Photo courtesy of BICSI

BICSI World Headquarters Modernizes with Extron AV Technology

"The world-class BICSI Learning Academy has served thousands of individuals across the globe. The updates made to our training facilities will ensure we are equipped to serve thousands more in the future."

Jeff Beavers, RCDD, OSP, CFHP
BICSI President

BICSI – Building Industry Consulting Service International – is a global professional association supporting advancement of the information and communications technology – ICT – community. It sets industry standards, trains and certifies ICT professionals, and fosters industry communication through committees, publications, and conferences. With a November 2019 ribbon cutting, BICSI celebrated completion of "Project Refresh", a major remodel and technology upgrade of its Tampa, Florida world headquarters. As an official sponsor of Project Refresh, Extron provided expertise and supplied the latest AV and collaboration technology to the BICSI Learning Academy classrooms and conference rooms.

AV Enhances Face-to-Face Instruction

A major part of The BICSI Learning Academy training and certification process occurs in its suite of three hands-on training classrooms where students learn how to use the tools of the ICT trade by first observing, and then performing best practices for terminating, routing, and dressing copper and fiber optic cables, and operating common test equipment. The rooms have the feel of an actual job site, with concrete subfloors and exposed ceilings. Cable trays and Unistruts® give practical insight into how projectors, speakers, plenum enclosures, and other components are

AV in training classrooms allows students to view table-top demonstrations on the projection screens without leaving their seats. Ceiling-mounted flat panel display faces instructor. (Photo Courtesy of BICSI)

AV system functions in the training classrooms are controlled via TouchLink Pro touchpanels.

SMP 351 streaming media processor (top of rack) allows classroom training sessions to be broadcast to remote locations or recorded for video on demand. DTP CrossPoint 4K presentation matrix switchers (middle of rack) provide 4K switching and scaling, as well as integrated control processing and audio amplification.

mounted. Students practice cable routing and cable dress in work pods furnished with various styles of equipment racks.

Extron AV systems installed in the classrooms give every student a front row seat for demonstrations, without a need to crowd around the instructor. Each lab has two ceiling-mounted projectors with screens at the front of the room. Four sources provide AV content: a ceiling-mounted document camera to show table-top demonstrations, a fiber scope for close-up views of fiber optic connector polishing technique, a resident desktop PC, and a visitor laptop for other instructional content. Source selection and other AV system operations can easily be controlled using the Extron TLP Pro 1025M TouchLink touchpanel working in concert with the IPCP Pro control processor built into the Extron DTP CrossPoint 4K matrix switcher. Rack mounted peripherals are connected to the switcher via HDMI cables. Any source signals or projector signals that need to travel longer distances utilize DTP transmitters and receivers to route AV content over shielded twisted pair cable. Audio content plays through the overhead Extron SF 3PT SoundField pendant speakers, driven by the switcher's integrated 100-Watt amplifier.

Capture and Conferencing Expand Access to Training

The AV system in one of the training classrooms is augmented with lecture capture and streaming capabilities. In addition to the AV presentation system, this classroom has PTZ cameras, wireless microphones, and directional microphone arrays to capture all instructor and student activity. A DMP 128 Plus C AT Audio Matrix Processor mixes and processes the audio for in-room sound reinforcement, conferencing, and recording. An Extron SMP 351 streaming media processor provides lecture capture and streaming. Capable of recording and steaming simultaneously, the SMP 351 combines two HDMI feeds from the matrix switcher into a single stream. The AV content can be displayed in overflow spaces for local students, sent to remote learners, or stored as MP4 video files. The ability to record training sessions provides an opportunity to evaluate instructor performance, allows course content to be revised as industry standards and building codes change, or may be used for on-demand training. According to Russ Oliver, BICSI past president and Project Refresh working group member, "Lecture capture quality is phenomenal. Observers think it is live."

Zoom software running on the resident desktop PC provides video conferencing between training sessions in the lab and any BICSI location around the world. This makes it possible to offer distance learning, where students at the remote locations can have two-way interactive sessions with instructors. An Extron MediaPort 200 HDMI and audio to USB scaling bridge enables this capability by working as a soft codec interface. It converts classroom audio and video signals to a USB source for the Zoom software.

The HC 404 with Zoom meeting collaboration system provides the familiar Zoom user interface and control of the AV system.

PoleVault Digital System in the design classroom provides AV switching, control, and stereo audio amplification for presentation of multimedia instructional material. (Photo Courtesy of BICSI).

Conference Rooms Get Latest Collaboration Features

Executive and staff conference rooms have identical collaboration systems. HDMI sources from an Extron Cable Cubby 202 cable access enclosure mounted in the table send content to an 86" interactive touchscreen display via an Extron HC 404 with Zoom meeting space collaboration system that handles video switching, scaling, signal extension, and control processing. Extron's team-up with Zoom Video Communications simplifies user control of AV devices and the conferencing experience in these rooms. The TLP Pro 1025T TouchLink touchpanel displays the familiar Zoom interface for video conference sessions, and provides controls for AV system power, switching, and audio levels. Extron SF 26CT SoundField ceiling speakers driven by an Extron MPA 601-70V amplifier fill the room with clear sound.

PoleVault Ideal for Design Room

For the design classroom, which is used for system engineering and project management courses, BICSI selected the Extron PoleVault System. This complete solution provides connections for multiple HDMI sources, switching, amplification, speakers, cables, projector mounting, and an easy-to-use MediaLink control panel, making it a perfect fit for the single-display classroom.

Result

With completion of Project Refresh and its many technological and configuration enhancements, BICSI enters a new era of service to the ICT community. "The world-class BICSI Learning Academy has served thousands of individuals across the globe," said BICSi President Jeff Beavers. "The updates made to our training facilities will ensure we are equipped to serve thousands more in the future."