Brookings Institution Studio

Excellence Award category

New studio or RF technology — station

Submitted by

Lawson & Associates, Architects

Design team

Brookings: Ed Berkey, asst. dir. of AV-studio svc.
Lawson & Associates, Architects: Bruce Lawson, principal.; James Ahn, design architect
DesignTech, MEP Engineers: Matt Bowers, principal
Henning Associates, Acoustical Engineers: Gerald Henning, principal
DSI: Mike Burke, broadcast design eng.; Shawn Sammi, proj. mgr.
JGB Engineering: John Bull, principal

Technology at work

Apple: Final Cut Pro NLE
AMX: Control panels, PLV camera controllers
Cobalt Digital: Distribution amps, up/downconverters
Clear-Com: Encore intercom stations, Announcer consoles
Evertz: Fiber-optics transmission, MVP processor
Hitachi: DK-H100 HD box camera
PESA: Cheetah HD/SD-SDI video router, Ocelot NTSC video router, DSR audio router
Ross Video: CrossOver switcher, SoftMetal DDR
Sony: EVI-HD1 camera, monitors
Telemetrics: Pan-tilt heads
Telestream: Vantage transcoding and workflow automation
Wheatstone: Evolution mixers

The Brookings Institution opened a broadcast television/radio studio in September 2001 to provide live and taped interviews by its scholars giving analysis of breaking news to news outlets worldwide. The original analog-based facility continued to show its value in 2009 when more than 1000 interviews were conducted that year. But the equipment and systems installed in 2001 were past their useful service lives, and the television industry had transitioned to digital.

So Brookings, working with JGB Engineering, developed a plan to upgrade the studio to an HD file-based facility. Lawson & Associates, Architects designed the new facility, which would expand by adding a dedicated radio studio, a second control room, an edit suite and new equipment core. Diversified Systems was chosen to integrate the project, which was completed in March 2011.

The new Brookings studio needed to handle audio from multiple formats and delivery methods. PESA provided a unified solution by combining HD-SDI and NTSC video routers with a DSR audio router. The PESA DSR audio router provides seamless routing of audio between embedded, discrete, analog and AES sources, and provides internal embedding and de-embedding functions. The Wheatstone WheatNet-IP blades for microphone, analog and AES I/O also added flexibility to the system. These systems eliminated the need for dozens of outboard cards and frames, saving space and power, as well as reducing cooling needs.

Another key design requirement was the ability for each control room to have complete control of either studio or the cameras in the press briefing rooms at the press of a button. An AMX control system provided this function with touch panels and PLV camera controllers in each control room. The AMX system recalls custom-built presets of the Evertz MVP, PESA routers, Ross Video CrossOver switcher and Wheatstone Evolution mixers. The AMX also enables operators to customize the views, routes and mixer channels of each system via touch panels in the control rooms, equipment core or web access. The AMX PLV controllers operate two Hitachi DK-H32 cameras in the television studio, a Sony EVI-HD1 PTZ camera in the radio studio and seven Hitachi HV-D5 cameras in the press briefing rooms, depending on the preset selected.

Brookings' editors were already familiar with a file-based workflow, having used JVC FireStore and SD card cameras. Now Brookings wanted to ingest video and audio from the new facility and press briefing rooms. File ingest and transcoding functions are handled by workflows built in Vantage, from Telestream. Vantage shares gigabit access to a media SAN with the three Apple Final Cut Pro edit systems. Original and edited media files are dropped into watch folders on shared drives to copy original media files into archives, place copies into edit folders, transcodes files, and deliver files to both internal and external clients. The workflows relieve edit systems of transcoding processing, provide continuity in media file management and automate the delivery of media files to end users.