Extron NAV Pro AVoIP Enables Flexible Collaboration at University of Texas

Extron

The Life Sciences' divisible rooms at UTEP had to function as active learning spaces and practical labs, as well as provide remote learning capabilities.

The University of Texas at El Paso (UTEP) is a public research institute of higher learning. It is one of the largest and most successful universities to positively impact the health, culture, education, and economy of the Hispanic community they serve. UTEP is proud to have a like-minded student body, which is 84% Hispanic.

This case study focuses on the UTEP Rehabilitation Sciences Complex and the upgraded AV system design for the rehabilitation training facility's multipurpose active learning spaces. These classrooms are used for specialized rehabilitation health services training and nursing studies. To upgrade the rooms for active learning, the plan included replacing the original analog AV systems with an all-digital AV solution using the school's standardized brand, Extron.

CHALLENGES

The divisible rooms had to function as active learning spaces and include remote learning capabilities. Each room required multiple displays to be operated independently or in combination. The AV system also had to support a gamut of devices, from university servers and Apple® TV to students and faculty bringing in their own devices (BYOD).

To visually reinforce lessons, the AV system would support the capability to zoom in with any one of the room's cameras to show physical therapy and rehabilitation science techniques during live demonstrations. The rooms also had to be capable of splitting into smaller learning spaces, allowing individual groups of students to collaborate as a team at a training station.

"Extron was able to facilitate and support our needs to make the audio visual system fit the complexity of the teaching and learning pedagogies we were going to support, all without a lot of extra time, effort, and investment."

Mike Pitcher
Director of Learning Environments
University of Texas at El Paso

The Extron NAV system is deployed as a high-performance AV matrix solution, regardless of the room arrangement. NAV combines the flexibility of an IP-based system with virtual video and audio switching.

AVoIP signal routing with NAV allows the divisible rehabilitation training rooms to be open to collaborative plus hands-on learning for a larger number of students at the same time.

"Extron NAV products filled our needs without having to look further, which kept costs down, streamlined the design as well as the installation, and kept the project on time."

Mike Pitcher
Director of Learning Environments
University of Texas at El Paso

DESIGN SOLUTION

Each active learning multipurpose room includes two instructor lecterns, five student team stations with a 75" interactive touch display at each, and a front-of-room projection system with a 165" screen. Sources range from university servers and Apple® TV to PTZ cameras, a PC within the instructor lectern, and AV connectivity for personal devices at each station and lectern. Students are able to annotate directly on a presentation at their station and save the screen with their notes for later review.

Content from any source can be sent to one or more of the display devices over the university network using the Extron NAV® Pro AVoIP system.

NAV Interconnects Stations and Operations

The NAV system is deployed as a high-performance AV matrix solution, combining the flexibility of an IP-based system with virtual video and audio switching. Video signals are distributed over the UTEP network at ultra-low latency and bit rates, while also ensuring optimal image quality. The same system also supports audio signals, streamlining the installation. NAV 1G encoders and scaling decoders are integrated into each station and instructor lectern. To manage the NAV endpoints, the NAVigator system manager is installed within the primary lectern, enabling any faculty member to customize content selection and presentation to best fit their personal teaching style.

Compared to a traditional application, the support team found the new AV system easy to integrate and maintain and the

Many of the AV system components are rack-mounted in a centrally located equipment room, ensuring maximum space flexibility.

"The Extron NAV AV over IP solutions are first class compared to other brands we've had prior experience with, and the ability to use GVE as a classroom reporting tool has reduced support needs."

Hector Lugo
Sr. Instructional Specialist, Learning Environments
University of Texas at El Paso

faculty appreciated its quick switching speed and user-friendly operation. For example, several instructors requested the ability to flip the room monitors to act not only as main displays but as extended desktop displays for note taking. They also asked for teleprompter-style presentations on the back screens.

The integration team set up modes to meet the various requests and needs. One such mode is identified as "Simple," which supports basic lectures. Another, "Advanced," supports instructors who engage in a variety of active learning methodologies and modalities approved by the UTEP administrators.

The faculty are able to make individualized requests to the AV systems to best fit their personal teaching styles, especially in comparison to a traditional system. Currently, the instructor controls the AV system during lecture time and students operate it after class to study and for reference during practice sessions at the training stations. System expansion in the future will allow students to also control the work-station capabilities.

As with the other learning and meeting spaces on campus, the support team uses Extron GlobalViewer® Enterprise to monitor and manage the new AV systems from anywhere on campus. According to the installation team, integration of the NAV systems into such complex spaces was easy and straightforward.

RESULTS

UTEP's new Rehabilitation Sciences Complex is successfully delivering multiple interprofessional training environments while also providing clinical services to the community.

The first phase of UTEP's Rehabilitation Sciences Complex upgrade, including two large active learning classrooms, was completed in just six months. The next few phases ran just as smoothly and were commissioned and available on schedule. A future phase will enable the instructors to use QR codes, personal tablets, and smart phones to control each room and the AV system.

UTEP is committed to the region's student demographic, which is often underserved by institutes of higher learning. Their use of technologies such as Extron's NAV AVoIP, streaming, and control products clearly demonstrates that they are focused not only on educating but also helping each student excel in their chosen field of study and career.

"Extron product support and technical assistance throughout the design and installation phases were outstanding!"

Mike Pitcher
Director of Learning Environments
University of Texas at El Paso

EXTRON EQUIPMENT - PARTIAL LIST

Model	Description
NAV E 501	1G Pro AV over IP Encoder for HDMI, Ethernet, and USB
NAV SD 501	1G Pro AV over IP Scaling Decoder for HDMI, Ethernet, and USB
NAVigator	Pro AV over IP System Manager
MediaPort 200	HDMI and Audio to USB Scaling Bridge
DMP 128 PLUS C V AT	12x8 ProDSP Processor w/AEC, VoIP, and Dante
XPA U 1004-70V	Four Channel Audio Amplifier with 100 watts at 70 volts
IPCP Pro 360Q xi	IPCP Pro xi Quad Core Control Processor
LinkLicense Upgrade for Control Systems	LinkLicense for User Interfaces

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