Science Center Elevates Visitor Experience with MuxLab AV over IP

Science Theater

Curiosity Hall

The Da Vinci Science Center in Allentown, Pennsylvania—working with **Roto** as the exhibit design-build partner—sought a cutting-edge audiovisual (AV) system capable of routing high-resolution video and clear audio across multiple floors. With the help of integration specialists at **Theme Park AV**, the center installed MuxLab's **500759-TX-DANTE** transmitters and receivers. This solution seamlessly connected various video sources to multiple displays while integrating audio into the center's existing Dante-enabled sound system.

Da Vinci Science Center required an AV system that would support 4K video in different areas, offer intuitive controls for staff presentations and demonstrations, and enable flexible connectivity for external devices such as laptops. Additionally, the center needed to route Dante audio through its speaker system with minimal complexity. Because it frequently hosts live events and educational sessions, the project demanded a reliable solution with low maintenance requirements to minimize downtime.

Theme Park AV selected MuxLab's **500759-TX-DANTE** transmitters and receivers because they can transmit both HDMI video and Dante audio over a single Ethernet infrastructure. This all-in-one approach eliminated the need for separate signal paths, streamlining the installation process and reducing cable clutter. Power over Ethernet (PoE) further simplified deployment by removing the need for additional power sources and enabling easy relocation or expansion of devices.

> *No other solution offered the capability to transmit audio and video over one cable while allowing independent separation of signals," explains the Theme Park AV team. "That streamlined operation makes for a clutter-free installation and an exceptional user experience.*

The center's setup also includes portable stage boxes that house additional transmitters. Staff can place these boxes anywhere on the first floor and quickly plug in laptops or other HDMI-equipped devices to stream content to any designated display. Because the system operates on a standard network, adding new sources and displays in the future requires minimal reconfiguration.

To manage signal routing, the Da Vinci Science Center's technical team uses MuxLab's ProDigital Network Controller, which provides a web-based interface for selecting sources and destinations. On the audio side, a Symetrix DSP integrates with an Alcorn McBride show controller, enabling convenient routing and control via a touch panel or an iPad. This user-friendly interface simplifies day-to-day operations, ensuring that presentations and events run smoothly.

Since installation, the center has reported no service tickets, highlighting the system's stability and ease of use. Staff can effortlessly switch between input sources and direct content to different displays. In addition, the portable stage boxes allow for quick set-ups during live events, ensuring presenters and visitors enjoy a seamless, high-quality multimedia experience.

Why MuxLab?

Before finalizing MuxLab, Theme Park AV explored other solutions but found that none could carry HDMI video and Dante audio over a single cable while allowing the signals to be managed separately. MuxLab's unique feature set delivered the simplicity and convenience that the Da Vinci Science Center and Roto required. By combining audio and video over one Ethernet cable, the system maintains a clean, organized installation that is easy to operate and upgrade.

I've been using MuxLab products for over 20 years, and they've consistently proven to be reliable for AV distribution. It's impressive how they continuously innovate, introducing new technology that not only meets client needs but also empowers integrators to develop creative, tailored solutions.

Jesus Solis - Owner, Audiovisual & Show Control Engineer for Theme Park AV

Theme Park AV.

With over two decades of industry experience, Theme Park AV specializes in designing user-friendly, feature-rich, and cost-effective audio, video, and show control solutions. Catering to themed entertainment and public venues, the company blends engineering expertise with a passion for innovation to deliver installations that enhance both operational efficiency and the overall visitor experience.

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