

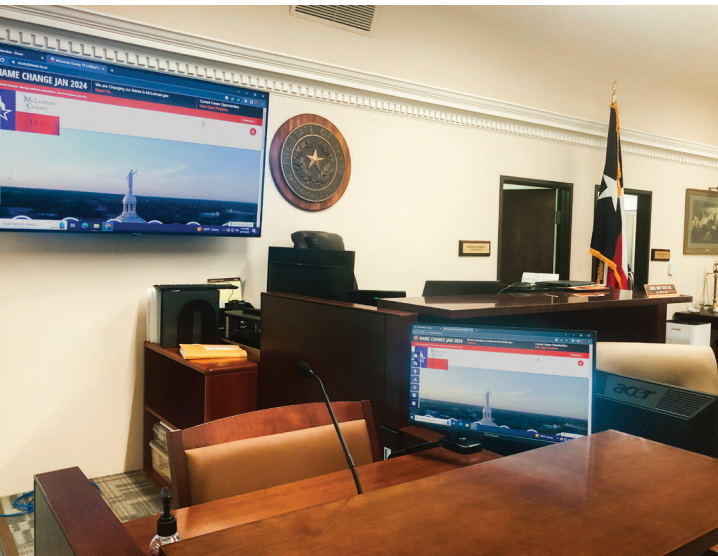


CASE STUDY

## Extron NAV Pro AVoIP System Provides McLennan County Court with Superior AV Routing & Control

**Extron**

The McLennan County courthouse includes a mid-size courtroom that served as the pilot application for AV over IP and new control functionality.



High-end monitors and displays controlled from the bench enable presentation of evidence, exhibits, and multimedia content sent over the Extron NAV Pro AV over IP system.

**“This is our second installation using Extron NAV. The first project went so smoothly that there was no reason to look at anything else. Using NAV makes the courtroom system completely expandable, now and in the future.”**

Trey Shaw  
Co-Owner / Manager  
Brazos Media Technologies, LLC

The McLennan County Courthouse in Waco, Texas, holds jurisdiction over the 74th district of the state. The docket includes criminal trials, complicated and multi-party civil cases, family law hearings, and all Child Protective Services cases. It is housed in what is considered the city's most impressive civic edifice, which was built in 1901.

## CHALLENGES

A mid-sized courtroom was selected to act as a pilot installation for future AV over IP and control systems throughout the courthouse. While it was remodeled just a few years ago to include a sound system and a large display, only the attorneys were able to send content to the display. The court needed a more sophisticated AV system to enhance and streamline courtroom proceedings.

The presiding judge required complete control of audio and video selection and distribution within the courtroom. Another necessity was the ability to preview content at the bench.

Scheduling integration was a challenge, working around shifting courtroom schedules on different floors. Since cabling had to be run between floors and physical modifications implemented at the judge's bench, witness stand, and other areas, the courtroom directly below the proof-of-concept courtroom had to be closed at the same time. The construction and historic nature of the building presented additional installation challenges.

McLennan County brought in integration firm Brazos Media Technologies, LLC. Brazos designed and deployed a NAV® Pro AV over IP system and control products from Extron.



The same content can be presented on any combination of display devices throughout the courtroom.

**“The fact that customers are surprised by the minimal need for support until they are ready for an upgrade is a testament to the reliability and longevity of the Extron systems, as well as the quality of the initial installation.”**

Trey Shaw  
Co-Owner / Manager  
Brazos Media Technologies, LLC

## DESIGN SOLUTION

The courtroom underwent a significant technological upgrade. The design included the Extron NAV Pro AV over IP system, expansion of the sound system, and addition of monitors at the judge’s bench and witness stand. The NAV system increased AV functionality while providing complete flexibility to route signals over the local network. To lay the needed cabling, Brazos made discreet modifications to the floor and the platform under the Judge’s bench. Great care was taken to protect the floor surface and ceiling within the historic courtrooms on both floors.

The courtroom AV sources include the PCs at the judge’s bench, the prosecution table, and the defense table. Another source is a document camera at a lectern for hardcopy display. A PTZ camera system supports Zoom®/Teams® calls, such as testimony from an expert witness at an authorized remote location. High-quality monitors and displays enable presentation and closer examination of evidence, multimedia

The AV sources include the judge's PC, the prosecutor's PC, the defense team's PC, and a document camera at the lectern for hardcopy display. A PTZ camera tied into the AV system supports Zoom/Teams calls.



The judge previews content from any NAV endpoint on the bench monitor, vetting the material before it is presented to the jury. A NAV scaling decoder delivers content to the monitor, and selections are made on an Extron 10" TouchLink Pro touchpanel.

content, and other materials submitted as exhibits. The primary destinations are the main display, the judge's monitor, and the monitor at the witness stand. The displays are strategically placed to enable visibility from the bench, the witness stand, the jury box, the gallery, and other court personnel stations. Signal routing capabilities include selected source content and direct video feeds to specific displays and/or monitors in any combination.

### NAV System Central to Exhibiting Evidence

The pilot courtroom's NAV system consists of four encoders and three scaling decoders, and is easily expanded. The NAVigator System Manager provides secure configuration, management, and control of the NAV Pro AV over IP system. The installation uses the entry-level NAVigator that supports up to 16 endpoints. With the addition of NAVigator LinkLicense®, the NAV system can be expanded to accommodate 48, 96, or 240 endpoints. To grow the installation beyond 240 endpoints, multiple NAVigator units can work together to support thousands of endpoints.

Brazos assigned custom tags to each endpoint using the NAVigator software. These tags allowed endpoint classification, which helps identify their location on the network and apply rules for routing via the control system.

### Decisions from the Bench

The NAV system's user-friendly control interface, with graphical web pages, enables the judge to easily monitor and control content distribution and manage the AV system. The judge previews the selected source content on the bench monitor, which is connected to a NAV scaling decoder. The judge selects the appropriate content for distribution to one or more of

The judge is able to activate and/or mute the courtroom's microphones individually or in any combination using the Extron Touchlink Pro touchpanel at the bench.



the courtroom displays with a simple touch. The Extron TouchLink® Pro 10" tabletop touchpanel at the bench facilitates system control. It works in conjunction with the Extron IP Link® Pro control processor installed in the rack next to the courtroom's NAVigator.

The judge also controls the audio. There is a centralized audio control panel at the bench that facilitates management of the various microphones, speakers, and other audio devices. Individual microphone controls offer options to activate or mute specific microphones, including at the witness stand, the bench, and the two attorney tables.

A new access panel was added to the bench platform to streamline future system expansion with additional NAV encoders and decoders.

### **NAV Streamlines Service and Support**

During system commissioning, Brazos used the NAVigator One-Button Commissioning Report to quickly generate an accurate record of the NAVigator and all NAV endpoint settings and the status of each. Extron engineers were looped in remotely to answer any questions. Brazos continues to use this reporting feature for their periodic maintenance checks under the service contract with the county. In addition to component logging and troubleshooting, the NAV system's web-based interface also allows Brazos to easily configure, backup, restore, and update the NAV system.

Because of the historic elements within the building and respect for its legacy, replacing the old infrastructure with new cabling was time-consuming but worthwhile. As soon as the runs were



The compact sizes of the Extron NAVigator and IP Link Pro control processor allowed both units to fit easily into 1U of rack space.

**"Updating the technology in our courtroom improved all of our hearings and trials. The ability to display exhibits from counsel table exclusively to the witness made it easier and faster for attorneys to move through voluminous documents. Additionally, the ease of transfer between screens makes it easier for jurors to follow along during complicated testimony involving exhibits. Ultimately, updating our technology helped everyone in the courtroom - the judge, reporter, lawyers, witness, jurors, and observers."**

Judge Gary Coley, Jr.  
District Court Judge and recipient of the Texas CASA  
Judicial Innovation and Leadership Award  
McLennan County, Texas

in place and verified, Brazos installed and commissioned the new AV and control systems. Deployment was prompt and the judge was using the new system capabilities virtually overnight, enabling the court calendar to be at full capacity just as quickly.

## **THE VERDICT**

The judge is pleased with the outcome. The new AV system exceeded expectations in terms of functionality and usability. The courtroom is the envy of the county, making it the ideal template for the rest of the district courtrooms in the building, as well as the region's other courthouses.

## **EXTRON EQUIPMENT - PARTIAL LIST**

<b>Model</b>	<b>Description</b>
NAV E 101	1G Pro AV over IP HDMI Encoder
NAV SD 101	1G Pro AV over IP HDMI Scaling Decoder
NAVigator	Pro AV over IP System Manager, Entry Level Version for 16 Endpoints
IPCP Pro 255	IP Link Pro Control Processor
TLP Pro 1025T	10" Tabletop TouchLink Pro Touchpanel in Black

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