

ENHANCING VISITOR EXPERIENCE AND SAFETY

Minnesota Zoo

Connecting Visitors to the Natural World with Q-SYS Technology

📍 Apple Valley, MN

Innovation and adventure are at the heart of the [Minnesota Zoo's](#) mission to connect people, animals and the natural world to save wildlife. To achieve this, the zoo has integrated Q-SYS solutions throughout its expansive nearly 500-acre facility, enhancing visitor experiences with advanced audiovisual technology. The transformation of a decommissioned monorail into the Treetop Trail exemplifies this integration, offering visitors elevated views and closer encounters with wildlife. Beyond this signature project, [Q-SYS](#) facilitates audio distribution and control across various venues to ensure engaging, safe, and enriching experiences to craft an unforgettable adventure that's as secure as it is inspiring.



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Luke Mapes

Audiovisual Designer at Minnesota Zoo

Challenges

Modernizing Monorail Pathway

The audiovisual designer at Minnesota Zoo, Luke Mapes, has been a key advocate for integrating Q-SYS technology throughout the zoo. However, the most ambitious project was the Treetop Trail. Mapes had long envisioned comprehensive audio and paging distribution for emergency calls and announcements. The transformation of the monorail into a walkway provided the perfect opportunity for his vision to come to life. “The Treetop Trail became our thoroughfare for wide area distributed audio and paging,” Mapes explains. “Q-SYS was the logical choice due to its expandability, flexibility, and routing/zoning capabilities.”



Solutions

New Heights with Q-SYS

With Q-SYS chosen as the central audio, control and paging system, the Treetop Trail was transformed into an engaging Canopy Walkway. This system is designed for flexibility, handling zoning, emergency communication, and delivering immersive audio experiences. It drives a total of 74 speakers which includes [AcousticDesign™ Series Premium](#) outdoor landscape loudspeakers powered by [Q-SYS MP-A Series Amplifiers](#) housed in AV cabinets with [Q-SYS QIO Series network I/O expanders](#). The Q-SYS system manages weather alerts, safety announcements, immersive soundscapes, event entertainment, and live nature presentations, controlled via [Q-SYS Touch Screen Controllers](#).

“We started thinking creatively,” Mapes said. “We considered additional uses for the Treetop Trail, like hosting nature walks, educational talks, events and even collaborating with other organizations. In the design of the trail, we planned for multiple locations that could be utilized for events, presentations or performances. The aesthetics of the trail is intended to be minimalistic so in these locations we did not want any permanent visible AV racks. Since managing such an expansive area and a growing number of events would be challenging for a small AV team, we needed a solution that allows presenters to use the AV equipment without relying on tech assistance. Therefore, we equipped two AV carts with a [TouchMix® Series Digital Mixer](#), wireless microphones, media player, a Q-SYS QIO expander, and a Q-SYS Touch Screen Controller. The trailhead, nature center, tiger overlook and reflection pond overlook each have presentation areas where these carts can be connected. When the cart is plugged into the network at that location, it connects to the QSYS Core 110f. Through the QSYS TSC-70-G3 touch screen controller, this setup enables presenters to choose their location on a trail map via the [user control interface \(UCI\)](#), activate the loudspeakers in the selected zone and start their presentation.”

Mapes continued, “During events, performers, entertainers or DJs can simply plug into the TouchMix to utilize our PA. The intuitive UCI makes it easy for the end-user to select their event. Moreover, all zones and presentation spaces can be overridden by the paging system to make “all call” announcements from our Guest Services desk or Dispatch office. This ensures quick and efficient communication during weather alerts or security incidents if needed.”



Solutions

Expanding Q-SYS Deployments

Branching out from the Treetop Trail, we find other Q-SYS deployments at the Minnesota Zoo, enhancing various venues such as conference spaces, indoor and outdoor theaters, a nature exhibit, and flexible conferencing areas. In the indoor bird show theater, called the Target Learning Center, the Q-SYS Core 110f not only manages audio and video playback but also controls theatrical lighting, showcasing its third-party device control capabilities and automation features. Meanwhile, at the Lakeside Amphitheater, another Core 110f controls microphones and audio playback, accommodating a venue with a seating capacity of 1,500 guests.

Engaging Conference Solutions

“We’ve renovated three conferencing spaces using Q-SYS, ensuring an engaging experience for our guests and zoo staff,” said Mapes. “Each room is equipped with microphones, projection, hybrid conferencing devices, [Q-SYS PTZ Cameras](#) and loudspeakers, all controllable via a Q-SYS Touch Screen Controller to enable seamless meeting experiences. This user-friendly set up with hybrid capability is perfect for board meetings, education classes or corporate events. We plan to leverage [Q-SYS VisionSuite Intelligent Audio](#) to automatically identify the active speaker using microphone data. This system will seamlessly switch camera presets without manual input, ensuring that the person speaking is always in view, regardless of their location in the room. It’s really great.”

Enhancing Education and Events

Mapes shared his vision for Q-SYS at the Minnesota Zoo: “We are planning several large future projects that will incorporate a significant amount of technology driven by the Q-SYS system. These projects aim to enhance education and events at the zoo, providing advanced technological solutions to improve visitor experiences and operational efficiency. The integration of Q-SYS will ensure seamless audio-visual capabilities across various spaces, supporting a wide range of activities and functions.”

Immersive Nature Experience

The Minnesota Zoo and Q-SYS collaboration highlights how technology can deepen the connection between people, animals and nature. Using a flexible and intuitive AV system, the zoo creates an immersive environment where visitors can engage with compelling wildlife conservation stories. As the zoo evolves with future projects, Q-SYS technology will enhance these efforts, ensuring every visitor leaves with unforgettable memories.



Q-SYS is a globally recognized manufacturer of audio, video and control (AV&C) solutions for huddle rooms to stadiums—and everything in between. Our systems make it easy for your team to design and integrate flexible, scalable solutions and deliver the native IT integration and standards-based technology your customers expect.

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