



## Crestron Transforms Grand Canyon Visitor Center

### New High-Tech Theater Introduces Visitors to Grand Canyon History and Preservation

#### Background

When managers of the Grand Canyon National Park started planning a theater for the South Rim Visitor Center, they knew it had to be highly automated and reliable. With 750,000 to one million people expected to visit the theater each year, staff might become overwhelmed by the support responsibilities.

The new theater introduces visitors to the park with a beautiful video, "Grand Canyon: A Journey of Wonder," produced by Joshua Colover of Newport Beach, CA-based Aperture Films, Ltd. Colover spent more than two years on the project, shooting in the park and completing the final cut just one month before the theater opening.

According to Judy Hellmich-Bryan, Chief of Interpretation for Grand Canyon National Park, theater design and video production occurred simultaneously. By the fall of 2010, the

theater was under construction and the AV system designed. However, the general contractor was not happy with the plans. Charlie White of Sedona, AZ-based AVDomotics explains. "He asked us to look at the designs and we said, 'you can do this much more efficiently and intelligently using Crestron equipment head to toe.'"

AVDomotics joined the project with White engineering the new system. "With an integrated Crestron solution, we were able to re-design the system with functionality and performance far greater than the original design and at a lower overall cost," he says.

#### Automated operation

Because the video was shot in 1080p high definition with 5.1 surround sound, AVDomotics decided to incorporate Crestron DigitalMedia™ over fiber to transport and switch all video and audio signals.

The new design included complete automated control of all systems, running the theater 365 days a year.



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From a 6" wall mount touch screen, park staff can program movie start and stop times. The Crestron processor controls the audio and video systems, and also powers the countdown timer outside the theater entrance.

With the touch of a button, a show begins, the doors close, the lights dim and the video begins. After the movie, the lights turn on and doors open. If it's the first presentation of the day, the system powers on automatically at preset times before the theater opens, ensuring all systems are warmed up and ready to go. At the end of the day, the system powers down automatically. AVDomotics tied the fire alarm into the AV systems. In an emergency, the movie stops, lights turn on and doors open automatically so visitors can exit safely.

The system also includes assisted listening and open captioning for the hearing impaired plus an elaborate audio experience for the blind and visually impaired. "We provide headphones that give visitors a descriptive audio interpretation of the film," explains Bryan.

When the park hosts a meeting or special event, staff can override the automated system and display presentation visuals from a computer or Blu-ray Disc® player. Speakers can address the audience from wireless and handheld microphones. Thanks to Crestron DigitalMedia, the system accepts both analog and digital inputs so any device can connect to the system.

"We hosted a Star Party for visitors in the theater, where astronomers provided a tutorial on the night sky for visitors, and they were able to easily connect their laptops to our system and begin their presentations right away," notes Bryan. What's unique is that DigitalMedia can accommodate the latest digital signals and connectivity.

### Systems at a Glance

In designing this system, AVDomotics were very concerned about the quality of the audio and video delivered to the audience. DigitalMedia™ allowed AVDomotics to provide full 1080p high definition and surround sound in the production's original format, without compression or the artifacts that digital compression can produce.

To ensure the best possible playback, AVDomotics route video signals to a Projection Design F82 theatrical projector and audio to JBL 8320 surround speakers and a JBL 4642A Dual 460 mm subwoofer system.

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**Charlie White, AVDomotics**

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### Benefits

"Using essentially all Crestron components for the video and audio system had several benefits," says Charlie White. First, since the products are built to work together, and programming and integrating was easier and less expensive.





Second, park staff wanted to use the theater for presentations, plugging in wireless microphones and presenter laptops. DigitalMedia allowed AVDomotics to provide analog and digital inputs using a single DM-TX-201-C transmitter.

“Maintenance is much easier,” White adds, “since we’re able to bring detailed feedback on every aspect of the system from power input monitoring to projector bulb life up on the touch screen. Should there be any problem, diagnostics are available quickly and efficiently, simplifying service and minimizing downtime.

“While a system integrating a multitude of products can work fine, when something goes wrong, it’s difficult to diagnose the problem,” he adds. If an older product needs to be replaced, the entire system may need to be reprogrammed. “Crestron, on the other hand, has been very good at maintaining their

product line, providing long term support of all of their products. Not only does that go along way for the integrator, but it translates into higher customer satisfaction.”

Bryan says the film and theater’s new design have been well-received by park visitors. “Word has spread about the new theater,” she says.

Bryan’s only concern now is whether the 230-seat theater is large enough for the number of daily visits. “We have not been over capacity yet, but that could change in the coming years.”

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