

Dole Institute of Politics

KU's Dole Institute: New Vision Adds AV

BY LINDA SEID FREMBES, SOUND & COMMUNICATION, MAY 2004

In late 2001, the University of Kansas (KU) broke ground for the new home of the Robert J. Dole Institute of Politics on its campus in Lawrence, Kansas. An alumnus and long-time supporter of KU, Senator Bob Dole not only lent his name to the project but also more than 4000 boxes of material representing his life and career from his days in the military to his presidential campaign to his most recent time in the Senate.

The \$11 million, 28,000-square-foot Dole Institute of Politics building features public space along with several offices and meeting spaces. Open to the public, the Institute has an aim to become a premier political science and international relations research facility that will focus on major public service and policy issues of the day. The Institute will offer Dole's materials for future study and use by students, KU scholars and the people of Kansas.

NEW VISION

In 2002, famed historian Richard Norton Smith joined the Institute as its director and brought with him a new vision for the building, including expanded audiovisual systems in every room. KU looked toward a high-tech AV system designed by Acoustical Design Group (ADG) and installed by Mission Electronics. "Our design team was called into action after it was under construction and the concrete was poured," explained Brian Tennyson, senior audiovisual consultant at ADG.

Tennyson added that the original plans for the building were supposed to be a basic museum



KU's Dole Institute of Politics went from a museum to a more modern interactive, high-tech meeting space.

exhibit space. "With the arrival of Smith, the vision of the Dole building went from a museum to a more modern interactive, high-tech meeting space. He wanted to make it more of a centralized hub for meetings and symposiums, which meant we

had to totally redesign the AV infrastructure in the building."

Also due to this new vision and subsequent redesign, construction was delayed as budgets and design details were adjusted. With a hard deadline

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KU'S SATELLITE UPLINK

As a special gift to the University of Kansas, the Dole Institute of Politics installed a satellite uplink as part of its AV infrastructure, the only television uplink in Northeast Kansas. Bill Kaufman, founder and principal of satellite communications company Kaufman Broadcast, consulted the Institute on the installation.

The Institute's satellite dish can be used by the University to transmit corporate programming from the community, news feeds from its journalism school, press conferences, as well as videoconferencing from any room in the Institute. The uplink interfaces with the Institute's routing equipment like any other destination device such as a loudspeaker or TV screen. The signal is fed from a source such as a video camera or projector to the satellite dish and is then broadcast out.

Dole Institute's uplink is an all-digital broadcast uplink that can stream MPEG2 video and digital audio. The transmission is scalable depending on the transponder bandwidth of the satellite; transmissions can range from 6 megahertz to 36 megahertz.

of July for the grand opening, the team of architects, AV designers and integrators was thrown into a frenzied pace, often making changes on the fly as construction occurred simultaneously. When it came time to install the new AV system, project manager Scott Strong and his team at Mission Electronics was given only 30 days to turn ADG's design into reality.

"Our biggest push was that the building needed to be open for public use in just over a month," said Strong. "We had to have a functional sound system for all three rooms and functional video in the seminar room by the time of the grand opening. We were starting from a new AV design among last minute structural changes with no room for major error."

HANSEN HALL

The building's most prominent feature is Hansen Hall, which features the largest stained glass American flag in the U.S. Measuring 30 feet tall, the flag is meant to illustrate the value and pride of public service. Displayed below the flag is Dole's World War II uniform flanked by remnants of two columns from the World Trade Center in New York City. "Richard Norton Smith wanted to put some elements in the building that would emotionally move people and connect with them," explained Steve Scannell, KU's project manager on the Dole Institute project and assistant director of KU's Office



Hansen Hall's control room.

of Design and Construction Management. "The exhibits in Hansen Hall illustrate key milestones in U.S. political history over the past 50 years as well as Dole's role in them."

The Hall is an expansive reverse wedge shape sloping at a seven degree angle where the highest point at 36 feet is also the narrowest at 12 feet wide. The lowest point of the hall at 12 feet is where it is most wide at 36 feet. Along both sides of the hall are recessed eight-foot-tall glass display cases featuring Dole's memorabilia and papers, above which are fabric-covered panels for sound absorption. The display cases and walls are made of hand-milled walnut by Danny Sales of Highland Mill Shop in Topeka, KS. "Overall, the room is very quiet due to the treatment of materials. The most absorptive is the ceiling, which is perforated metal with two inches of insulation backing," said Tennyson.

ADG's architectural engineering team became involved early in the construction phase to work with Steve Abend of architectural firm ASAI in Kansas City, MO to consult on mechanical noise control, absorption, controlling reverb time and other physical acoustic elements. When Tennyson and his design team joined the effort, they found that space planning and aesthetics would play a major role in the design.

MAJOR CHALLENGE

One of their biggest challenges at the onset was determining which end of the hall should be the front. It was decided that the low, wide end would be the projection end, with a fixed Da-Lite



This is the "shallow" end of Hansen Hall, opposite the area containing the stained-glass flag.

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Advantage screen that would roll down in front of a mock-up of the Capital Building. Due to the open design, the install team from Mission Electronics custom painted the projection screen case and removed the low-voltage control from it so it could be reduced in length due to the constraints put on placement. A lift in a custom cabinet hanging down from the ceiling conceals the NEC DLP projector when not in use. "Hansen Hall was the biggest design challenge in the building," said Tennyson. "It needed an evenly distributed audio system for speech and presentations, while maintaining a discrete presence."

Also, due to the four-inch-depth constraint in the ceiling, the distributed speaker system was mounted to exposed tubular roof trusses spanning the width of the hall instead of recessed into the ceiling. Aesthetics became much more important once it was discovered that the loudspeakers would be out in the open. Each of the 13 EAW JF80 speakers had to be custom painted and fitted with discreet rigging. Each loudspeaker cabinet's rigging point was tapped and drilled into the tubing, which proved time consuming.

The Hall's sound system is powered by QSC CX series amplifiers located in the central control room. Six Shure WL183 microflex omnidirectional lapel microphones are configured to function in any room of the building, with a Shure UA845A remote receiving antenna system also located in the control room. Matching walnut doors cover junction boxes for AV hookups that are recessed into the walls throughout Hansen Hall.

A custom AV lectern designed by Strong, Scannell and Sales also matches the woodwork in the building and can be used in any room. Although the lectern's functions were not

custom, its appearance allowed for it to blend easily into any space. Sales generously donated the lectern to the university in support of the Dole Institute.

Adjacent to Hansen Hall is the building's seminar room, named the Simon's Family Media Center. For the space, Smith envisioned the seminar room as a high-tech meeting space. Originally slated as a flat classroom, the new architectural design was a high-gloss finish with lots of glass surfaces. The 36-foot-wide by 40-foot-deep space is the main room for training, instruction and presentation at the Institute.

"We're very proud that we hit all of our marks in such a short time. The AV system works so well it is nearly invisible to visitors."

RON ROCKROHR AT MISSION ELECTRONICS



The Simon's Family Media Center is a 36'x40' space used for training, instruction and presentation.

Hi-fi stereo is achieved with a pair of three-way Electro-Voice Xi-1123-106 loudspeakers that provides even coverage for the room. A Da-Lite 11-foot by 6-foot rear-projection screen is built into the mezzanine level and hidden by a sliding wood-paneled door when not in use.

BIGGEST INSTALL CHALLENGE

"Our biggest install challenge was the rear-screen system in the seminar room," said Strong. "The rear-screen system is up on the mezzanine floor about 10 feet off the ground and there is no way to access it except from this room." He added,

"We had to bring the screen up to that level using a lift and six people to get it into place. We were doing the install around wood-work that was already in place so we had to be extra careful not to cut or scratch anything."

Coordination between all parties is best seen by the effort to build out the mezzanine to house the rear-projection screen. Integration of the screen, its wiring and paneling was achieved by tight synchronization between general contractor McPherson Contractors, Mission Electronics and Heartland Electric. "I am most impressed by the seminar room," said Tennyson. "The audiovisual

components totally disappear when not in use."

Adjacent to the seminar room is the Rhodes Conference Room. The 15-foot by 27-foot space includes a 3M wall display with Smart Board technology, as well as a basic AV setup.

CENTRAL CONTROL

The AV system for the entire building is centrally controlled from a control room located behind the seminar room. In the original design, the control room consisted of a series of small closets and a larger storage room; these were all combined into one room to make the control room habitable. From the control room, all audio and video switching and feeds can be directed from one room to another or out to the Institute's satellite uplink. Audio conferencing by ClearOne and videoconferencing by Polycom are available in all rooms as well. For logistical purposes, ADG designed the Dole Institute like one complete system with three subsystems represented as each room.

Ron Rockrohr of Mission Electronics did all the AMX programming for Dole Building, including configuring an AMX NXT-CA15 Modero 15-inch touchpanel and three AMX VPN-CP Viewpoint wireless touchpanels for use in any room. "Writing the AMX programming and integrating it with the DSP devices proved quite a challenge given the time crunch," he said.

The Dole Institute used BIAMP's® Audia® system to achieve its high level of AV flexibility. Rockrohr,

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who also programmed the Audia system, used customer input and functional need as his basic criteria. The Audia system handles all routing of microphones, routes output of each room, provides sound mixing and DSP functions, as well as matrix switching for the entire building from an equipment rack in the control room. The Institute's Audia system of two full *FLEX* frames plus one *EXPI* 8 input unit and one *EXPO* 8 output unit, all connected via CobraNet™.

"The system is fairly locked down; they cannot change the DSP or AMX programming by

themselves," said Rockrohr. "There is no on-staff AV person at the Institute. No one there had any familiarity at all with that kind of system so it was best to not leave it open." He added, "This was my first project with the Audia system. BIAMP was the best fit for number of I/Os and use of CobraNet to tie the boxes together."

A GRAND OPENING

The Robert J. Dole Institute of Politics held its four-day grand opening celebrations culminating on Senator Dole's 80th birthday. The grand opening

included speeches by former President Jimmy Carter and National Security Adviser Condoleezza Rice. One of the first public uses of Hansen Hall was an induction ceremony for 150 new citizens.

"It was a wonderful opportunity to be apart of special building. Whether you are a Dole fan or not, there is some pretty neat stuff at the Institute," offered Strong. "We're very proud that we his all of our marks in such a short time. The AV system works so well it is nearly invisible to visitors." ◀



One of the most prominent features of Hansen Hall is the 30-foot-tall stained-glass American flag, the largest in the US.

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