

# Tillicum Village

## Case study



▲ Tillicum Village's show highlights the history of the Coast Salish Native American community.

## New technology for sharing timeless stories

Tillicum Village highlights the history of the Coast Salish Native American community through song, dance, culture and traditionally-prepared food. Argosy Cruises, Tillicum's operator since 2009, provides a 40-minute boat trip from Seattle to Tillicum Village on Blake Island where it hosts a dinner and show at its 22,000 square-foot facility.

When Argosy acquired the long-term concession to operate Washington State Park's Tillicum Village, the long house, which serves as a theater for 450 people, was in dire need of updating and repair. The stage had a dirt floor and the stage set and soundtrack were 18 years old. The whole facility had suffered from a considerable amount of deferred maintenance.

On a trip to California, Kevin Clark, chief executive officer, Argosy Cruises, first saw Musion technology and recognized the potential to use video images to enhance Tillicum Village's live performance. Using Musion to show high-definition, virtual actors meant the performance would be consistent

and high-quality every time. Live actors and dancers could interact with the video content creating a synthesis of live and filmed performance, fantasy and reality.

Two elders from local tribal communities, along with several of Tillicum Village's Native American performers agreed to share their songs and dances on film. In one part of the show, two filmed dancers perform in full regalia accompanied by live drumming. In another part of the show, Roger Fernandes, a gifted storyteller, shares compelling and instructive stories about life and the health of the Puget Sound area.

"Marrying a new technology with an ancient culture may seem inauthentic. But, culture doesn't mean stagnation. And Native American culture is not out of sync with today's world. The Tillicum Village show demonstrates that native cultures should not be confined to a museum. Native Americans are alive, vibrant, evolving," explains Maureen Black, marketing director for Argosy Cruises and Tillicum Village.

### Customer:

Argosy Cruises (Argosy) and Tillicum Village

### Location:

Seattle, WA, USA

### Industry/market:

Hospitality/tourism and live entertainment

### Partners:

- Da-Lite
- rp Visual Solutions
- Tempest Technologies

### Requirements:

- Realistic holographic images
- High brightness
- Perfect pixel mapping
- Reliable performance
- Ease of use

### Summary:

Tillicum Village tried to use Musion projection to incorporate high-definition film content into its live show. But, the projection system wasn't designed properly. Tempest Technologies redesigned the system so it creates amazing and realistic holographic images.

### Products:

- Christie HD-10KM (Dual Stack)
- Christie Twist
- Christie AutoStack

### Results:

The show at Tillicum Village uses high-definition content to enhance the live performance and capture the images and wisdom of Native American elders. The overall production is rich and every performance is of the same high quality. Now Tillicum Village's projection system works so well audience members are often unable to distinguish the live actors from projected images.

Musion uses Pepper's Ghost technology to create dramatic holographic images. Projected images are directed towards a custom bounce surface and then reflected towards a specialized reflective surface. If the bounce surface is not properly designed and installed, every imperfection will show on the projected image. The right screen surface gives the image its depth. Matching the light output from the bounced surface to the rest of the scene creates a lifelike holographic image.

Unfortunately, Tillicum Village's first system installation was not ideal. The bounce surface was little more than a bed sheet. And due to improper installation, the two Christie® HD-10KM 3-chip DLP® projectors were literally being shaken out of place every day by the dancers' lively stomping on the stage, creating blurred images.

Bart Black, business development manager, Tempest Technologies, was called in to upgrade the entire projection system. He and his team spent more than six months redesigning and installing the new system, working around the shows, which were never stopped.

He replaced the existing bounce surface with a Da-Lite digital grey screen that reproduces "utter reality, rich color and true contrast of the actor and the background," according to Black.

The existing Christie HD-10KM 3-chip DLP projectors needed to be repositioned and the mounting system completely redesigned to allow for image stacking. The work required exact pixel-by-pixel mapping to keep the image brightness and sharp focus. "If the projectors are not aligned properly — are off at all — then the final image is blurry. If brightness is an issue," Black explains, "I'd recommend using one brighter

projector rather than two projectors. That way you don't have to mess with pixel-to-pixel matching of a live performance. This installation wouldn't have been a success without Christie Twist™. And we needed a solution to keep the projectors in alignment. Christie AutoStack™ was an invaluable component of the overall design."

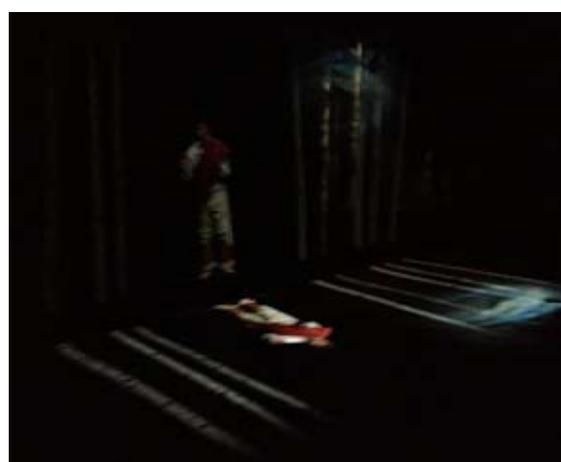
Christie AutoStack is designed to work with any Christie 3-chip DLP projector that has Christie Twist loaded on it and dramatically decreases the time it takes to stack multiple projectors and blend their images.

Black continues, "The person running the show needed a nontechnical way to realign the images and [Christie] AutoStack gives him a one-button way to do this... it only takes him 90 seconds to realign the images. After each show, he double clicks "AutoStack" hits run and then does all his other stuff. Before [Christie] AutoStack was used, he had to call a projectionist at \$300 an hour and he was doing that just about every day."

The new system has been running perfectly since June 2012 with no service calls. "The images have maintained themselves. The software and alignment have stayed in place," says Clark.

But it's the audience response that really highlights the success of the new system. Both Black and Clark recall that "Audience members ask to come up and meet the shaman or want to know why Roger didn't come out to take a bow. That's how real he seems on stage! But he's only a hologram."

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▲ This photo shows the poor image quality of the original projection system.



▲ The new, properly-designed projection system creates dramatically lifelike images.

Photo credits: Argosy Cruises, Tempest Technologies

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