



Integrated Courtroom Technology

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Courtrooms across America are running more efficiently thanks to the use of technology in the courtrooms. Through the use of technology, judges, attorneys, and other participants are able to effectively manage their time and resources. Citizens have a better understanding of their court system and how decisions are made. By making court activities and events more accessible to the public, technological advances help to build trust in the judicial system. The purpose of this document is to illustrate the sophisticated use of technology in the modern courtrooms of today and provide suggestions on the type of equipment needed for a successful project.

A well-equipped Courtroom will have these and other technological features:

- Touch Panel Control Pad
- Sound Reinforcement System
- Display Monitors
- 4 Pan/Tilt/Zoom Cameras
- Quad Splitter
- Video Conferencing
- Teleconferencing
- VHS / DVD Player
- Computer Input Display Connection
- Audio Input
- Composite Audio/Video Inputs
- Media Plate

- Digital Court Recording
- ADA Assisted Listening Devices
- Remote Technical Support and Control

Touch Panel Control Pad: A Touch Panel should control all of the courtroom technology, including the sound system, the video conference system, the teleconferencing system, four pan/tilt/zoom cameras, the digital recording system, the VHS/DVD player, and the display monitors. Using the control pad, participants can activate the courtroom audio and video system. The system should allow the judge to mute speakers for side-bar conferences, switch visual presentations, turn monitors on or off, and view evidence privately. Much of this technology, while advanced, is quite easy to use.

Sound Reinforcement System: Strategically placed microphones and speakers will provide high quality sound throughout the entire courtroom.

Display Monitors: Equip the judge's bench and witness stand with flat-screen monitors. Large monitors allow the jury, clerk, lawyers, and any members of the public and observers outside the bar also to view the evidence.

Cameras: High-resolution pan/tilt/zoom cameras allow for the

needed coverage in the courtroom. It is suggested that four cameras be placed in the following areas: Judge, Jury, Witness, and Courtroom. The cameras should be able to be controlled using the Touch Panel and preset for various views. One camera should be strategically placed to allow participants to place any document or object at a specified location and transmit the image to the monitors. Using cameras equipped with a zoom feature, allows participants to focus in on a particular part of a document or simply to limit the amount of the document or item shown so that jurors are actually able to read the documents they are shown. In addition to traditional business documents, attorneys can use this camera to present exhibits and/or evidence, i.e., fingerprints, x-rays, maps, and even bullets.

Quad Splitter: A Quad Splitter enables the cameras to be viewed individually or on the same screen simultaneously. This component provides benefits to several of the other technology features in the courtroom. One example would be a witness testifying remotely by video conferencing would have the ability to see the Judge, Jury, Courtroom, and the Evidence on one screen. A second quad splitter may be used to provide your Digital Court Recording system its own video feed.

Video Conferencing: In addition to facilitating the presentation of evidence, it is suggested that the courtroom's audio and video conferencing equipment be networked and available for use by out-of-town counsel to participate in hearings without having to travel. As with using video conferencing for taking testimony from witnesses, using the equipment for

hearings can result in significant cost savings and can facilitate scheduling. Video conferencing can be used many types of court proceedings, and depending on the circumstances, may be used to eliminate the need to transport some defendants who are in custody, reducing the cost of transportation and security risks. Many rural courts use video conferencing systems to provide sign language interpreters when needed.

Teleconferencing: Courtroom systems should include an audio conferencing system, which is connected to the courtroom sound system and is capable of adding telephone conferences to the proceedings and allows participants to present audio evidence. Audio systems generally are wired in a central location to the courtroom's high quality sound system, which includes ceiling speakers and surround sound.

VHS / DVD Player: While most consider VHS/DVD players to be old technology, they are still widely used throughout the courts. Counsel can use a VHS/DVD player to play portions of videos or even to show a clear single frame. The VHS / DVD player should be controlled by either a Touch Panel or remote. Court personnel should be sure to provide information about the type of discs that are compatible and other information about the VHS / DVD player to participants in judicial proceedings.

Computer Input Display Connection: It's wise to provide a computer input to allow counsel to present scanned documents, Power Point presentations or other visual presentations through the courtroom

systems. Since the litigants can have every piece of documentary evidence imaged, there is no longer a need to carry dozens of boxes of documents to court.

Audio Input: The system should allow participants to connect their computer or any audio device with a 1/8" connector to the courtroom's sound system.

Composite Audio / Video Inputs: Inputs should be available to connect additional equipment for use in the courtroom if needed. A participant can connect any technological device with composite outputs into the courtroom system.

Media Plate: This will provide the news media with the ability to capture the courtroom's audio and video feeds. Providing an audio feed to the media eliminates the need for the reporters to place wireless microphones throughout the courtroom. The audio feed is the same as what's being played through the speaker system, so when the Judge mutes the speakers, he also mutes the media's audio feed. This prevents unwanted recordings of sidebars or private conversations.

Digital Court Recording: Application of digital court recording (DCR) technology in courtrooms began in the early 1990's, when courts began facing court reporting shortages. With digital recording, the electronic court recorder captures the spoken word of court proceedings using a traditional computer. Benefits of the electronic record are immediately realized by playback of the spoken word that can be listened to at any time or anywhere. In order to permit the court and the attorneys to make use of digital

recording systems, recordings can be made available through audio CD's or the court's local area network. Use of digital court recording allows the litigants to instantly search and review audio from prior days' testimony, quickly read back questions or testimony to witnesses, annotate their personal copies of the recording with notes or highlighting to assist in preparation for the following day's testimony. Digital recording also simplifies complying with a deliberating jury's request to review particular testimony. DCR systems generally indicate to participants when they are recording through an illuminated indicator light and are remotely monitored by Digital Court Reporters. Courtrooms equipped with DCR systems should have signs posted at the entry of the courtrooms to remind everyone that the electronic recording systems that may record their conversations.

Remote Technical Support and Control: By building remote access into your courtroom technology, staff and/or vendors will have the ability to remotely provide support and maintenance on critical systems. This eliminates the cost of vendors traveling to make minor adjustments.

ADA Assisted Listening Devices: Hearing devices allow participants with hearing difficulties the ability to hear the proceedings more clearly.

Disclaimer: Some courts have chosen to include a disclaimer for the use of their technology. An example of a typical disclaimer:

The Court provides the use of the

courtroom technology as a courtesy to the legal profession and court participants. The Court will make every effort to ensure the equipment is working properly. However, the Court does not guarantee the reliability of the equipment. The Court is not responsible for the user's own negligence or lack of knowledge in operation of the equipment. The user agrees to hold the Court harmless for any failure of the equipment and any and all claims,

damages, action, causes of action, suits in equity whatever kind or nature as a result of the use of the equipment. The Court advises the users of this equipment that the Court will not be responsible for any delays caused by the failure of the equipment. Users of the equipment should have back-up material suitable for use in the courtroom in the event of equipment failure.

Disclaimer: The advice and opinions represented in this bulletin are based on the experiences of the Administrative Office of Pennsylvania Courts (AOPC). Such recommendations may not be suitable for other jurisdictions, and are only offered in the spirit of sharing experience as information to others considering the installation of similar technologies and adoption of similar processes.