



Inside Scoop: Fox News, Studio H

A new broadcast studio sets itself apart with a unique, rear-projection video cube.

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Creating the 36-by-48-foot Studio H on the 12th floor of the Fox News building in midtown Manhattan began with the build-out of a new two-story studio shell, complete with video cabling and a powered lighting grid. As executives fielded design ideas and bids, the race began: Deadlines were tight because Studio H was to be Fox's home base for live broadcasts on Election Night 2008.

McCann Systems of Edison, N.J., and set designer/partner Clickspring Design of New York emerged as the winners in the bid process. The duo had also built the studio for the new Fox Business Network (see "That's a Wrap," www.proavmagazine.com/foxbiz). In this case, the team's design was based on a bold concept that combined cutting-edge AV with modern design. The focal point of their set creation is a four-sided, rear-projection cube meant to invoke and accentuate the spinning Fox News logo.

"We had created a smaller rear-projection cube for another install, but we knew it could be done in a larger format," says Jonathan Shor, CTS, director of technology for McCann Systems.

The cube also serves to emphasize interactivity between a news anchor or correspondent and the images and video content on-screen. The four sides of a cube, plus the ability to project anything onto it, means a versatile news environment that can cover any event.

The cube is composed of four Stewart Filmscreen 100 projection screens, each measuring 12x12 feet. The flexible screens were chosen over rigid screens due to the large size of the cube and the need to easily transport the screens into an existing space. Showman Fabricators of Long Island City, N.Y., coordinated with Stewart Filmscreen and McCann to create a custom frame to hold each screen, with each corner of the cube housing a strip of proprietary Showman LED lights.

The bottom of the cube holds a solid LED light box about 6 inches deep that reflects off the mirrored floor and gives the cube a bolder look. The overall effect of combining the screens with LED lighting sets the tone for the other AV elements in the studio.

The cages for the cube's four Christie Roadster S+20k projectors fit between the studio's existing grid and duct work. "The projectors are all mounted a bit off-axis with a Christie 0.73:1 fixed, short-throw lens," says Shor. "The setup ensures that the images are evenly centered, bright, and that the non-standard, 1:1 aspect ratio is preserved on all four sides."

The Fox News building has a fiber-optic backbone already in place and Studio H has been able to tap into the infrastructure for fiber runs from the video processors (Vista Systems Spyder 380 8-input expansion processors and a 308 8-output expansion processors) located in the basement, to the projectors on the 12th floor. Four Thinklogical DVI over fiber extenders were used to extend the DVI-D signal.

"Using the Vista Spydres, it is easy to set up the active pixel area on each side of the cube, as well as bring in video feeds or a ticker that wraps around the cube," says Shor.

Because the camera can only pick up two sides of the cube at once, Shor says that the opposite sides of the cube are fed the same images. This is a cost-savings measure that also simplifies system operation. "On the opposite side of the stairs, the image on that side of the cube faces a mirror and therefore is projected as a reversed image on the cube," he adds.

McCann also integrated five banks of nine Samsung 26-inch LCD displays, which were supplied by Fox. Each bank is integrated into the studio walls, which were made Chicago Scenic Studios and have multiple cutouts and adjustable mounts for the displays.

"The challenge was getting the LCDs to the fabricators in time," says Shor. "We chose an RF distribution backbone for the displays, so there was no need for routers and other equipment. Using RF technology made it a simplified system topology resulting in cost savings. In essence, we ran five wires for 45 monitors using a splitter at each bank."

The signal feeds for each LCD bank come over four channels off the Fox in-house router, modulated onto four open RF channels from the house MATV feed. The LCDs are mainly used for custom graphics in which a bank of nine screens creates a composite image, like a waving American flag. The studio also invested in Contemporary Research HD tuners that support all monitors.

Throughout the finished TV studio, the walls feature multiple cutouts and adjustable mounts for displays. McCann Systems chose RF distribution for the displays so it wouldn't need routers and other equipment. Just five wires for 45 monitors meant cost savings.



McCann deployed a Crestron control system to handle the AV technology on the set. For live broadcast functionality, McCann laid out an intelligent graphical interface on a Crestron TPS-12B touch panel, offering Fox Technical Directors pre-set "looks" with one-touch operation.

When all was said and done, Studio H was ready for Election Night on November 4, 2008. A month later, The Fox Report with Shepard Smith moved into Studio H, which is also now used by the show The 5PM Hour hosted by Glenn Beck.

Equipment List

Control System

Crestron (www.crestron.com)

- Isys TPS-12B touch panel
- RACK 2 dual-bus control system
- C2COM3 three-port RS-232 card
- C2ENET-1 Ethernet card
- CNXRY-8 Ethernet card
- 9 C2IR8 infrared cards

Video Systems

Christie Digital (www.christiedigital.com)

- 4 Roadster S+20k SXGA+ DLP projectors
- 4 0.73:1 fixed short-throw lenses

Contemporary Research (www.crwww.com)

- 18 232-ATSC HDTV tuners

Panasonic (www.panasonic.com)

- 2 Panasonic TH-103PF9UK 103-inch plasmas
- 2 Panasonic TH-65PF9UK 65-inch plasmas

- 3 Panasonic TH-50PH9UK 50-inch plasmas

Samsung (www.samsung.com)

- 45 26-inch LCD monitors (OFE)

Stewart Filmscreen (www.stewartfilmscreen.com)

- 4 12-by-12-foot Filmscreen 100 projection screens

Vista Systems (www.vistacontrol.com)

- Spyder 380 eight-input expansion processor
- Spyder 308 eight-output expansion processor

Infrastructure

Blonder Tongue (www.blondertongue.com)

- Various Blonder Tongue splitters
- 4 AMCM 860 agile modulators
- 2 RMDA 860-30 rack-mount RF amplifiers
- 2 OC-8D passive combiners

DVIGear (www.dvigeart.com)

- DVIGear 2320 20-meter DVI cabling

Evertz (www.evertz.com)

- 6 7702BPX-IF 2x1 RF Protection Switch
- 2 7701FR 1RU multiframe with power supply

Moxa (www.moxa.com)

- 2 NPort 5650-16 rack-mount RS-232 terminal servers

Thinklogical (www.thinklogical.com)

- 4 Velocity KVM Extension System DVI over fiber