Immersive Projection

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Project: Interactive, immersive display with unparalleled image resolution at Monterey Bay Aquarium

An exhibits design and development company in Corrales, NM, recently designed and installed a custom 7-foot, round multi-touch wall for the Monterey Bay Aquarium. Entitled Tiny Drifters, the interactive installation utilizes blended Digital Projection dVision 35-WQXGA projectors to drive the imagery. Two 2560 x 1600 resolution dVision 35-WQXGA projectors create an incredibly high-resolution interactive touch surface for aquarium attendees.

The aquarium’s interactive touch wall has many unique qualities. The seven-foot diameter glass surface serves to fully immerse the audience. The rounded surface gives the installation additional differentiation from more traditional touch surfaces. Additionally, the fact that this exhibit is permanent (while many other touch surfaces are temporary) presented challenges along the way for Ideum, as they used thick tempered glass and other hardened materials to fortify the wall for the long-term.

The exhibit can track an almost unlimited number of points, allowing for multiple visitors to interact simultaneously. Ideum used a series of low-powered 5 milliwatt lasers to provide the infrared light for the tracking. A relatively simple four camera system is used to capture the touch points. The software and 3D plankton models were created by Lindsay Digital using Unity. The group at the Monterey Bay Aquarium developed the concept and assembled together the team.

Projector Used
• dVision 35-WQXGA

Feedback from the Client
"While there are larger multi-touch walls out there, few match our resolution at 2560 x 2560 pixels (better than HD) or if they do, they often aren’t contiguous." – Jim Spadaccini, Ideum’s Director

Key Features:
• Single-chip DLP display with 2,900-7,500 Lumens / 7,500:1 Contrast
• High-contrast displays for inspiring high-detail imagery
• High-quality lenses with remarkable amount of lens shift

We would like to thank Ideum (www.ideum.com) for the use of images and content in this case study.