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Corporate Install

Idea Factory

Ad agency's relocation presents the perfect opportunity to blend AV, IT, and architecture.

By: Kimberly R. Griffin

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Integrating AV and IT systems into this 100-year-old former textiles warehouse posed some unique challenges, such as where to find cables and cable trays to match the décor.

CHALLENGE: Create a consolidated management system with network-based video distribution in a historic warehouse.

SOLUTION: Install a hybrid AV/IT solution to distribute video content and incorporate the equipment in the interior design.

Moving it's offices into a 100-year-old warehouse in Minneapolis' downtown historic district, Carmichael Lynch had to balance the unique character of the building that attracted the advertising agency to the space with its need for state-of-the-art office space and technology. Innovative thinking and extensive collaboration among the architect, AV consultant, and the company's IT director gave the company the best of both worlds.

The creative company, which relies heavily on technology, wanted more than a simple AV infrastructure. Still, it needed an infrastructure that functioned simply. "We had a lot of different systems in our previous building, but they weren't really compatible," says Steve Diedrich, Carmichael Lynch's IT director. "We couldn't track whether equipment was on or off, or whether projector bulbs were in good shape or not, so it was a frustrating scenario."

Diedrich's ideal: a network-based AV/IT infrastructure that offered flexibility in video control, remote management, and universal function. "I had a lot of users tell me that when they walked into a room in the old place, they never knew what to expect from one room to the next," he says. "I wanted to be as absolutely consistent as possible—within budgetary constraints—and still be able to offer a lot of features."

OLD MEETS NEW

Architect Alex Haecker, an associate at Minneapolis-based firm Meyer, Scherer & Rockcastle (MS&R) helped Carmichael Lynch find, rebuild, and restore the underutilized warehouse. MS&R specializes in sustainable design and historic preservation, and he wanted to maintain as much of the building's character as possible. "All old buildings have their own weirdness and intricacies to them, and this one was full of them," says Haecker.

Before any AV components could be installed, the former textile warehouse had to be brought up to today's codes, including those of the National Register of Historic Places. Inside, Haecker used an old linen chute as the core shaft to store the electrical and mechanical equipment. He also chose to embrace the AV and IT elements as part of his interior design by exposing racks of equipment and running wires on the walls' exteriors rather than trying to hide them behind the cast-in-place concrete walls.

Presentation-capable conference rooms have access to a VBrick video hub that stores and distributes video throughout the office space.

Jeffery Lipp of Lipp A/V Design, a Buffalo Grove, Ill.–based consulting firm, entered the project early in the design process and worked side-by-side with Diedrich and Haecker. "We met over a six- to eight-month period at least two dozen times," Haecker says. "I wouldn't wait until I was done designing the thing to talk to the structural engineer," Haecker explains. "It's the same thing. If you don't have all the [AV and IT] cogs working together, it doesn't work." John Patchin, production engineer, and Tim Miles, systems technician, of Shoreview, Minn.–based Electronic Design Company (EDC) would later lead the design's integration and installation.

The interior's white design—a sort of "blank canvas" for the agency's creativity, says Lipp—caused some minor holdups. White cable trays run along the ceiling down the center of the floors, carrying the necessary eight cables for each workspace. "A white cable tray was hard to find," says Diedrich. "It delayed us a week or two waiting for that white cable tray."

While Diedrich and Lipp were enthusiastic about the interior motif, exposing the AV also raised concerns not normally addressed when a racked system is hidden in a closet, such as leaving passage space around the rack and making sure the equipment was still easily accessible.

VIDEO DISTRIBUTION

Occupying five floors of the 12-story building, Carmichael Lynch's open floor plan has eight executive offices and several conference rooms of varying sizes. Each office has an LG 42PC3DC

42-inch plasma monitor mounted on a Premier Mounts PSD-EB60 floor stand. Smaller conference rooms have the 42-inch plasmas mounted on Chief Manufacturing PCM-2152 pole mounts, except for one that has an LG 50PM1M 50-inch flat-panel on a Premier Mount UFM. These conference rooms also have a Crestron C2N-FTB-B table box with control buttons on the flip-up lid. The largest conference rooms have Panasonic PT-D3500 projectors and Crestron TPS-4000 touch panels as well as the table boxes.

Digital Extra: Complete Equipment List

4 Anchor AN130 powered loudspeakers

4 Audio-Technica ES945W ceiling microphones

1 Biamp Nexia PM audio DSP matrix

1 Bretford MP34-E4 document camera cart

3 Bretford TVA3654-E4 video projector carts

2 Chief Manufacturing PCM-2152 plasma display pole mounts

1 Chief Manufacturing PWR-2152B swing-arm plasma wall mount

6 Chief Manufacturing RPA-570 projector ceiling mounts

6 Chief Manufacturing SLBU suspension brackets

8 Crestron C2N-FTB-B table boxes with control buttons

6 Crestron C2N-MMS AV switcher expanders

4 Crestron CNRFHT-15A wireless button panels

2 Crestron CP2E control systems with network control

7 Crestron MP2E control systems & AV switchers with network control

1 Crestron Room View network control/monitoring software

6 Crestron TPS-4000 control system touch panels

1 Crown 660A amplifier

7 Crown XLS202D power amplifiers

6 Da-Lite Tensioned Advantage Electrol electric screens

2 Da-Lite 83315 deluxe 60-inch Insta-Theater portable screens

1 Da-Lite 87063 deluxe 100-inch Insta-Theater portable screen

6 EAW Commercial SMS3 surround loudspeakers with brackets

3 EAW Commercial VR61 loudspeakers with U-brackets

1 EAW Commercial VRS18 subwoofer

4 ElectroVoice EVID 12.1 subwoofers

14 ElectroVoice EVID 4.2 subwoofers

1 Extron CrossPoint 300 84 HVA RGBHV matrix switcher with audio

1 Extron MAV84AV video matrix switcher

1 Extron MDA-3V video distribution ampifier

3 Axtron MTP-R-15HD-RS twisted-pair receivers RGBHAV & RS233

1 Extron MTP-RL-15HD-RS twisted-pair receiver with loop

Presentation-capable conference rooms have a computer, Extron interface that includes an RGBHV output cable and VGA splitter, and Crestron combination control system/switcher in a Middle Atlantic rack. Computers access the VBrick system of EtherneTV, VBcast, and a Video On Demand (VOD) server, Diedrich and Lipp's hybrid solution to the agency's most important AV requirement—video distribution.

Employees rely heavily on video technology to not only view and review the commercials they produce, but also to monitor clients' television appearances and mentions. "We wanted to be able to do just about anything with the video remotely over the network," Diedrich explains. "I wanted to be able to record video, play back video, send links to clients, and have clients be able to play them. It had to have a network DVR with TiVo-like functionality and it needed a video-on-demand component, too."

According to Diedrich, VBrick works as a centralized video hub, storing live streams and video-on-demand content that everyone within the network can access. A video signal reaches the VBrick server via cable or satellite, where the software encodes it and multicasts it as a single IP-format stream over the network to a core switch. Employees can distribute video to clients, who can view it via Windows Media Player.

Ideally, Diedrich and Lipp wanted to perform VBrick's television function through Crestron, removing the need for a computer, but calls among VBrick, Crestron, and the independent programmer hired, Palmer Harbison of Advanced Control Systems Design, led to an IP-based solution that controls the video through a computer instead of the set-top box.

3 Extron MTP-T-15HD-RS twisted-pair transmitters RGBHV & RS232

10 Extron P/2 DA2 PLUS computer interfaces/VGA splitters

10 Extron RGB109xi computer interfaces

1 JVC SRDVM700US DVR

1 Kramer PT102VN video distribution amplifier

1 Kramer RK-50RN switcher/VDA rack mount

2 Kramer VM30AVB video distribution amplifiers

1 Kramer VP-31 VGA switcher

1 Kramer VS-55V 5x1 switcher

1 Large Screen Display Solutions custom video projection enclosure

5 LG 42PM1M 42-inch plasma monitors

8 LG 42PC3DC 42-inch plasma TVs with loudspeakers

1 LG 50PM1M 50-inch flat-panel monitor

5 Lutron GRX-3504-T-WH wall dimmers

6 Lutron GRX-FDBI-16A-WH fluorescent dimmer ballast interface dimmers

5 Lutron GRX-PRG RS232 interface dimmers

1 Marshall Furniture EXEC-32FD podium

1 Middle Atlantic D2 rack storage drawer

7 Middle Atlantic LD-AM1X1 computer LCD monitor mounting arms

2 Middle Atlantic MRK-4026 gangable 40-space equipment racks

7 Middle Atlantic PD-915R rack power switch/strips

7 Middle Atlantic PTRK-21MDK portable equipment racks

1 Middle Atlantic RK10 table rack

17 Middle Atlantic RSH rack mounts

10 Middle Atlantic SS computer keyboard/mouse shelves

1 Middle Atlantic PD1215 rack power switch/strips

1 Middle Atlantic PD1415C rack power switch/strips

9 Mystery Electronics FCMA3400 floor boxes

8 Panasonic PV-D4745K VHS VCR/DVD combos

1 Panasonic SA-XR57S surround sound receivers

1 Panasonic ETDLE100 video projector with 1.3-1.8 short-zoom lens

5 Panasonic PT-D3500 video projectors

1 Panasonic PT-D5600U dual-lamp video projectors

1 Panasonic PV-V4525S VHS recorder

8 Premier Mounts PSD-EB60 floor stands

16 Premier Mounts PSD-SHA floor stands with equipment shelves

8 Premier Mounts CTM-MS2 SL wall/stand mounts

2 Premier Mounts UFM flat-panel monitor mounts

8 Pro Co custom engraved rack panels with connectors

2 Pro Co custom engraved wall plates with connectors

2 Sharp LC-15AV6U 15-inch LCD video monitors

"I definitely believe that video distribution is a hole in the market that needs to be addressed by the manufacturers in our industry," Lipp says. "We wanted the control system to be able to take control of VBrick's set-top box like it was controlling a DVD player, and we couldn't get that to happen."

Diedrich also noticed a difference in quality between the VBrick video displayed through the computer and the video displayed through the set-top box to a television screen or projector. "There's some sort of technology gap between the quality at which the signal is encoded versus the quality at which the signal is decoded by the set-top box," he says. "These two industries are converging, but it's going to take another year or two to sort this out until the people who do the network-based video work more tightly with the AV integrators. I'm sure there'll be some common interests that will prevail."

Overall, Diedrich and the agency are pleased with the VBrick system, particularly the VOD server. "I think it's been powerful to say that we can send video from any point on the network to any other point on the network," he adds.

COMPANY GROWTH

One of Haecker, Lipp, and Diedrich's proudest achievements is the Carmichael Lynch Greenhouse—a meeting space where small groups or the whole company gather on bleacher stairs to view video content displayed by a Panasonic PT-D5600U projector with an ETDLE100 short-zoom lens on a 120-inch-diagonal screen. Lipp and his team cleverly designed the projector into a large box with a double-mirror frame in the center of the room.

"The video projector is mounted inside a custom-built, freestanding Large Screen Display Solutions enclosure. The image bounces off the mirrors twice to reduce the size of the box. It would have to be about 15 feet deep without the mirrors, but with them

2 Shure SCM268 mixers

2 Shure SLX14/93 wireless microphone lavaliers

1 Shure SM58S-LC handheld microphone with switch

1 Sony EVID100 remote pan & tilt camera

1 Sony EVID70 remote pan & tilt camera

1 TVOne CS320 scan converter

1 Vaddio 535-2000-211 model 50 IP wall mount bracket

1 VBrick EtherneTV live streaming system

1 VBrick NVR network video recorder

1 VBrick VBcast portable streaming box

1 VBrick VOD video on demand server

1 Wolf Vision VZ-8light document camera
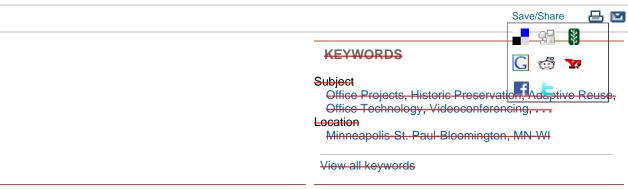
SOURCE: LIPP A/V DESIGN

the box is only about 5 feet deep," Lipp explains. But the Greenhouse is more than just a meeting space. On one side, walls slide away to reveal a large presentation conference room. On the other is a cafe area equipped with an LG 42PM1M 42-inch plasma display for smaller impromptu gatherings. Two more plasma monitors are found near the stairs and in a library.

An Extron CrossPoint 300 84 HVA RGBHV matrix switcher with audio, an Extron MAV84AV video matrix switcher, and a Biamp Nexia PM allow the content to be displayed throughout the Greenhouse complex. A Sony EVID70 remote pan-and-tilt camera and a TVOne CS320 scan converter connected to the VBrick system enables remote employees to view company meetings live via their PCs. The seven ElectroVoice EVID 4.2T wall-mount loudspeakers, a Crown 660A amplifier, a Shure SCM268 mixer, and an assortment of Shure microphones round out the Greenhouse audio system.

EDC completed the installation in February 2007. However, the building—particularly the Greenhouse—has since grown into something larger than just a corporate space.

"The idea of the Greenhouse in general was as a creative space," says Diedrich. That idea has come to include the community at large, in the form of book signings, lectures, art exhibitions, and even live music. "It was one of those ideas that had been around for a year or two as we were making tentative plans to move to a new facility, so to see it come to fruition was really nice for everybody involved."

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