

Remote and Virtual Hearings Technology Considerations

A Resource from the
Pandemic Rapid Response Team



Introduction

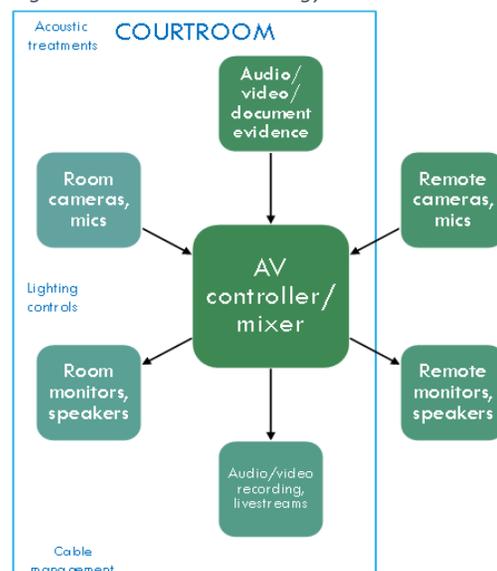
Since the start of the COVID-19 pandemic, the Conference of Chief Justices (CCJ) and Conference of State Court Administrators (COSCA) [Pandemic Rapid Response Team \(RRT\)](#) and the [Joint Technology Committee \(JTC\)](#) of COSCA and the National Association for Court Management (NACM) have published guidance and standards for conducting remote and virtual hearings. Using this guidance and their own ingenuity, courts across the United States have rushed to implement technologies for remote hearings typically using web conferencing platforms (e.g., Zoom). However, as pandemic restrictions are eased, courts must pivot to courtroom technologies and processes that also support “hybrid” hearings that accommodate new combinations of both in-person and remote participants.

This document introduces a courtroom technology framework based on the [Guiding Principles for Post-Pandemic Court Technology](#) to guide courts through the selection, installation and management of technologies for both remote and hybrid hearings. It includes several case studies of courts that support hybrid hearings today using currently available technologies. In the future, it is hoped that the framework will also help providers adapt their solutions to better suit the specific needs of courts.

Introduction Courtroom Technology Framework

The hub of any audio/video (AV) system is an automated controller or person-operated mixer that accepts audio and video inputs from multiple source devices (e.g., in-room and remote cameras and microphones, evidence) and generates audio and video outputs to one or more devices (e.g., in-room and remote monitors and speakers, recordings, livestreams). The room itself will also likely include AV-relevant features and devices (e.g., acoustic treatments, lighting controls, cable management).

Figure 1. Courtroom Technology Framework



Court staff selecting appropriate technologies and solutions for each room and device

must balance a range of technical requirements that vary between courtrooms including:

- Number and placement e.g., bench, litigants, witness stand, jury box, gallery
- Portability e.g., fixed or movable monitors/microphones/speakers, fixed or pan/tilt/zoom (PTZ) cameras
- Wired/wireless
- Ability to mute/disable
- Format e.g., file type, connector, resolution

A partial list of technology considerations for each device is shown in the table below.

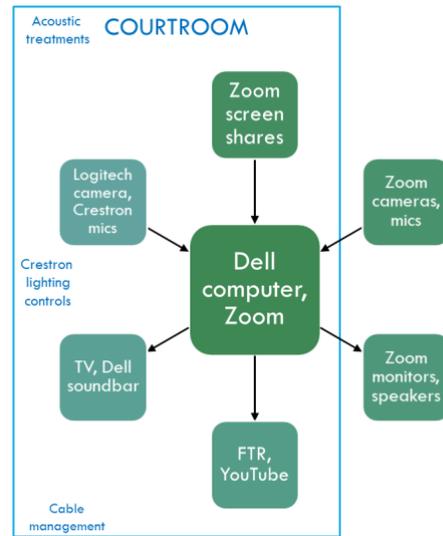
AV Type	Devices	Number/ Placement	Portability	Wired/ wireless	Ability to mute/ disable	Format
Audio input	Room mics	Bench, litigants, witness stand, jury box	Fixed preferred	Wired preferred but tripping hazard	Preferred	Connector
	Remote participant mics	Multiple litigants and witnesses, video remote interpreter			Required	
	Audio evidence					Connector, analog, audio format
Audio output	Room speakers	Soundbar or separates, bench, litigants, witness stand, jury box, gallery	Fixed preferred	Wired preferred	Preferred	Connector, Analog or digital
	Room assistive listening	Multiple		Wireless		
	Remote participant speakers	Multiple litigants and witnesses, video remote interpreter			Optional	
	Audio recording				Preferred	Connector, analog, media/file format
Video input	Room cameras	Bench, litigants, witness stand, jury box	Fixed focus or pan/tilt/zoom based on placement, some portability	Wired preferred but tripping hazard		Connector, video format
	Remote participant cameras	Multiple litigants and witnesses, video remote interpreter			Optional	
	Electronic documents					File format
	Document scanner		Optional			Media/file format
	Video evidence					Media/file format
Video output	Video monitors	Bench, litigants, witness, jury, gallery	Mostly fixed but some portability if needed	Wired preferred but tripping hazard	Optional	Connector, Size, Resolution
	Remote participant monitors	Multiple litigants and witnesses, video remote interpreter			Optional	
	AV controller/mixer	Connector distance limitations				Connector, media/file formats
	Video recording				Preferred	Connector, media/file format
	Video livestream				Preferred	
Room	Acoustic treatments	Walls, ceiling, flooring				
	Lighting controls	Overhead lights, camera lights blinds		Wired preferred		
	Cable management	Power, video, audio, and network cables				

Case Studies

Delaware Courts

To support remote and virtual hearings, the Delaware Courts built and deployed carts designed for use with Zoom to many of their courtrooms. Repurposing older computers helped keep the cost of each cart to just \$579, including a 55" TV, soundbar, PTZ camera, and microphone. As the Delaware Chancery, Superior, and Family Courts have re-opened, they are using one or more carts in each courtroom to support hybrid hearings. The audio output from the computer is recorded using [For The Record \(FTR\)](#) and hearings are livestreamed to YouTube as needed. In June 2021, jury trials re-opened limited to in-person juries – remote/hybrid jury rooms will likely require a separate, dedicated system.

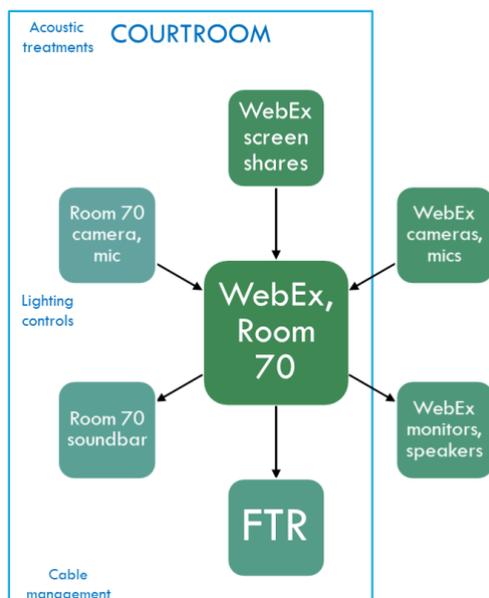
Figure 2. Delaware Courts Zoom Carts



Illinois 16th Judicial Circuit Court

The 16th circuit deploys [Meeting Owls](#) in the center of each courtroom as needed for remote and hybrid hearings. These portable devices are compatible with Zoom (and other multiple web conferencing solutions) and include integrated speakers and multiple cameras and microphones that automatically track participants up to 18' away. If needed, multiple Owls can be used together to provide coverage in larger courtrooms. To allow remote participants to be seen, each courtroom also needs one or more monitors.

Figure 3. Vermont WebEx Courtrooms



Vermont Courts

Over the last year, the Vermont Courts have deployed [Cisco WebEx Room 70](#) systems in most of the courtrooms across the state. These systems are designed specifically for WebEx conferencing and include a large monitor, soundbar and multiple cameras and microphones that automatically track participants. Due to the size and weight of these systems, they are best installed in a fixed location in each courtroom. To provide better coverage, many courtrooms also use a portable cart with a second monitor and PTZ camera connected to the Room 70. Hearing audio is output from the Room 70 and recorded to FTR. The system can be controlled in the courtroom by the judge or a court operations assistant using a dedicated tablet.

Next Steps

The Courtroom Technology Framework is expected to evolve and be updated as hybrid hearings become more common and solutions more tailored to the unique requirements of courts emerge. In the interim, the following additional guidance is available to implementers.

Pandemic Rapid Response Team Guidance

- [Guiding Principles for Post-Pandemic Court Technology](#)
- [Virtual Courtroom Standards and Guidelines](#)
- [Key Virtual Hearing Platform Capability Considerations](#)
- [Technology Options for Jury Trials and Grand Jury Proceedings](#)
- [Video Remote Interpretation Solutions and Resources for Courts](#)
- [Remote Hearings and Access to Justice](#)
- [Digital Divide Considerations](#)
- [SRL One-Page Remote Hearings Sample Instructions](#)

Additional Resources

- [JTC Quick Response Bulletin, Strategic Issues to Consider When Starting Virtual Hearings](#)
- [JTC Quick Response Bulletin, Managing Evidence for Virtual Hearings](#)
- [JIS Technology Provider Directory](#)