4) The audience and members of the governmental body must have full view of at least one monitor at each meeting location. Additional monitors should be placed, as required, to ensure a clear view by all of the audience.

- 5) Audio signals from the remote video conferencing sites must be of similar quality and volume as the local audio at the primary meeting site.
- 6) All videoconference transmissions will be in color and monitors for the viewing public and government members shall present color video.
- 7) An audio recording of the meeting shall be made at the primary meeting site.

Additional Recommendations

DIR recommends that state agencies consider the following videoconferencing standards when holding a meeting subject to the Open Meeting Act.

- 1) Videoconferences held between sites on different networks or linked through public switched networks or between sites not under control by a single government entity should be tested not more than one hour before the actual conference. The purpose of the test is to determine that the network link and applicable video bridges will perform adequately and meet the standards listed in the above sections. This recommendation does not apply to videoconferences at sites that have previously held open meetings within a six month period.
- 2) Meetings should be moderated by an agreed upon assigned individual from the primary meeting site. The moderator should act to facilitate technical and videoconferencing clarity issues during the meeting. The moderator may, or may not, be a participant in the meeting, but ensures that the video and audio at primary site is clear, and cooperates with remote site participants in resolving technical difficulties.
- 3) Moderator(s) should check camera focus, audio, and camera range prior to each meeting.
- 4) Moderators should ensure that all speakers are within camera range throughout the meeting.
- 5) All members of the governmental body, at the primary site and remote site(s), should be introduced at the start of the meeting. The audience or other participants may be introduced in accordance with the entity's usual practices.
- 6) Remote sites should have the mute enabled in multi-point conferences, unless a participant is speaking.
- 7) Material to be presented should be available at all sites.
- 8) If the governing body goes into a closed session, the public display of the videoconference is no longer required.

Note on Open Meeting Procedures

The preceding technical requirements are provided to ensure the quality of videoconference transmission. Questions about satisfying the specific procedural requirements of the Texas Open Meetings Act should be referred to an agency's general counsel or the Office of the Attorney General. The 2014 Open Meetings Act Handbook (Office of the Attorney General) can be found at https://www.oag.state.tx.us/open/publications_og.shtml.

Frequently Asked Questions

1. What hardware and software is needed for videoconferencing?

Successful videoconferencing requires cameras, microphones, display monitors, video compression/decompression (codec) technology, and a telecommunications line (PSTN, data network, or public Internet) for proper transmission of video and audio signals. Videoconferencing between more than two locations requires a multipoint control unit or video bridge that connects the sites allowing all participants to interact with one another.

There are three major categories of videoconferencing solutions that may be considered in implementing videoconferencing:

- **Large conference room expressly designed for videoconferencing**
This includes a room with multiple cameras, monitors, and microphones to accommodate multiple participants in the meeting room and remote locations. Requires staff support to operate equipment during the videoconference.
- **Small conference room or office-based videoconferencing with one or two remote sites**
This is typically a hardware-based solution with camera, codec, and audio in a compact unit that can be used to interact with one or two remote sites.
- **Desktop or web conferencing**
This is a software-based videoconferencing system using a personal computer and internal or external web camera. This can be used by a remote participant to interact with the conference room or office. Many of these systems are standards-based; however, some vendors use proprietary standards that limit the interoperability of videoconferencing equipment and services.

2. What are ITU Standards and why do I need to use them?

The International Telecommunications Union establishes standards for videoconferencing that define how video and audio are encapsulated for transmission. The equipment purchased or used should specify which videoconferencing standards are certified for that product. Standards ensure interoperability between the videoconferencing sites.

The most common ITU standards are:

- H.320 or H.324 for videoconferencing over the public telephone network
- H.323 for videoconferencing over data networks

3. Can I use a web conferencing solution to videoconference during a board or commission meeting?

There are a number of desktop web conferencing services and applications that offer audio and videoconferencing using software on a personal computer with a proprietary compression standard. Some business-class web conferencing services specify that their high-definition videoconferencing

services meet ITU H.264 compression protocols that fall under the umbrella H.323 standard for videoconferencing. As with other proprietary systems, use of non-ITU standard devices should be tested for interoperability with the host and endpoint videoconferencing sites before they are used for a meeting.

Note that web conferencing systems specify minimum requirements for computer CPU, memory, and video capability. High-resolution cameras, microphones, and large monitors can be attached to a computer's port or USB connection.

4. Will my local area network support the transmission of videoconferencing?

The transmission of compressed video signals over a data network requires adequate bandwidth and quality of service, therefore testing with a local network administrator is recommended to ensure the network bandwidth and firewall can accommodate the robust video signals from the service or equipment you intend to use. Bandwidth requirements vary depending on the specific vendor equipment or service.