

JUDICIAL COUNCIL OF CALIFORNIA

455 Golden Gate Avenue · San Francisco, California 94102-3688
www.courts.ca.gov/policyadmin-invitationstocomment.htm

INVITATION TO COMMENT SP23-08

Title Technology: Final Findings & Recommendations of Advancing the Hybrid Courtroom	Action Requested Review and submit comments by October 12, 2023
Proposed Rules, Forms, Standards, or Statutes N/A	Proposed Effective Date September 28, 2023
Proposed by Information Technology Advisory Committee and Advancing the Hybrid Courtroom Workstream Hon. Sheila F. Hanson, Chair, ITAC	Contact Hon. Sheila F. Hanson, Chair, Information Technology Advisory Committee shanson@occourts.org Heather L. Pettit, Chief Information Officer/Director of IT Information Technology Heather.pettit@jud.ca.gov Jessica Craven Goldstein, Senior Analyst Information Technology Jessica.Craven@jud.ca.gov

Executive Summary and Origin

The Information Technology Advisory Committee (ITAC) is responsible for making recommendations for improving the administration of justice through the use of technology and for fostering cooperative endeavors to resolve common technological issues with other stakeholders in the justice system. In 2021, the ITAC initiated a workstream to work on a framework for courtrooms that are optimized for proceedings involving any number of physical or remote participants. After assessing and reviewing the current implementation of hybrid courtrooms, the workstream now requests your input on the draft of the *Final Findings & Recommendations* for developing standards for hybrid courtrooms.

Please review and respond with your comments by **Thursday, October 12 at 5:00 p.m.** You may submit your comments by email to itac@jud.ca.gov.

The proposal has not been approved by the Judicial Council and is circulated for comment purposes only.

Background

As a result of the sudden onset of the COVID-19 pandemic in March 2020, to continue to provide access to the judicial branch, courts were forced to quickly implement technology and operations that could accommodate remote appearances. It should be noted that remote appearances had been a priority of the judicial branch for many years prior to the pandemic and have long been recognized as a key tool in the judicial branch's mission to provide equal and meaningful access to the court system for everyone. In 2022, and largely driven by the advancement of remote appearances, ITAC authorized the Advancing the Hybrid Courtroom Workstream to assess and develop standards for hybrid courtrooms in its [annual agenda](#).

Summary

The workstream agreed to adopt an approach based on five pillars for presentation of the information it culled throughout the period of its study, analysis, and process. The five pillars encompass the operational and technological needs to ensure successful hybrid and remote proceedings. The findings also include functional requirements and roles.

Review and Input Requested

At this time, the Advancing the Hybrid Courtroom Workstream requests your review and input on the draft *Final Findings & Recommendations by October 12, 2023*. We value your input and believe that it is critical to incorporate feedback from throughout the branch and public. Please contact itac@jud.ca.gov with any questions.

Attachments

1. *Final Findings & Recommendations of Advancing the Hybrid Courtroom*

[Approval Date]

DRAFT

Report of the Advancing the Hybrid Courtroom Workstream



Judicial Council of California

Advancing the Hybrid Courtroom

Draft Findings and Recommendations

Table of Contents

ITAC’s Annual Agenda	3
Introduction	4
The Workstream	4
Foundational Concepts	5
Operational & Technological Requirements.....	7
Five Pillars of Hybrid Courtroom Workstream.....	7
Functional Requirements.....	12
Minimum Requirements	13
Courtroom Orchestration	13
Technical	13
Operational	14
Court Technology.....	15
Courtroom Post-Operations	17
Courtroom Standard Communications.....	18
Court—Creating a Virtual Experience.....	19
Evidence	19
Courtroom User Experience.....	19
Courtroom Audio	20
Courtroom—Access from Anywhere.....	22
Courtroom Cameras.....	23
Courtroom Infrastructure	26
Courtroom Facilities.....	26
Remote Public Access	27
Courtroom Communications	28
Time Management.....	30
Courtroom Equipment Operations and Management	30
Courtroom System/Solution Training	30
Courtroom Wi-Fi and Bandwidth.....	31
Court Reporters.....	31
Court Interpreters	32
Appendix	35

Advancing the Hybrid Courtroom

Draft Findings and Recommendations

ITAC's Annual Agenda

Project Summary: Assess the current implementation of hybrid courtrooms, recommend metrics and data collection to facilitate court compliance with Assembly Bill 177 and Senate Bill 241, develop standards for hybrid courtrooms, and assist in developing a Request for Proposal (RFP).

Key Objectives:

- a) Define consistent standards for branchwide solutions, platforms, and programs in support of hybrid courtrooms.
- b) Review and evaluate the *2020 California Trial Court Facilities Standards* to align with hybrid court proceedings.
- c) Develop and define quantitative and qualitative metrics associated with hybrid court proceedings and remote court services to measure efficacy and areas for improvement, and make recommendations on the collection of associated data by which courts would comply with AB 177 and SB 241.
- d) Review the California Rules of Court to identify and recommend any potential rule changes needed.
- e) Assist with development of an RFP to establish branch Master Service Agreements (MSAs) and other procurement vehicles, where needed.
- f) Finalize recommendations and seek approval from ITAC, the Technology Committee, and the Judicial Council, if appropriate. Formally sunset the workstream.

Advancing the Hybrid Courtroom

Draft Findings and Recommendations

Introduction

As a result of the sudden onset of the COVID-19 pandemic in March 2020, to continue to provide access to the third branch of government, the judicial branch, courts were forced to quickly implement technology and operations that could accommodate remote appearances. It should be noted that remote appearances had been a priority of the judicial branch for many years prior to the COVID-19 pandemic and have long been recognized as a key tool in the judicial branch's mission to provide equal and meaningful access to the court system for everyone. Below are links to reports commissioned to study the practicality and efficacy of remote courtroom proceedings:

[Chief Justice Tani G. Cantil-Sakauye, "Remote Proceedings in Non-Criminal Proceedings"](#)

[Commission on the Future of California's Court System](#)

[Video Remote Interpreting \(VRI\): Project Report](#)

As a result of the pandemic, courts throughout California now regularly and successfully conduct proceedings in person, remotely, or in a hybrid fashion, meaning some participants are in person and some participants are connected via a remote device. There is no question that those who participate in remote and hybrid court proceedings report that the quality of the experience depends in large part on the quality of the technology used by the participants, including the courts. To that end, ITAC convened the Advancing the Hybrid Courtroom Workstream, to study what courts have done to implement remote appearance options throughout the branch, to ensure that the quality of the remote proceedings promotes a successful proceeding, make recommendations regarding minimum technology standards necessary to ensure quality remote proceedings, and issue an RFP consistent with the findings and recommendations. This report is intended to summarize the findings of the workstream, set forth minimum technology standards, and facilitate the issuance of an RFP consistent with these findings. The work of the workstream embodies the commitment of California courts to increasing remote access and upgrading technology to improve the court experience and provide meaningful and equal access to justice.

The Workstream

The workstream comprised members from small, medium, and large courts. In addition, the workstream membership included judges, operational staff, and court technology experts. Over the course of about a year, the workstream met weekly. For several months, the members of the workstream discussed internally what is necessary for participants in a hybrid or remote proceeding to see, hear, understand, participate, and control the proceedings adequately and effectively. In addition, the workstream invited others to participate in the workstream meetings who represented other court participants and had experience appearing and participating remotely in court proceedings in California during the pandemic. These invited guests included court reporters, interpreters, court staff (e.g., judicial assistants), private attorneys, and attorneys employed by legal service providers. Once the workstream collected extensive anecdotal perspectives regarding what is needed to have a successful hybrid or remote proceeding, the technology experts on the workstream developed a list of needs and technology components that are consistent with the council's Facilities Technology Standards as well as capable of ensuring quality and accessible remote proceedings.

Advancing the Hybrid Courtroom

Draft Findings and Recommendations

Finally, the workstream agreed to adopt an approach based on five pillars for presentation of the information it culled throughout the period of its study, analysis, and process. The five pillars encompass the operational and technological needs to ensure successful hybrid and remote proceedings. It is discussed in detail below.

Foundational Concepts

Any discussion of hybrid or remote proceedings must begin with the identification of foundational concepts. The workstream identified the foundational principles as follows: (1) discussion and identification of the benefits of remote access to courts, (2) identification of the goals and objectives of the workstream's undertaking informed by the project summary and objectives included in ITAC's Annual Agenda, (3) the need for objective and identifiable metrics going forward, (4) other considerations, and (5) funding sources and requirements. Those topic areas are summarized below and reflect the workstream's collective analysis and conclusions regarding these important subject areas.

Benefits of Hybrid and Remote Access to the Judicial Branch

- If courts provide high-quality audio, video, operational, and technology solutions, they will enhance in-person and remote courtroom experiences and create transparency and legitimacy for the third branch of government.
- Effective remote appearance solutions will increase options for accessing the court and increase court appearances and participation.
- Effective remote appearance solutions will provide more convenient access for those with challenges related to competing life demands, physical location, or other circumstances, (e.g., childcare, work, school, illnesses, disabilities, transportation, parking costs, custodial status, out-of-state-or-county locations, juvenile cases, state hospitals, etc.).
- Overall, remote access to courts will facilitate equal access to the courts by providing options for appearing in court.

Goals and Objectives of the Advancing the Hybrid Courtroom Workstream

- Identify and expand court appearance options, including remote or hybrid appearances.
- Share technical solutions and operational best practices locally and statewide.
- Identify necessary legislative changes or revisions to rules of court to eliminate barriers to increased access to remote appearances.
- Maintain and expand easy-to-use solutions for self-represented litigants (e.g., mobile devices, public computers, and court kiosks).
- Streamline remote appearances and gain efficiencies through electronic workflows and solutions (e.g., electronic signatures, and uploading and storing electronic evidence).

Metrics Necessary to Evaluate and Enhance Hybrid and Remote Appearances

- Number of courtrooms with remote access capabilities by county.
- Number of courtrooms not equipped to provide remote access by county.
- Number of courtrooms needing upgrades by county.
- Number of courtrooms upgraded by county.

Advancing the Hybrid Courtroom

Draft Findings and Recommendations

- Number of hearings held with remote participants per case type by county.
- Number of litigants participating remotely per case type by county.
- Number of counties with online instructions for the use of remote appearances.

Considerations to Enhance the Useability of Remote Appearance Technology

- Court user's access to, and ability to use, remote technologies.
- Consideration of the impact of remote appearances on court staff duties.
- Demand for, or interest in, participating in remote appearances by the court, parties, and other participants.
- The importance of collaboration and cooperation with stakeholders (e.g., facilities personnel, interpreters, court reporters, bar associations, justice partners, and advisory bodies).
- The necessity for changes to legislation or court rules.
- Court's ability to maintain and preserve courtroom decorum and the sanctity of a court proceeding.

Potential Funding Requirements—Implementation and Ongoing

One-time costs

- Courtroom audio and video systems.
- Bandwidth and network upgrades.
- Facilities upgrades.
- Assistance for those without access to technology who wish to appear remotely.

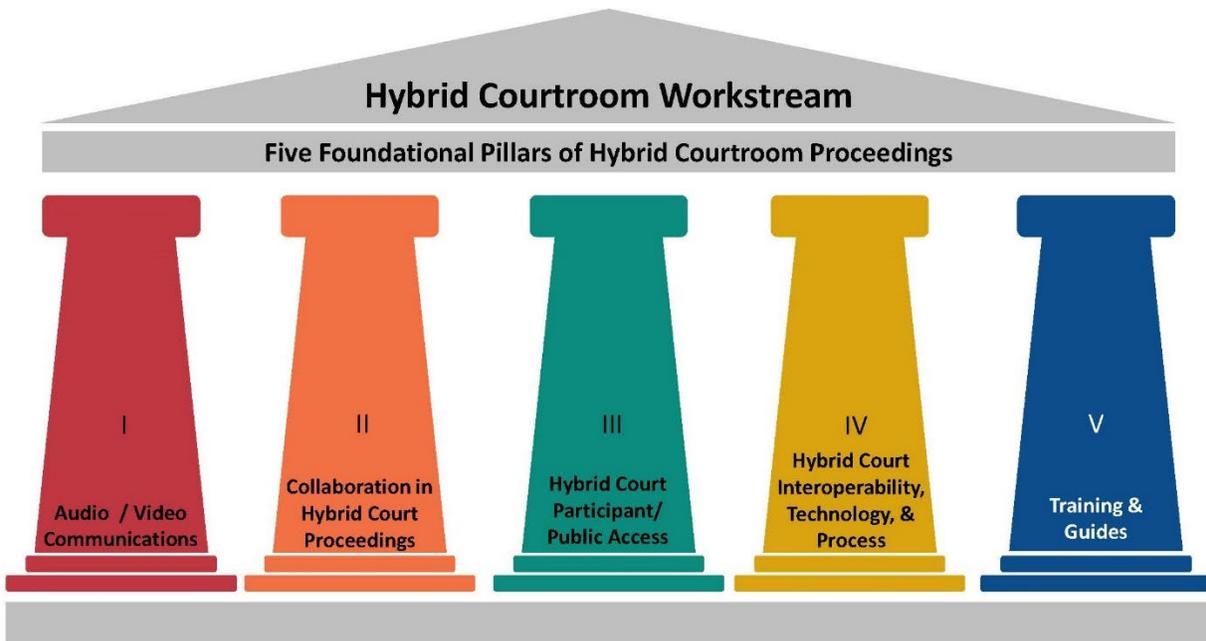
Ongoing costs

- Annual maintenance and licensing for hardware and software.
- Staffing needs.
- Training and support both internally and externally.

Advancing the Hybrid Courtroom

Draft Findings and Recommendations

Operational & Technological Requirements



Five Pillars of Hybrid Courtroom Workstream

Early in its study, the workstream decided that an effective way to assess and present the operational and technological needs and issues to be addressed by a hybrid courtroom program and ensure continued authority to conduct remote proceedings was to organize the discussion and analysis around five pillars. The five pillars are (1) Audio and Video Communications; (2) Collaboration in Hybrid Court Proceedings; (3) Hybrid Court Participant and Public Access; (4) Hybrid Court Interoperability, Technology, and Process; and (5) Training and Guides. They are discussed in detail below.

Pillar I: Audio and Video Communications

In all court proceedings, effective communication is critical to the fair litigation of every matter. The quality of audio and video impacts all participants in the proceeding. In a physical courtroom, audio is supported through microphones and speakers placed throughout the room. Historically, remote audio participation in court proceedings was primarily supported through teleconferencing systems. Beginning with the COVID-19 pandemic, videoconferencing capabilities (with or without video) were introduced and widely used to enable court staff and other participants in the proceeding to participate safely and effectively from a remote location.

The workstream identified key concepts and requirements necessary to ensure an effective forum in which all participants, regardless of physical location, could communicate and interact with the court, the other parties, and court staff.

It is fundamental that in a successful remote proceeding, all court participants can be identified and seen and/or heard. It follows that all participants must be seen and/or heard within the hybrid environment as well. It is also imperative that technology support or provide for confidential or

Advancing the Hybrid Courtroom

Draft Findings and Recommendations

restricted conversations (e.g., between a lawyer and a client and, if interpretation is needed, the client's interpreter, and between the judge and litigants outside the presence of a jury). Technology must also provide an ability for an interpreter to assist participants who are limited in their English proficiency or are deaf or hard of hearing. Finally, courtroom technology must provide an opportunity for a verbatim record of the proceedings to be captured whether by a court reporter or an electronic recording.

Control over courtroom proceedings is an important consideration. A judicial authority or selected courtroom staff (e.g., judge, judicial assistant, or someone with similar authority) must be able to mute or remove a courtroom actor at their discretion whether in person or participating remotely.

It is equally important that participants have the capability to alert the court to onsite or remote disruptive behavior that may not be visible to all.

Pillar II: Collaboration in Hybrid Court Proceedings

In all court proceedings, there is a need for collaboration and sharing of documents, forms, evidence, and other types of materials. These materials may be presented in physical form or electronically on several types of media. In-court, participants may bring with them a mix of computing devices and other supportive technology that need to integrate with the courtroom. At the same time, the court needs to provide access to remote participants with unknown devices, Internet Service Providers (ISPs), and potentially limited/poor connectivity and bandwidth. The experience of remote staff, participants, and the public varies based on connectivity capability and technology available and known to them. The branch should be cognizant of these user experiences, and identify opportunities to increase participant satisfaction and participation.

Courts must consider how participants can share, submit, and display evidence and documents in a hybrid environment when participants may connect via audio and video or audio only. To facilitate collaboration in a hybrid environment, participants must have access to documents and evidence regardless of how they are participating in the proceedings (in-person, via audio and video, or audio only). The optimal technology should allow participants to upload all evidence and other documents in electronic form—e.g., scanned documents, video, proposed settlement agreements—to a central repository controlled by the court.

The Superior Court of Orange County is currently conducting an electronic evidence pilot project that enables participants to submit evidence and documents in electronic form to the Orange court in advance of, or during, a hearing. Once the evidence is uploaded, the court controls the distribution of the evidence as well as other features, e.g., numbering of the exhibits. This program enables all parties to have access to the documents either before or during the proceeding so long as remote participants have access to the electronic evidence solution and can view the documents.

In the event that a court does not have a solution to afford participants the opportunity to submit evidence and documents to a central repository controlled by the court prior to a proceeding, courts need to implement procedures and rules that require parties to submit evidence and other documents to the court and other parties prior to the proceeding so that all participants have access to the evidence and documents in hard copy or original form facilitating all participants' access to the evidence

Advancing the Hybrid Courtroom

Draft Findings and Recommendations

and documents regardless of how they choose to participate in the hearing (in person, remotely with audio and video, or audio only).

Public access is critical to the transparency of the judicial branch. To that end, any court conducting hybrid proceedings should consider the various ways that participants will access the proceeding and implement rules and procedures so that all participants can view evidence and documents (either via a remote appearance solution or in hard copy or original form) and collaborate during the proceedings. Consideration should be given to remote technology solutions that (1) allow participants to join with or without video, (2) can accommodate a panoply of internet-connected devices (e.g., desktops, tablets, or smart phones), and (3) anticipate that some users may not have easy access to high-speed internet or electronic devices, which may necessitate court-provided resources such as a kiosk or partnering with public libraries.

As stated above, any remote technology solution should include the ability for participants to have confidential communications between and among the judge, attorneys, clients, interpreters, and court staff. In addition, it is important that remote participants can be identified either visually or audibly during the proceeding (e.g., the participant's name at the bottom of the video image or stating one's name before addressing the court).

Pillar III: Hybrid Court Participant–Public Access

During a hybrid proceeding, remote participants need to have access to a court proceeding that approximates the access one would have in person. One size does not fit all with participants' access to technology that would provide them with the ability to access courtrooms from outside the courthouse using solutions that anticipate a breadth of sophistication and access to devices and high-speed internet. It is imperative that the branch develop minimum technology standards for courts to maximize equal public access and transparency, and ensure that all courts throughout California enable participants who choose to appear remotely. This may require upgrades to infrastructure, cabling, and wiring in many courtrooms. Furthermore, in order to comply with California Code of Civil Procedure section 124, which requires courts to provide a public audio stream or telephonic means by which to listen to the proceedings when a courthouse is physically closed (unless the proceedings are required by law to be closed), it is recommended that all courtrooms be equipped with minimum technology components that would facilitate this access (e.g., a telephone line, VOIP system, or audio web stream that connects to a Digital Signal Processor (DSP), managed by a control system that enables "listen only" access).

Controls and procedures are key to protecting the sanctity of the legal proceedings and protect sensitive and confidential information from public view when allowed and required by law.

Finally, if courts provide public access remotely to court proceedings, it is important to recognize that this may increase distractions given that participants will likely be participating from home, work, or other locations. To minimize those distractions, "best practices" guides should be developed and distributed setting forth the expectations of the court for remote participants, and/or promulgated in local rules and orders. The legal community, especially bar associations, are available to partner with local courts to develop and distribute guidelines and guides to ensure successful hybrid proceedings that minimize distractions and maximize decorum, convenience, and increased access to courts.

Advancing the Hybrid Courtroom

Draft Findings and Recommendations

Pillar IV: Hybrid Court Interoperability, Technology, and Process

As with all public facilities, courthouses and courtrooms must be accessible. As a result of the sudden onset of the COVID-19 pandemic, courts were forced to hastily install, and bring online, remote access capability under very challenging circumstances. The result is a patchwork of equipment, hardware, cabling, and wiring infrastructure that has been installed and routed rather than a planned design and approach.

Each courtroom has technology infrastructure such as network cabling, audio/video cabling, switches, control boxes, outlets, additional electrical power sources, telecommunications wiring, shelving, storage, etc. The technology and sophistication needed to support audio and video for remote, hybrid, and onsite proceedings develop rapidly and add complexity to courtroom infrastructure.

One real-time security and process challenge is the placement of cameras in compliance with court rules, law, and court orders governing what and who can be seen in a particular proceeding. For hybrid proceedings to be successful, all participants must have access to technology solutions that enable them to meaningfully connect with and access court proceedings. Given that the level of access to internet services and electronic devices and the sophistication of remote participants vary widely, courts must anticipate that access to remote proceedings will vary. As a result, technology used in the courtroom to provide access to remote participants must be compatible with a wide variety of devices, applications, and systems that are capable of interfacing with the hybrid courtroom. The selected equipment should enable a participant to connect to the appropriate devices or be ready to be connected to devices used by remote participants.

During the pandemic, it became readily apparent that increased technology in a courtroom designed to facilitate remote access requires court personnel to have some training in how to operate the technology solution and equipment. This can be as simple as knowing how to turn the equipment on and readying the system prior to the time the proceedings begin; and troubleshooting when a participant is having difficulty connecting, participating, or being seen or heard. A courtroom participant delegating with authority to control the equipment, must have access to, and be capable of, managing the controls of the remote conferencing solution and audio/video controls to enable all participants in a hybrid proceeding to meaningfully participate.

In addition, the audio equipment in the courtroom requires configuration and controls to ensure that it does not conflict or interfere with foundational communications processes. Furthermore, equipment and furniture must be installed to meet the requirements set forth in the Americans with Disabilities Act (ADA) and computing accommodation and accessibility standards. This will require some thought and planning on the part of facilities personnel when installing equipment and placing furnishings to support hybrid court proceedings.

Furthermore, courtroom personnel must be able to access case management systems and calendars during any hybrid proceeding. It is also preferable if the remote conferencing software can be configured to meet the needs of the judicial officer and the particular case type they are handling.

With added technology comes added courtroom telecommunications, computing infrastructure, audio/video control systems, standalone devices, cabling, and electrical power cords. All these items

Advancing the Hybrid Courtroom

Draft Findings and Recommendations

should be safely and securely installed to minimize tripping and other hazards. In addition, the telecommunications equipment and infrastructure should be moveable and adjustable to support courtroom operations.

Even minimum technology solutions that will facilitate hybrid proceedings for all users regardless of broadband access, Wi-Fi strength, and sophistication of the device used to connect to the proceeding, mean that there must be additional cameras and microphones in courtrooms that will hold hybrid proceedings. As a result, courtroom staff must be aware of the vantage point of courtroom cameras. In many case types, there are prohibitions about what and who may be seen and heard. Speakers with quality sound capability will easily pick up all audio. As a result, participants must pay close attention to the location and capability of speakers so that confidential conversations and communications are not broadcast. It is important that the minimum technology standards include the ability for participants to manage a microphone's power, volume, and directional capabilities.

Having a broadcast delay (of a couple of seconds or more) would allow the opportunity to stop objectionable content from being broadcast (by being "bleeped" or silenced before it is transmitted in a live court proceeding).

Pillar V: Court Participant Training and Guides

Courtrooms are outfitted with many types of audio and video, telecommunications, computing devices, cabling, and other necessary devices to support onsite, remote, and hybrid operations, which can lead to differences in technology within, and among, courtrooms. At a minimum, judicial officers and court staff require training on operating courtroom technology and any updates or upgrades completed. The training should be ongoing and continuous such that those who operate court-provided technology can also troubleshoot, triage failed devices, and control devices if needed.

Some hybrid court participants, including those who are limited in their English proficiency or who are deaf or hard of hearing, may have difficulty with first-time remote experiences and adapting to changing technology. Court staff should be trained to assist limited-English-proficient participants or have interpreters available to translate as court staff troubleshoot with participants.

Ideally, courts should have resources to distribute to communities that courts serve about how to access courtrooms remotely. The options for external communications are many. Court websites should provide directions about remote participation and connection, and those items should be easy to find. Court websites should also include troubleshooting and FAQs to address common connection issues. If resources are available, there should be help desk personnel available to all participants. Bar associations and other legal organizations can be leveraged to help courts communicate and provide training regarding remote access to proceedings. Churches, community organizations, local legislators' staff, libraries, schools, and other government offices are available to partner with local courts to ensure that their constituents have the information and resources they need to meaningfully access the courts via remote means. All court users recognize the benefits of being able to access courts other than by physically appearing in a courtroom, whether they avail themselves of that option or not. Accordingly,

Advancing the Hybrid Courtroom

Draft Findings and Recommendations

local communities can work together with courts to facilitate remote access to courts by providing information, training, and education.

Finally, courts can create and distribute materials to court users so that remote participants have access to information about remote access. Those materials should be readily available on the court website, in courthouse locations, and at locations in the community. These materials should be printed in various languages.

Functional Requirements

The hybrid courtroom model ideally should include 10 functional roles. Each of the roles may have responsibilities that correspond with activities that require hardware and software components to support the outcome of a hybrid courtroom experience. The roles are:

1. Judicial Officer;
2. Judicial Assistant;
3. Court Reporter;
4. Courtroom Clerk;
5. Bailiff;
6. Attorney;
7. Witness;
8. Digital Evidence Presentation;
9. Juror; and
10. Public Access (Code Civ. Proc., § 124).

Advancing the Hybrid Courtroom

Draft Findings and Recommendations

Minimum Requirements

Minimum requirement considerations based on functional requirements.

	Control Commands	On Camera	On Microphone	On Display Courtroom	On Display Remotely	On Record	Sidebar	Listen-Only Access
Judicial Officer	✓	✓	✓	✓	✓	✓	✓	
Judicial Assistant	✓	✓	✓	✓	✓	✓		
Courtroom Clerk		✓	✓			✓		
Bailiff		✓	✓		✓	✓		
Court Reporter		✓	✓	✓	✓	✓	✓	
Court Interpreter (VRI)		✓	✓	✓	✓	✓	✓	
Attorneys		✓	✓	✓	✓	✓	✓	
Witness		✓	✓	✓	✓	✓		
Digital Evidence Presentation (DEPS)		✓	✓	✓	✓	✓		
Jurors		✓	✓	✓	✓	✓		
Public								✓

Courtroom Orchestration

Technical

Context: The equipment that is staged in each courtroom and placed where judicial proceedings occur needs to be configured and set up to operate when needed.

Business need:

1. Preparing the courtroom for all participants is critical to the operation of the proceeding.
2. Each device should be set to a predetermined baseline to operate during the proceeding (video settings, audio settings, location, power distribution, peripheral connections).
3. Each device requires testing for proper operation and integration into the system.
4. Supplementary and support peripherals (e.g., mouse, keyboard, external microphone) require physical connectivity checks, maybe testing.
5. Verify wireless connectivity for connected devices and peripherals (Wi-Fi & Bluetooth).
6. Verify sufficient bandwidth for internal and external users.
7. Verify operation of noncomputing devices such as projectors, microphones, standalone cameras, control panels, lighting, screens, and monitors/TVs.
8. Inspect courtroom for trip hazards (cabling, equipment locations, etc.).

Advancing the Hybrid Courtroom

Draft Findings and Recommendations

Recommendations:

1. Identify options for a court resource to "pre-flight" the courtroom for operational readiness for specific case types.
2. Develop a model checklist for testing of all courtroom devices required for remote proceedings.
3. Develop guidelines for testing of network and telecommunications connectivity and bandwidth capacity.
4. Develop courtroom operations training videos and guides for all participants.
5. Develop a courtroom communications guide.
6. Develop a model judicial officer operational checklist.

Operational

Context: To support onsite, remote, or hybrid session(s), both the physical courtroom, the remote technology/solutions, court staff, and participants require significant preparation efforts. The local court team prepares the courtroom technology and sets up the software solutions to meet the day's needs.

Business need:

1. Remote conferencing software that may be configured to meet judicial officer and particular case needs.
2. Audio equipment is turned on and does not interfere with other devices; volume is set correctly.
3. Video and projection equipment is set up, connected to the appropriate devices, and/or ready to be connected to litigant-provided devices.
4. Judicial officer, or delegate, has access and can manage the controls of the remote conferencing solution and audio/video controls.

Recommendations:

1. Develop model configurations and settings for the courtroom that provide options for both the case type and the preferences of a specific judicial officer and their staff.
2. Develop a "Start-up Checklist" for the judicial officer, or their delegate, to complete just prior to a session starting to assure the audio, video, and computing devices are operating correctly.

Advancing the Hybrid Courtroom

Draft Findings and Recommendations

Court Technology

Context: Once a court proceeding and/or series of hearings are started, technology requires human intervention for operations such as reconfiguration, restarts, volume control, camera angles, etc. If the technology supporting the hearing fails, the judicial officer may call a recess to address the technology failure and enable all participants to resume the hearing.

Judicial Officer / Courtroom Clerk / Judicial Assistant	
	Playbook
Audio/Visual System Controls	<ol style="list-style-type: none">1. Control AV system2. Control electronic recording3. Control remote participants4. Exhibit control5. Preserve digital evidence6. Volume controls
Remote Platform System Controls	<ol style="list-style-type: none">1. Connect/disconnect (end meeting)2. Control electronic recording3. Control remote participants4. Control sidebar5. Control exhibit6. Mute all
Infrastructure	<ol style="list-style-type: none">1. Needs power/electricity2. ADA-compliant workspace3. Connect to network (3 data drops)4. Clear conduit paths to telco closet (IDF)5. Millwork location for cable management

Business need:

1. An audio and video master control panel available to the judicial officer/their delegate to operate all courtroom technology available.
2. Enable the judicial officer to delegate control of all or specific components of the courtroom technology to specific users.
3. Standardized signals to communicate that some immediate action is required.
4. Automated alerts to any court participant that a system component of the courtroom technology has failed or there is critical error.

Recommendations:

1. Research and develop model courtroom technology configurations and solutions.

Advancing the Hybrid Courtroom

Draft Findings and Recommendations

Courtroom Minimum Technical Requirements

Hardware Requirements	QTY	Specified Location
1. Control Panel (Audio/Video Controls)	1	TBD
2. Video Switcher	1	AV closet (rack)
3. Sound Reinforcement (System) <i>a. to include Assistive Listening System (ALS)</i>	2	Throughout courtroom (Facilities standards). Note: The specific locations and quantities for the hardware components will need to be determined by the Facilities and Permits team.
4. Digital Evidence Presentation System (DEPS)	1	DEPS cart
5. 8-Channel Audio Mixer	1	Underneath clerk desk
6. Hardware (Infrastructure)	4	Judge, witness, DEP cart, attorney table (Facilities standards). Note: The specific locations and quantities for the hardware components will need to be determined by the Facilities and Permits team.
7. Videoconferencing System (CODEC)	1	TBD to include AB 716 minimum requirement
8. Video Camera	2	Back (judge & witness), front (attorney tables)
9. Microphone	6	Judge, witness, 2 attorneys, clerk, wireless
10. Display Monitor	1	Projector & screen (opposite jury box)
Software Requirements	QTY	Recommended Location
System Controls (Hybrid/Remote functionality)	2	Judicial officer, judicial assistant, or courtroom clerk

Advancing the Hybrid Courtroom

Draft Findings and Recommendations

Additional Considerations

In a hybrid courtroom model, the hardware required to support this environment could increase the amount of audio outputs, microphones, cameras, monitors, and displays needed to support a hybrid experience. The additional need for hardware infrastructure modifications may also be required based on court size and layout and hearing types.

Hardware Requirements	QTY	Additional Location
1. Control Panel (Audio/Video Controls)	2	None
2. Video Switcher	1	None
3. Sound Reinforcement (System) <i>a. to include Assistive Listening System (ALS)</i>	1	None
4. Digital Evidence Presentation System (DEPS)	1	None
5. 8-Channel Audio Mixer	1-3	TBD
6. Hardware (Infrastructure)	4+	Note: The specific locations and quantities for the hardware components will need to be determined by the Facilities and Permits team.
7. Videoconferencing System (CODEC)	1	TBD to include AB 716 minimum requirement
8. Video Camera	4+	TBD
9. Microphone	6+	TBD
10. Display Monitor	1+	TBD
Software Requirements	QTY	Recommended Location
System Controls (Hybrid/Remote functionality)	2+	Judicial officer, judicial assistant, or courtroom clerk

1. Explore available solutions that would generate an error notification for performance and system failure.
2. Develop standard signals for which courtroom technology needs to be adjusted and how.

Courtroom Post-Operations

Context: The equipment that is staged in each courtroom and placed where judicial proceedings occur needs to be properly shut down/put to sleep to be easily set up for the next use.

Business need:

1. Properly configure and/or power down the technology that supported the court proceedings.
2. Identify and document any discrepancies that occurred during the court proceedings.
3. Disconnect any noncourt-provided equipment from the court technology and network.

Advancing the Hybrid Courtroom

Draft Findings and Recommendations

Recommendations:

1. Develop a template/checklist to power down, hibernate, and/or secure the courtroom technology from wear and tear or potential misuse.
2. Develop a model operations and maintenance procedure to document any issues, equipment failures, cybersecurity threats, or software glitches to be repaired or mitigated before the next operational session.
3. Develop a postsession model checklist to identify any noncourt technology or computing machines still connected or left by noncourt participants so they can be removed, the system secured, and the noncourt-provided equipment secured.

Courtroom Standard Communications

Context: The hybrid courtroom experience must allow participants to be in multiple remote locations on multiple types of devices with a mixed use of video with audio, and audio only.

Business need:

1. Various participants use many types of nonverbal communications in the courtroom and on remote conferencing to get the attention of the appropriate participant.
2. Videoconferencing applications have different reactions or “raise hand” features.

Recommendations:

1. Develop a branchwide model document with a standard definition/meaning to the Teams/Zoom/BlueJeans reactions and hand raising. This would support court participants and reduce real-time socialization to a specific court. Below are some suggested standards being developed for nonverbal communication between a judicial officer and a court interpreter.

Nonverbal Communication / Cues / Commands

Suggested Hand Signals for the Judicial Officer and Court Interpreter to Communicate

The following are recommended hand signals for the judicial officer and interpreter to use during a VRI-interpreted proceeding. These are universal signals that can be used to quickly and effectively convey to the court the need to slow down, wait, or stop. Note that all communications, including hand signals, must be recorded on the record.

	Everything is good.
	Slow down.
	The interpreter needs a break.
	The interpreter can't hear or see what is happening.
	The interpreter has a question.

JUDICIAL COUNCIL OF CALIFORNIA

Advancing the Hybrid Courtroom

Draft Findings and Recommendations

Court—Creating a Virtual Experience

Context: All participants, whether remote or onsite, should see and experience the same trial/hearing content (not available if participating by phone).

Business need:

1. All items that must be displayed, whether digital or physical, should be viewable by all participants.
2. Availability to use, in court or from a remote location, digitized evidence that may be categorized, numbered, reviewed, accessed, projected/displayed, etc.

Recommendations:

1. Review and align with the Electronic Evidence Workstream’s recommendations to support a solution and a process for litigants to transfer files, images, documents, emails, etc., into a secure Cloud or on-premises location.
2. Research and identify devices that have the capability to render 2D and 3D images for use during proceedings.
3. Research and develop the capability to zoom in or reduce image size as needed during a court session so that the digitized evidence can be seen clearly on any connected device.
4. Develop model procedures for the use of digitized/electronic evidence.

Evidence

Context: The transformation of physical evidence and documents into a digitized format to be used in both a remote session and an on-premises court. Digitization is required for preparation and near–real time during the court proceeding.

Business need:

1. An operator to support the digitization process.
2. Court staff to retrieve digitized evidence, then support the display/presentation in the courtroom and in the online conferencing solutions/tools.
3. The capability to mark and categorize the digital evidence.

Recommendations: Electronic Evidence Workstream recommendations.

Courtroom User Experience

Context: The remote/hybrid courtroom experience should be able to simulate the onsite experience as realistically as possible. The video/visual experience should be similar in nature such that relevant participants are able to gauge both verbal and nonverbal expressions and communications.

Business need:

1. The capability of the virtual courtroom experience to be like the physical experience.
2. Behavior, appropriate and inappropriate, and the maintenance of decorum is of concern to the court.

Advancing the Hybrid Courtroom

Draft Findings and Recommendations

Recommendations:

1. Develop best practices and standards, including conduct and use of technology, to be used by onsite and remote court participants.
2. Develop an approach for camera and audio locations that is accessible to the public and that protects human and physical resources from misuse, identification, or any security breaches.
3. Develop a design standard to install and configure cameras and/or microphones that only enables the camera views and/or audio content allowed by law or rules of court.

Courtroom Audio

Context: Courtroom audio technology varies from court to court and courtroom to courtroom. Multiple configurations and locations of microphones and speakers that are not part of the technology solution may already exist in the courtroom. The technology solution is comprised of a multitude of devices with internal speaker and microphones, both court-provided and litigant-provided. Outside the courtroom, remote participants use devices and technology not part of the courtroom technology.

Business need:

1. Allow private conversations that should not be heard throughout the courtroom.
2. Speakers that allow clear sound so that all participants may hear relevant discussions.
3. Capability to manage a microphone's power, volume, and directional capabilities.
4. Capability to mute any participant.

Recommendations:

1. Investigate and identify appropriate microphone technology for each courtroom based on use, security, and privacy needs of all participants. In a hybrid courtroom model, the general recommendation would suggest that any person or persons speaking or presenting evidence on "record" could be presented and unmistakably identified by any person or persons physically inside a courtroom or appearing remotely. (See chart below.)

Current Standards (Not Hybrid)

Hardware Requirements	QTY	Specified Location
Microphone	6	Judicial officer, courtroom clerk, witness, (2) counsel tables, wireless

Advancing the Hybrid Courtroom

Draft Findings and Recommendations

Hybrid Courtroom Minimum Requirements: Considerations are based on audio functional requirements.

	Control Commands	On Camera	On Microphone	On Display Courtroom	On Display Remotely	On Record	Sidebar	Listen- Only Access
Judicial Officer			✓					
Judicial Assistant			✓					
Courtroom Clerk			✓					
Bailiff			✓					
Court Reporter			✓					
Court Interpreter (VRI)			✓					
Attorneys			✓					
Witness			✓					
Digital Evidence Presentation (DEPS)			✓					
Jurors			✓					
Public								

Advancing the Hybrid Courtroom

Draft Findings and Recommendations

2. Research systems that would provide the judicial officer, or their delegate, with capabilities to control courtroom audio.

Suggested Controls

Hardware Requirements	QTY	Specified Location
1. Control Panel (Audio/Video Controls)	2	TBD
3. Sound Reinforcement (System) <i>a. to include Assistive Listening System (ALS)</i>	1	Throughout courtroom (Facilities standards). Note: The specific locations and quantities for the hardware components will need to be determined by the Facilities and Permits team.
5. 8-Channel Audio Mixer	1-3	Underneath clerk desk
6. Hardware (Infrastructure)	4	Judge, witness, DEP cart, attorney table (Facilities standards). Note: The specific locations and quantities for the hardware components will need to be determined by the Facilities and Permits team.
7. Videoconferencing System (CODEC)	1	TBD to include AB 716 minimum requirement.

3. Develop a model “Terms of Use Agreement” that specifies the set of rules to be used by onsite and remote court participants.

Courtroom—Access from Anywhere

Context: Hybrid courtrooms should be developed with consideration not only of capabilities and needs currently available but also those that may be relevant 5–10 years from now.

Business need: Considerations for remote (hybrid) participation in court proceedings should account for participants being physically located, at a minimum, anywhere in the United States.

Recommendations:

1. Amend and/or adopt rules/legislation that address court participant location.
2. Amend and/or adopt rules/legislation that address the required regalia to be seen in a hybrid courtroom proceeding.
3. Develop a standard design for a virtualized courtroom that recognizes court tradition and decorum.
4. Develop rules and/or guidelines for court participant dress and expected behaviors.

Advancing the Hybrid Courtroom

Draft Findings and Recommendations

Courtroom Cameras

Context: Placement of cameras and what/who can be seen are governed by court rules, legislation, and court participants' individual physical security requirements.

Business need:

1. Courtroom staff must be aware of what courtroom cameras are focused on and allowing to be viewed.
2. There are restrictions on what/who may be seen and identified in an image, depending on the participant and the proceeding.

Recommendations:

1. Develop guidelines on video camera operations. The guidance would focus on boundaries for video operations, recording of video, and who can and cannot be on camera based on their specific role(s). In a hybrid courtroom model, the general recommendation would suggest that any person or persons speaking or presenting evidence on "record" could be presented and unmistakably identified by any person or persons physically inside a courtroom or appearing remotely. (See chart below.)

Advancing the Hybrid Courtroom

Draft Findings and Recommendations

Current Camera Placement Standard (Not Hybrid)

Hardware Requirements	QTY	Specified Location
4. Digital Evidence Presentation System (DEPS)	1	None
8. Video Camera	2	Back (judicial officer & witness), front (attorney tables)

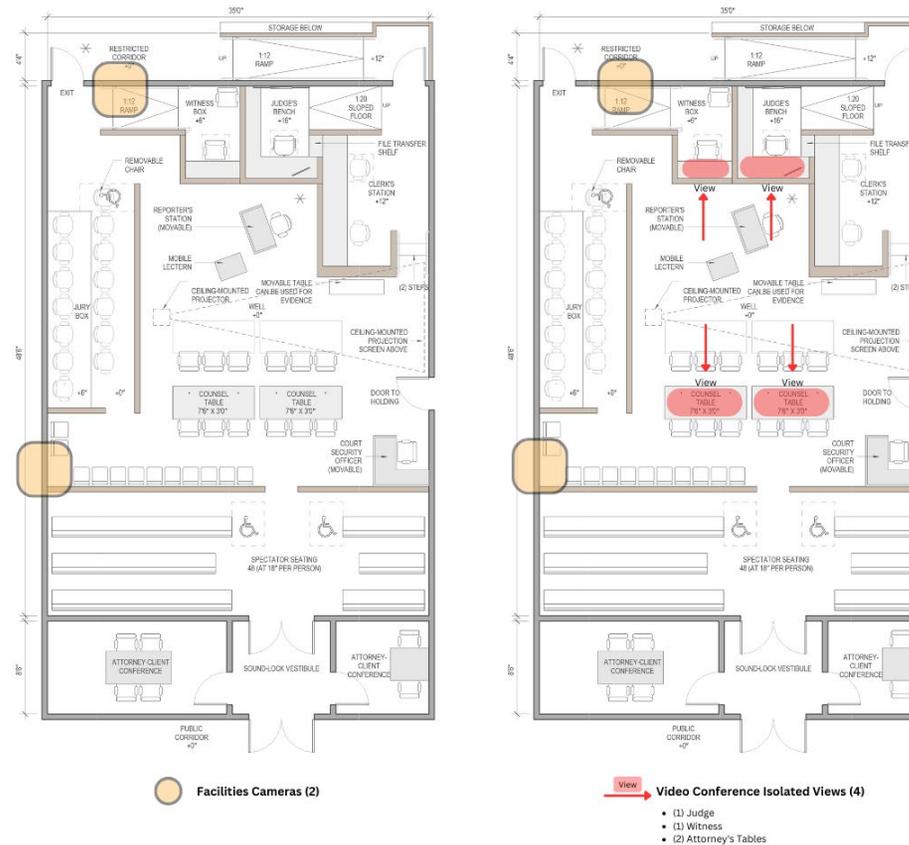
Hybrid Courtroom Minimum Requirement Considerations Based on Functional Requirements (Video)

	Control Commands	On Camera	On Microphone	On Display Courtroom	On Display Remotely	On Record	Sidebar	Listen-Only Access
Judicial Officer		✓						
Judicial Assistant		✓						
Courtroom Clerk		✓						
Bailiff		✓						
Court Reporter		✓						
Court Interpreter (VRI)		✓						
Attorneys		✓						
Witness		✓						
Digital Evidence Presentation (DEPS)		✓						
Jurors		✓						
Public								

- Investigate and identify cameras and camera automation that could provide additional value-added capabilities and security to the courtroom.
- Research and develop a set of model instructions for camera placement, limits on what is viewable, and how the cameras are physically and virtually controlled.

Advancing the Hybrid Courtroom

Draft Findings and Recommendations



Current Camera Placement Diagram (Not Hybrid)

Advancing the Hybrid Courtroom

Draft Findings and Recommendations

Courtroom Infrastructure

Context: Each courtroom has technology infrastructure such as network cabling, audio/video cabling, switches, control boxes, outlets, additional electrical power sources, telecommunications wiring, shelving, storage, etc. The technology and sophistication needed to support audio and video for remote, hybrid, and onsite proceedings develops rapidly, and adds complexity to courtroom infrastructure.

Business need:

1. Infrastructure requires that manual arrangement and movement not hinder courtroom operations.
2. The infrastructure needs to be configured to support safe access and be ADA compliant.

Recommendations:

1. Conduct research to discover best practices in setting up temporary and permanent audio/video ecosystems.
2. Develop model instructions to guide facilities and technology staff in how audio, video, computing machines, and related cabling should be physically installed, routed, and placed in the courtroom.
3. Develop facility guidelines for the permanent routing and storage of infrastructure through raised floors, walls, equipment closets, and specialized cabinetry needed to support specific pieces of hardware and/or control panels.
4. Develop guidelines for periodic observations and inspections to identify obstacles or safety barriers that inhibit access and safety during court proceedings. This would include suggestions for remedies or mitigation.
5. Advance an initiative to develop a multidisciplinary team to address courtroom technology needs for all case types, physical court facility sizes, and locations.
6. Conduct market research and acquire network (Wi-Fi) access points in each courtroom with sufficient bandwidth, connections, and multifrequency to support reliable, fast, and stable Wi-Fi access in each endpoint (device).
7. Conduct market research and acquire LAN/WAN bridging technology for litigant access when appropriate and secure.
8. Conduct market research to identify alternate and/or backup internet service providers using a spectrum of infrastructure (e.g., StarLink, cable, fiber, Hi-Speed DSL, traditional satellite, cellular data, etc.).

Courtroom Facilities

Context: As with all public facilities, there is federal, state, and local governance to make the courtrooms accessible. Additionally, facilities had to be quickly retrofitted with audio/video equipment, streaming and broadcasting equipment, telecommunications equipment, computing networking, and other hardware and personal protection equipment. The result was a patchwork of equipment, hardware, cabling, and wiring infrastructure installed and routed as needed versus a planned design and approach.

Advancing the Hybrid Courtroom

Draft Findings and Recommendations

Business need:

1. Courtroom telecommunications, computing infrastructure, audio/video control systems, standalone devices, cabling, and electrical power cords should be safe, secure, and safe to traverse.
2. The configuration of the courtroom should be compliant with the ADA and any state or local statutes.
3. Telecommunications equipment/infrastructure may be moved and adjusted to support courtroom operations. However, the cabling, equipment, and devices should not present trip hazards, be obstacles, or result in limitations in nonnatural movement in the courtroom.

Recommendations:

1. Research, review, and update the current facilities guidelines for courtrooms to account for modern remote and hybrid technology and telecommunications equipment that may impede physical access.
2. Review the current federal and state statutes on ADA, Section 508 Information and Technology Communications, and Section 501 Reasonable Access to identify key areas of the hybrid courtroom that may require access mitigation, adaption/rearrangement of equipment and infrastructure, compliance, and barrier mitigation.
3. Develop a template of minimal standard courtroom hybrid configuration.
4. Create a minimum standard for audio/video/computing machines to support remote and hybrid proceedings that takes into consideration a level of reasonable access that enables a right of entry to the justice system.

Remote Public Access

Context: For onsite court hearings, public access is made available through the physical galleries in the courtrooms. Some courts offer access through videoconferencing (watch/listen only), some offer phone access (listen), and some only offer onsite participation with no cameras/video equipment.

Business need:

1. As the manner in which public access to proceedings varies from court to court, legislation may be put in place to provide consistency.
2. There are no branchwide technology standards for providing public access.
3. Public access is critical to the transparency of the judicial branch.
4. The public in all but limited circumstance, managed by the judicial officer, has a right to access court proceedings.
5. During the COVID-19 pandemic, some courts gave full remote access (viewing and listening, not two-way conversations) to the public. Others offered very limited options including physical attendance in the courtroom.
6. Aging cabling and wiring are compromised such that audio quality is poor at best, making streaming and telecommunications unsuitable for remote access.
7. Difficult, if not impossible, to limit recording of streaming services in the public ecosystem.
8. Camera view should only show what is appropriate/allowed.

Advancing the Hybrid Courtroom

Draft Findings and Recommendations

Recommendations:

1. Develop standards for public access to remote and hybrid proceedings. At a minimum, all courtrooms must provide the public access to listen to proceedings remotely via audio stream or telephonically. To satisfy the minimum requirements for AB 716 (Stats. 2021, ch. 716), it is recommended that all courtrooms be equipped with at least one telephone line, VOIP system, or audio web stream that connects to a DSP managed by a control system for the function of telecommunication with listen-only functionality for public access.
2. Research solutions to monitor live audio to manage the quality of the audio streams.
3. Develop camera placement and operations guidelines to only show what is allowed by law and rules of court.
4. Research and identify solutions to enable remote access for court participants that do not have access to technology and/or technology sufficient to support remote/hybrid access to the courts.

Courtroom Communications

Static

Context: For any proceeding, there are many one-to-one, one-to-many, and many-to-many communication endpoints. These take place over many communication venues and electronic solutions. For instance, participants could be speaking, texting, emailing, chatting, hand signaling, and talking through back channels all at the same time.

Business need:

1. Standard operations instructions and appropriate-use conditions for communications, device use, and computing machine solutions/applications during court operations/sessions.

Recommendations:

1. Create standards guide (court playbook) on appropriate communication methods.

Advancing the Hybrid Courtroom

Draft Findings and Recommendations

Courtroom Communications

Dynamic

Context: The audio and visual communication qualitative experience impacts all participants in a court proceeding. Within a traditional setting, audio is supported through microphones and speakers placed throughout the room. During a remote hearing, audio is supported through teleconferencing systems. Beginning with the COVID-19 pandemic, videoconferencing capabilities were introduced to enable court staff, court resources, and hearing participants to participate safely from a remote location unbounded by a physical location such as a courtroom or court building.

Business need:

1. All participants need to see human activity within the physical and virtual environment.
2. All participants need to clearly hear and understand verbal communications based on their individual role and purpose in the proceeding.
3. All participants need to see nonverbal communications to understand intent, purpose, and meaning of communications.
4. Communications sometimes must be paused to clarify a statement, audio/video glitch, intentional/unintentional interruptions, or other distractions that would result in a miscommunication.
5. All participants need to be able to alert participants to onsite or remote disruptive behavior that may not be visible to all.
6. All participants need to see and verbally identify other participants and their specific role in the proceeding.

Recommendations:

1. Develop a courtroom communications guide (courtroom playbook).
2. Develop standards for video monitor(s) that would enable at least the judicial officer to view all participants.
3. Produce model designs for the best placement of audio/video equipment and how to make it compliant with the relevant legislation.
4. Develop an initial, continuous, and long-range training program on the use of court audio/video equipment and control mechanisms.

Advancing the Hybrid Courtroom

Draft Findings and Recommendations

Time Management

Context: Electronic access to the court calendar should be available to the judicial officer and delegated staff to schedule future events.

Business need:

1. Judicial officers and court clerks/judicial assistants have a near–real time need to have access to calendars to schedule future events.

Recommendations:

1. Make available to the judicial officers, court clerks, and any other designated participant online access to calendars as appropriate.

Courtroom Equipment Operations and Management

Context: The successful operation of a hybrid courtroom is dependent on modern technology. The software/application selected by the courts has an implicit expectation that it will be operational with the general levels of technology used by all participants, independent of case type.

Business need:

1. Courtroom equipment must be compatible across operating systems and brands.
2. The audio/video equipment provided by the court must also be compatible with devices brought into the courtroom by noncourt participants.
3. The audio equipment in the courtroom requires configuration and controls so it does not conflict or interfere with inherent communications processes.
4. Equipment/furniture must be set up to meet ADA and computing accessibility standards.

Recommendations:

1. Develop a facility template for the use of technology and integration of decentralized systems for each court size and case type.
2. Draft a model user’s guide to provide noncourt participants with the device and software specifications needed to connect to the courts’ remote services.
3. Develop a checklist to assess ADA compliance.
4. Develop a model checklist to verify that technology/software provided is compliant with Section 508 of the Rehabilitation Act Information and Communications Technology (ICT) final standards and guidelines as well as Web Content Accessibility Guidelines (WCAG) 2.X at the appropriate level (A, AA, AAA). (Gov. Code, § 11135, Ref. § D.)

Courtroom System/Solution Training

Context: Courtrooms are outfitted with many types of audio/video, computing devices, telecommunications, cabling, and other necessary devices to support onsite, remote, and hybrid operations, leading to great diversity between courtrooms. At a minimum, judicial officers and court staff require operational training on courtroom technology and any updates or upgrades completed.

Advancing the Hybrid Courtroom

Draft Findings and Recommendations

Business need:

1. Courtroom staff in general need to be provided training to operate courtroom technology.
2. The training should be ongoing and continuous such that those who operate court-provided technology can also troubleshoot, triage failed devices, and control devices if needed.

Recommendations:

1. Develop courtroom operations training videos and guides for all participants, including visiting judicial officers.
2. Develop a production script with a troubleshooting guide for potential issues.

Courtroom Wi-Fi and Bandwidth

Context: Proceedings are dependent on adequate Wi-Fi signal and bandwidth to support not only remote audio and video connections, but also in-courtroom display of evidence and other activities requiring connections to systems and services outside the courtroom.

Business need:

1. The courtroom has sufficient Wi-Fi signal to support many devices.
2. The courtroom has sufficient bandwidth to support audio/video conferencing services.
3. The courtroom has the infrastructure to enable litigants to connect to their organization's computing and online services.
4. The courtroom has the capability to deploy alternative (litigant-provided) audio/video equipment and internet/network access.

Recommendations:

1. Develop minimum standards for Wi-Fi access points to support the increasing demand for signal strength and bandwidth.

Court Reporters

Context: Court reporters may serve as court staff or as a contracted service. They bring the tools and software they need to capture the official record of court proceedings. During the proceeding, court reporters may ask speakers to repeat and/or clarify their speech to ensure that transcripts truly represent what was said. Remote proceedings complicate the court reporter's task by introducing multiple sources of speech and activities using electronic devices, audio/video equipment, mobile devices, and landline-based telecommunication equipment.

Business need:

1. Court reporters need to clearly hear and record the spoken word during the hearing.
2. Court reporters need to see and identify speakers.
3. Court reporters need to communicate (verbally or through nonverbal gestures) with the judicial officer to avoid conversational gaps in the official hearing record.

Advancing the Hybrid Courtroom

Draft Findings and Recommendations

Recommendations:

1. Create a set-up and operational script to configure, integrate, and test the court reporters' tools with the technology supporting the proceedings.

Court Reporter Roles and Responsibilities

Court Reporter	Playbook
Audio Required	<ol style="list-style-type: none">1. Be on microphone2. Ability to hear all participants3. Microphone and speaker with headphone jack and volume control4. Listen to sidebars5. Have local speaker to hear clearly
Courtroom Visual Requirements	<ol style="list-style-type: none">1. Ability to see in-person speaking individuals (sufficient screen size required in ASL)2. Present real-time (court reporter transcript transmission)3. Ability to see and hear participants in sidebars (when needed)
Remote Appearance Visual Requirements	<ol style="list-style-type: none">1. Ability to see the remote speaking individuals2. Ability to see and hear participants in sidebars (when needed)

2. Collaborate with court reporters to develop a model for communicating verbally and nonverbally with the judicial officer.

Court Interpreters

Context: Court interpreters, much like court reporters, may be internal court staff or a contracted resource. They can operate remotely or in court based on the tools they use. Their client or customer expects to be served in a way that provides them access to justice notwithstanding any language barrier.

Business need:

1. Interpreters may be required to collaborate with court staff and their client prior to, during, and after the proceeding to interpret and guide them through the processes and court technology solutions.
2. Interpreters have access to and use a diverse set of technology, tools, audio/visual software, and accessories to serve their clients through the court system.
3. Interpreters may interact with onsite and remote participants and other interpreters, as well as secondary and tertiary communications and personal devices.
4. ASL interpreters may experience challenges interpreting via conferencing software due to line-of-sight obstacles in viewing their client, as well as the 2D representation of signed communications.
5. Interpreters are often asked by clients to assist with the navigation of technology, which is not one of their core competencies.

Advancing the Hybrid Courtroom

Draft Findings and Recommendations

6. Interpreters need clean and clear audio, whether onsite or remote, to provide satisfactory interpreting to their clients. With multiple sources of audio (sound), it may be difficult to correctly hear what is being spoken based on the device’s location, internet quality, and background noise, as well as other signal quality factors.

Recommendations:

1. Collaborate with an integrated team of diverse interpreters to further identify challenges and potential solutions in support of onsite, remote, and hybrid proceedings.
2. Develop a courtroom communications guide.

Courtroom Interpreter Roles and Responsibilities

Courtroom Interpreter (VRI)	Playbook
Audio Required	<ol style="list-style-type: none"> 1. Ability to hear all participants 2. Microphone and speaker with headphone jack and volume control 3. Simultaneous interpretation (connect with the LEP via a separate line) 4. Ability to interpret confidential attorney and client conversation
Courtroom Visual Requirements	<ol style="list-style-type: none"> 1. Ability to see the remote and in-person speaking individuals (sufficient screen size required in ASL) 2. Ability for deaf and hard of hearing individuals and interpreter to see one another (For ASL. Sufficient screen size required) 3. Ability to see and hear participants in sidebars (when needed) 4. Ability to view evidence/documents presented for sight translation
Remote Appearance Visual Requirements	<ol style="list-style-type: none"> 1. Ability to see the remote and in-person speaking individuals 2. Ability for deaf and hard-of-hearing individuals and interpreter to see one another 3. Ability to see and hear participants in sidebars (when needed) 4. Ability to view evidence/documents presented for sight translation

3. Develop a checklist to verify that the court network and bandwidth are sufficient to support the interpreter’s role.
4. The only provisions suggested in the Facilities AV Standards are to provide the infrastructure to support video remote interpreting in courtrooms from a portable cart. The purpose of this infrastructure is to allow a remote language interpreter to hear the courtroom proceedings—and to be heard—and to view any evidence presented. The optional cart will house one or more monitors, a camera, and videoconference hardware. Audio connections shall consist of a line-level output from the courtroom (i.e., microphones) and a line-level input to the courtroom audio system. A video output will duplicate the feed to the courtroom evidence display. This video output will connect to the videoconference hardware on the cart. See the following chart.

Advancing the Hybrid Courtroom

Draft Findings and Recommendations

AOV Standards Chapter 18.D Audiovisual Systems Description, 11. Provisions for Video Remote Interpreting (Minimum Requirement).

Remote Audio Minimum Requirement	Roles & Responsibilities	QTY	Hardware Requirement
Remote Interpreter (VRI)	1. Hear courtroom	1	Line-out (output/microphone) to sound reinforcement system and line-in (input) to audio mixer
	2. Be heard	1	Remote (PC or laptop)

Remote Video Minimum Requirement	Roles & Responsibilities	QTY	Hardware Requirement
Remote Interpreter (VRI)	1. View any evidence presented	1	Video feed(out) from Digital Evidence Presentation System (DEPS)
		1	Video feed (in) to the video telephone conference (PC) hardware
		1-2	Display monitors

DRAFT

Advancing the Hybrid Courtroom

Draft Findings and Recommendations

Appendix

Hardware Components and Descriptions

Control Panel (Audio/Video controls)

A control panel is a flat, often vertical, area where control or monitoring instruments are displayed or it is an enclosed unit that is the part of a system that users can access. The control panel gives the user control of software and hardware features. The control panel consists of multiple settings including display settings, network settings, user account settings, and hardware settings. Some control panels require the user to have administrative rights or root access.

AB 716 Compliance (New Requirement)

[Assembly Bill 716](#) (Stats. 2021, ch. 716) adds to the Code of Civil Procedure section 124 to require courts to provide, at a minimum, a public audio stream or telephonic means for the public to listen to proceedings when the courthouse is physically closed, except when the law authorizes or requires the proceedings to be closed. At a minimum, all courtrooms must provide the public with the ability to listen to proceedings remotely via audio stream or telephonically. To satisfy the minimum requirements for Assembly Bill 716 (Stats. 2021, ch. 716), it is recommended that all courtrooms be equipped with at least one telephone line, voice-over IP (VOIP) system, or audio web stream that connects to a digital/audio sound processor (DSP) managed by a control system for the function of telecommunication with listen-only functionality for public access.

Switcher

The most basic part of a vision mixer is a bus, which is a signal path consisting of multiple video inputs that feed a single output.

Sound Reinforcement (System)

A sound reinforcement system is the combination of microphones, signal processors, amplifiers, and loudspeakers in enclosures all controlled by a mixing console that makes live or prerecorded sounds louder and may also distribute those sounds to a larger or more distant audience. Note: The specific locations and quantities for the hardware components will need to be determined by the Facilities and Permits team.

Assistive Listening

An assistive listening system shall provide secure transmission of both speech and program audio to participants or members of the public. When evaluating the types of assistive listening systems in the design as well as the quantities of headsets, refer to sections 11B-219 and 11B-706 of title 24 of the California Code of Regulations to ensure adequate provisioning.

Digital Evidence Presentation Systems (DEPS)

The DEPS is an additional input to the courtroom video display. It is located between or in front of the attorney's tables, or in front or to the side of the courtroom clerk's desk. It is a neutral location for the display of evidence, which can be used by either attorney. Source content may include audio and video playback devices, laptops, and document cameras. The system may be portable or dedicated, depending on courthouse needs.

8-Channel Audio Mixer

Advancing the Hybrid Courtroom

Draft Findings and Recommendations

Audio mixers may control analog or digital signals. The modified signals are summed to produce the combined output signals, which can then be broadcast, amplified through a sound reinforcement system, or recorded.

The channel input strips are usually a bank of identical monaural or stereo input channels arranged in columns. Typically, each channel's column contains several rotary potentiometer knobs, buttons, and faders for controlling the gain of the input preamplifier, adjusting the equalization of the signal on each channel, controlling routing of the input signal to other functional sections, and adjusting the channel's contribution to the overall mix being produced.

Hardware

Judge, witness, DEPS cart, attorney table (Facilities standards). Note: The specific locations and quantities for the hardware components will need to be determined by the Facilities and Permits team.

Videoconferencing System

Videoconferencing and video teleconferencing is the two-way or multipoint reception and transmission of audio and video signals by people in different locations for real-time communication.

Video Camera

A video camera designed to record or stream to a computer or computer network. Webcams can be built-in computer hardware or peripheral devices and are commonly connected to a device using USB or wireless protocols.

Unidirectional Microphone

A unidirectional microphone is primarily sensitive to sounds from only one direction.

Display Monitor

A video reference monitor also called a broadcast reference monitor or just reference monitor, is a specialized display device like a television set, used to monitor the output of a video-generating device, such as playout from a video server, IRD, video camera, VCR, or DVD player. It may or may not have professional audio monitoring capability. Unlike a television set, a video monitor has no tuner and, as such, is unable independently to tune into an over-the-air broadcast like a television receiver.

Remote Videoconferencing Software (Platforms)

Videoconferencing software is software that allows two or more people to emulate a person-to-person meeting over the internet using real-time, multidirectional video and audio streaming.

Language Access

The language access system shall work in conjunction with alternate channels of the assistive listening system to provide for live translation to participants and audience members in courtrooms. Language access may be provided in other spaces as required on a per-project basis.