Fed Ex Institute of Technology
University of Memphis Memphis, Tennessee

Voting Application

It's being called the digital research epicenter of the Mid-South, a reference to its location on the seismic fault line that runs through Memphis, Tennessee. Officially open this past November, the FedEx Institute is a unique, $23 million public-private collaboration between the University of Memphis and the shipping giant, Memphis-headquartered FedEx Corporation.

The Institute has been established to advance world-class interdisciplinary research and introduce a new generation of highly skilled graduates to the workforce. The 95,000 square-foot building incorporates a wireless fidelity (WiFi) network, a voice-over Internet protocol (VoIP) network, interactive multimedia theaters for meetings and presentations, computer labs, training rooms, collaboration areas, an exhibit area, and labs.

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Led by system designer and project supervisor Bill Kistler, WJHW (Wrightson, Johnson, Haddon & Williams, Inc.) of Dallas, TX handled systems design and integration for the Institute and the A/V contractor was Southern Business Communications of Memphis.

Probably the most interesting product "collaboration" in this project was between the Bosch Digital Congress Network (DCN), a system of mini-stations that incorporate an LCD screen, keypad, and two-way audio, and the **Crestron RACK2 Dual Bus Control System.** WJHW and Crestron's in-house software engineers were responsible for getting these systems to talk to each other—"in a huge way," says WJHW, Bill Kistler. But the results of this effort lead straight in to the heart of the facility—the interactive, multimedia amphitheater, known simply as, "The Zone."

The large raked-seating arena, The Zone, best represents the spirit of this project, and the Institute in general. Over 190 seats focus on a 9.5' x 17', rear projection screen (with a 16:9 aspect ratio) here in this forum for interactive education and collaborative research.

There are 194 DCN stations in The Zone. (This is the second largest DCN installation in the world, the largest being the General Assembly of the United Nations.)

The basic use for Bosch conference units is for voting and discussion, as well its primary function, simultaneous language interpretation. Integration of the Bosch network into The Zone was accomplished through custom software developed by Crestron software engineers, Ray Coneys and Craig Rosasco, working with Mr. Kistler, using Crestron's open platform, **ActiveX-based e-Script programming** application that allowed the RACK2 to control the Bosch networked units.

What was gained through the integration of Crestron control system with the Bosch was greatly enhanced database capabilities for the units, expansion of the system's voting feature, and integration of its camera control feature with the Crestron multiple-window display capability.

When you're in The Zone, it's all eyes front and center. A 116" x 206", 16:9 aspect ratio, rear projection screen dominates. Two **Crestron DVP4 Digital Video Processors** send signals to the HDTV-format screen driven by an NEC Nighthawk projector in the front of the room as well as to the two, 42" Pioneer plasma screens facing the podium, and the Elo touch-screen driven by a **Crestron TPS-TPI** at the podium itself.

There are four main reasons—or five, depending on how you count—that WJHW's Kistler specified the DVP4: "The Crestron unit is the only one on the market that will do 16:9," he says, "and we wanted a unit that could handle multiple windows on-screen." The DVP4 can display up to four

real-time video/computer windows simultaneously on a single high-resolution monitor, projector, or plasma screen, with variable text.

"The DVP4's are used as video processors, not just a display controller, " says project manager, Matthew Kosel of dealer Southern Business Communications. "The signal generated by the unit is fed back into the RGBHV switcher and then routed to any of the displays we choose: Projection, Plasma, LCD panels, Codec, Feed to Building Messaging System, etc."

The default display configuration is one large image with three smaller images along the right side. One of the plasma screens facing the podium displays the same image as the one on the rear projection screen. The other, driven by a DVP4, has the ability to display up to four images and text, for Power Point details, current student/attendee speaking info and voting feedback information.

Plasma screens are used in the main floor lobby and in the lobbies on floors 2, 3, and 4 for in-house video messaging and news broadcasts powered by Enseo Channel Now.

"By using the building cable TV system and a Crestron **QM-RMC** connected to the network," says Kosel, "we are able to control the content and control the plasmas without running wire to every location. This makes for a very easy installation."

The Zone also includes a **Crestron C2N-DAP8** high-performance, 5.1 digital audio processor that provides surround sound in The Zone.

Consultant & Designer:	Bill Kistler	Wrightson, Johnson, Haddon & Williams, Inc.
Installation & Integration:		Wrightson, Johnson, Haddon & Williams, Inc., Dallas, TX Southern Business Communications, Memphis, TN
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