2014 AMX Innovation Awards

Higher ed institutions use technology to increase collaboration, learning

Cutting-edge higher education institutions across the country are leveraging AV and IT technology to advance the learning experience on their campuses. Five of these institutions were honored at the 2014 AMX Innovation Awards, which were presented this past June at UBTech, higher ed's leading national technology and leadership conference.

The winners were selected from a record number of submissions this year, with entries from seven different countries. Several themes emerged from the submissions, such as distance learning and how institutions extend learning beyond the classroom; collaborative learning; how sciences are pushing the limits of technology and automation; how sustainability initiatives impact more than building technology; and how collaboration is central to all campus life.

This year's awards included winners in the following categories: Shenandoah University in Virginia in the Classroom Automation category; the University of Minnesota in the Collaboration category; The University of Ottawa in the Alternative Learning Spaces category; The University of Queensland in Australia in the Sustainability Initiatives category; and the University of Western Australia in the Simulation and Medical Learning category.

A new feature was also introduced to the program this year, the People's Choice Innovation Award. The winner in this new category was the University of Hawaii and its Information Technology Center, which was selected from 28 finalist institutions by UBTech attendees.

Each of the five winners of the five categories won $25,000 MSRP of AMX equipment in recognition of their innovation. The People's Choice Innovation Award winner received a Hydraport in recognition of their award. All finalists were awarded an Enzo Presentation System.

The AMX Innovation Awards are annual honors presented to individuals and institutions that have improved the campus experience through the innovative use of technology. For 2014, winners were selected for each of the categories mentioned above. Categories may change for 2015. Applications may come from any higher education institution in the world. Entries are being accepted in October for the 2015 AMX Innovation Awards and the winners will be presented at UBTech 2015 in Orlando, Florida.

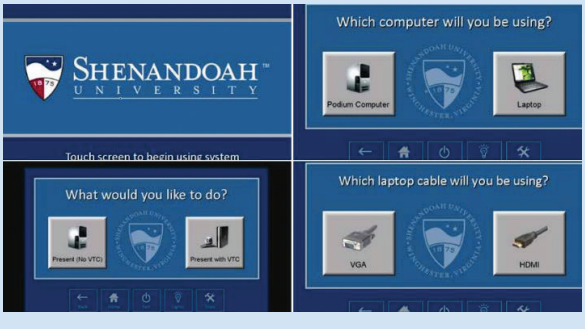
To learn more about the 2014 AMX Innovation Awards and how you can apply for next year's awards, please visit www.amx.com/education

Shenandoah University: Innovation going mobile

As Shenandoah University, in Virginia, was experiencing a dynamic period of growth led by an expansion of its health sciences program, administrators realized that this expansion necessitated a reconsideration of issues of enterprise technology standardization, integration and support.

Administrators developed a standard room configuration for different sized classrooms based around the AMX DVX 3150 switcher. Additionally, control interfaces were standardized using the AMX MST 701s touch panel to provide a uniform experience. The touch panels, designed by end users, for end users, resulted in a simpler interface removing the abundance of buttons, sliders and options. A short series of binary questions (two choices, pick one) easily guides the user through no more than 4 questions to start class. Standardizing the user interface for the touch panels was an important aspect to improving the student and faculty's classroom technology experience and streamlining the faculty development process for room controls.

"The ability for staff to support classroom technology virtually has produced efficiencies in response time and reduced the number of personnel required," says Richard Pierce, associate professor at Shenandoah. "Extending the power and productivity of the support staff is critical to the expansion of Shenandoah University in a technology rich, multi-campus."



Shenandoah University developed a new standard room configuration based around the AMX DVX 3150 switcher.

University of Minnesota: A.L.I.V.E. for learning

While revising the curriculum for the Doctorate of Pharmacy (Pharm.D.) program, the University of Minnesota College of Pharmacy sought to make a significant pedagogical change. Rather than traditional "sage on the stage" instruction, the new model was created to promote student-created knowledge, with instructors able to direct, coach and expand on learning.

A.L.I.V.E. (Active Learning and Interactive Video Environment) for Learning is a classroom design that seamlessly combines all aspects of a modern Active Learning Classroom with state-of-the-art video conferencing capabilities. The room is designed to cultivate local active learning punctuated by faculty facilitation across distance using highly integrated and automated video conferencing.

A.L.I.V.E. for Learning promotes: cooperative learning environments that encourage student collaboration and peer teaching; technology that allows students to easily present work for review by peers and instructors; furniture designed to facilitate small-group work; the ability for instructors to interactively coach students during activities; and new options for student interaction and class structure.

"Our curriculum revision required more than existing ALCs had to offer," says Charles Bottemiller, senior engineer at the University of Minnesota. "WDH 7-135's A.L.I.V.E. for Learning design blew our original expectations out of the water. And was under budget, too."

A.L.I.V.E. is a classroom design that combines all aspects of a modern Active Learning Classroom, including video conferencing capabilities.

The resulting design contains 13 active learning "pods" among groups of nine students. BYOD connectivity, and dual flat-screen displays at each pod provide an engaging way for small groups to collaborate. A teaching station in the center of the room controlled by a touch panel provides a simple but powerful user interface to allow for sharing of local, pod- or table-specific student media across the room and at distance.

University of Western Australia: Scalable collaboration space

The "M" block project at the University of Western Australia sought to replace traditional show-and-tell methods of teaching students about cell pathology with practical sessions that would provide and demand a collaborative learning environment to analyze data on real patient blood samples. A 24/7 facility, the project serves as a group study location as well.

After renovating a number of outdated offices and teaching facilities by knocking down walls and opening up the ground floor area, the university created three separate collaborative teaching spaces, which could also be opened up using folding glass walls to form one very large collaborative teaching space. A mixture of collaboration and traditional wet lab environments are blended together within the renovated space, providing 174 students with 29 collaborative pods serving six students each.

The collaborative pods are comprised of a work surface for six people and two local LCD displays with full-screen capabilities for BYOD. The BYOD strategy deployed supports connect, select and display capability at the pod location. Finally, each pod has two local Mac mini computers with wireless keyboard and mouse—all run by an individual DVX 3155 all-in-one presentation switcher.

"Allowing for all kinds of input resolutions could have been a huge nightmare," says Terry Coe, manager of Teaching Infrastructure Services at the university. "But the inbuilt scaling on the DVX-3155 handles anything we throw at it and still produces a great picture on the monitor."

The rooms also have an additional layer of control with the ability to share a student's image with any individual pod, the room, or a combination of all three rooms. From dedicated teaching stations with BYOD capability, the lecturer controls the room through a dedicated panel and iPad TP control allowing mobile interaction and collaboration with one or all pods.

University of Ottawa: Secure law education

The Ian G. Scott Courtroom design infrastructure had many requirements, as it serves the Provincial Government as well as the School of Law at the University of Ottawa. Strict provincial guidelines, security protocols and standards set by the bar, as well as end-users of the space shaped the attributes, capabilities and communication processes in the space. However, certain requirements were quite clear: Professors and students would require excellent sightlines for viewing the legal proceedings, top-notch automation and redundancy, key technology components, and excellent sound reinforcement and acoustical considerations.

The final solution provides the security required through government computers and cable trays to provide acoustical separation between the rooms. The AMX Enova DGX-32 solution was key to this success due to its built-in software and its ability to ascertain the pass-through reliability of the crimping of each cable and the quality of the connections performed by technical staff. The DGX-32 became the central nervous system of the installation and doubles as the gatekeeper for the provincial security requirements in the courtroom.

The specialized digital media switcher allows the clerk full access and retrieval to any and all sources during courtroom proceedings. As part of the mandate of the provincial government, the clerk could also mute all audio feeds and render the two-way Pro-Display window opaque at the request of the judge during confidential sessions.

The new Ian G. Scott Courtroom at the University of Ottawa has new technology with the required security for government computers.

"The Ian G. Scott Courtroom will allow all of us to work together," says Bruce Feldthusen, professor and former dean of the Common Law Section. "Professors, students, judges and lawyers will all be able to engage with one another, creating a laboratory for active learning."

The University of Western Australia created three collabrative teaching spaces that can also be opened up by using folding glass walls to form one large collabrative space.

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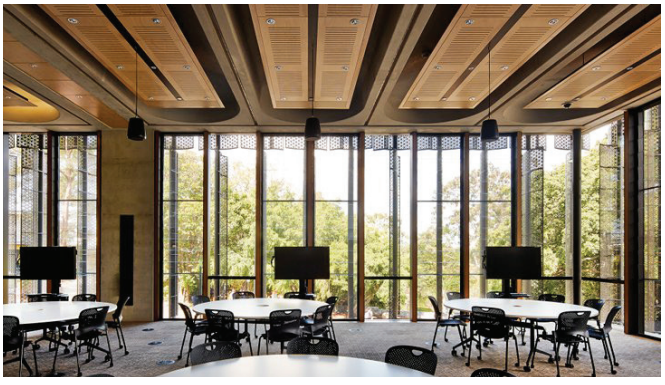
–Terry Coe, manager of Teaching Infrastructure Services, University of Western Australia

University of Queensland: 'Living' automation for a greener campus



The control system behind the Global Change Institute Building at The University of Queensland gives users complete control of its efficiency.

The Global Change Institute Building at The University of Queensland in Australia is designed to meet the highest standards in sustainability. The control system behind the building was meant to mesh seamlessly with the Building Management System, such that users would have control where required of internal and external blinds, louvres, shadescreens, in-slab cooling, building modes and the usual AV and lighting systems, without affecting the overall efficiency of the building.

"The control system is central to its day-to-day operation. Simple things—such as the ability to tell if it is day or night when a room is turned on and to turn the lights on or not—are key to keeping the energy usage to the lowest possible level," says Luke Angel, manager of AV support and integration at the University of Queensland. AMX MXD 1000 touch panels were used as the standard touch panel interfaces throughout the Global Change Institute Building. One central NI3100 controller attached to a field server device is used to talk directly to the BMS system, with Master-to-Master communication between all seven spaces where master controllers are installed.

Touch panels were installed in all spaces with controllers with additional panels installed in office spaces as well as a single master panel for control by the building manager. If a button is pressed in the level-one presentation space, that command is sent to the central controller, then translated and sent to the BMS. The reply is then processed and returned to that space such that both the touch panel in the space and the central manager's interface are kept up to date with exactly the current status of the building.

The building is a "living building" that aims to work with the environment, rather than consume its resources. For instance, the building will harvest all of its own energy and water on-site, and administrators plan to operate carbon-neutral and zero-energy strategies during daily operation.

PEOPLE'S CHOICE

University of Hawaii: Automating the Hawaiian Islands

The University of Hawaii's new IT Center allows staff to provide centralized assistance for the school's 10 campuses across six islands.

The University of Hawaii's Information Technology Center is a new state-of-the-art facility that expands UH IT Services' capabilities to provide support of IT resources throughout UH's 10-campus system across six islands from one centralized location. Hawaii's geography, which includes high mountains and deep ocean channels between islands, has created this unique challenge.

The new facility allows for consolidation of ITS staff to provide a centralized help desk, operations and management center, and maintenance services statewide, as well as provides a multimedia facility that the university community could benefit from and utilize on a daily basis. AMX's new Enova series digital media multi-format switchers not only solve many of the most pressing challenges, but have also paved a scalable path into the digital future. With an intuitive user interface, users enter a room and operate all of the multimedia technologies from a centralized wireless-enabled touch panel. TP Control allows ITS to provide a new level of support through remote management, monitoring and troubleshooting equipment, reducing travel costs to the many different campuses and centers across the island state.