Illuminarium Experiences Creates the Next Generation in Immersive Experiences with Lightware’s AV-over-IP Technology

Case Study

Lightware Visual Engineering
Lightware’s UBEX solution, delivering uncompressed audio and video content, pushes the boundaries of technology innovation for experiential entertainment company Illuminarium.

Illuminarium Experiences, a breakthrough global experiential entertainment company, is creating the next generation in immersive experiences. Created by worldwide leaders in cinematic and interactive content, architectural and theatrical design, and venue operations, Illuminarium Experiences enables visitors to experience recreated worlds. Actual filmed content is used to showcase real-world, authentic sights and scenes, presented in custom-designed venues called “Illuminariums.”

Illuminariums are reprogrammable, immersive theaters that surround visitors in a sensory space of sight, sound and scale unlike any other — providing access to the most amazing but typically out-of-reach places, people and experiences. They deliver one-of-a-kind sensory experiences, from exhilarating natural wonders to enriching cultural moments. Illuminariums are brought to life by 4K laser projectors, audio beams, in-floor haptics and realistic aromas, which work in combination to create a fully immersive experience.

Illuminarium Experience has opened its first Illuminarium in Atlanta, Georgia, with its debut spectacle, WILD: A Safari Experience. Through a convergence of cutting-edge technologies from the most impressive brands in the industry, the immersive 8,000 square-foot entertainment complex will showcase the beauty and splendor of Africa’s most exotic animals in their natural habitats.

“An Illuminarium is a place that can take you to any place, in a manner never before experienced, through state-of-the-art technology,” said Brian Allen, executive vice president of technology and content for Illuminarium Experiences. “Delivering this sort of immersive experience requires us to have the highest-quality audio and video.”

“From a technical standpoint, it requires us to deliver the highest-quality audio and video. Every layer of our technology contributes to the experience that we are trying to create. Our content is incredibly realistic and, because of that, we have to integrate technology that doesn’t look like a projector and a screen but the African Serengeti. We have to look closely at the little details — like color spaces and the light output — to create an immersive experience.”

Among the brands at work in Illuminarium is Lightware, whose UBEX (Ultra Bandwidth Extender) is being used to deliver reliable content with zero-latency. “UBEX enabled us to push the boundaries of technology and innovation by delivering truly uncompressed content without any degradation in our signal from camera, playback and projector,” noted Allen. “We integrated UBEX because of the actual lossless quality, incredible flexibility and reliable video routing.”
Allen added, “UBEX delivered on the promise of eliminating signal loss. We also wanted to create a flexible, future-proofed system. We pulled more fiber for each location as we anticipate signals will have a higher bit-depth, more color information and higher resolution. We wanted the ability to transport additional information for future growth. An AV-over-IP system provided us with the flexibility for expansion.”

Illuminarium’s debut spectacle, WILD, transports visitors to Africa through cinematic content on location across South Africa, Kenya and Tanzania, showcasing the majestic animals in their native habitats. Complementing the exotic sights of a safari, visitors will also be immersed in its authentic sounds and scents, all without leaving Atlanta’s BeltLine. WILD will be followed by SPACEWALK, a mind-blowing journey through our Solar System where audiences will experience what it’s like to walk on the surface of the moon and Mars.

“We create different rendering pipelines for each show,” Allen continued. “It was important that we integrated a flexible solution, like UBEX, that enables us to utilize existing technology as we create new shows. UBEX allows direct connectivity to different inputs and components that provides us with unparalleled flexibility across the massive facility.”

UBEX is the professional AV industry’s leading uncompressed AV-over-IP solution. It can operate as a virtual matrix using a standard Ethernet switch as a crosspoint or work as a conventional point-to-point extender. The unit allows for uncompressed, high-fidelity signal extension at 4K UHD at 60 hertz (4:4:4) using packet-based transmission. UBEX can simultaneously transmit and receive content with deep-color streams and multi-channel audio. It is designed to be future-proofed while catering to professional AV stakeholders’ needs and expectations.

For more information on Illuminarium’s WILD: A Safari Experience, please visit Illuminarium.com. Illuminarium will open additional locations in Las Vegas, Nevada and Miami, Florida, in 2022.