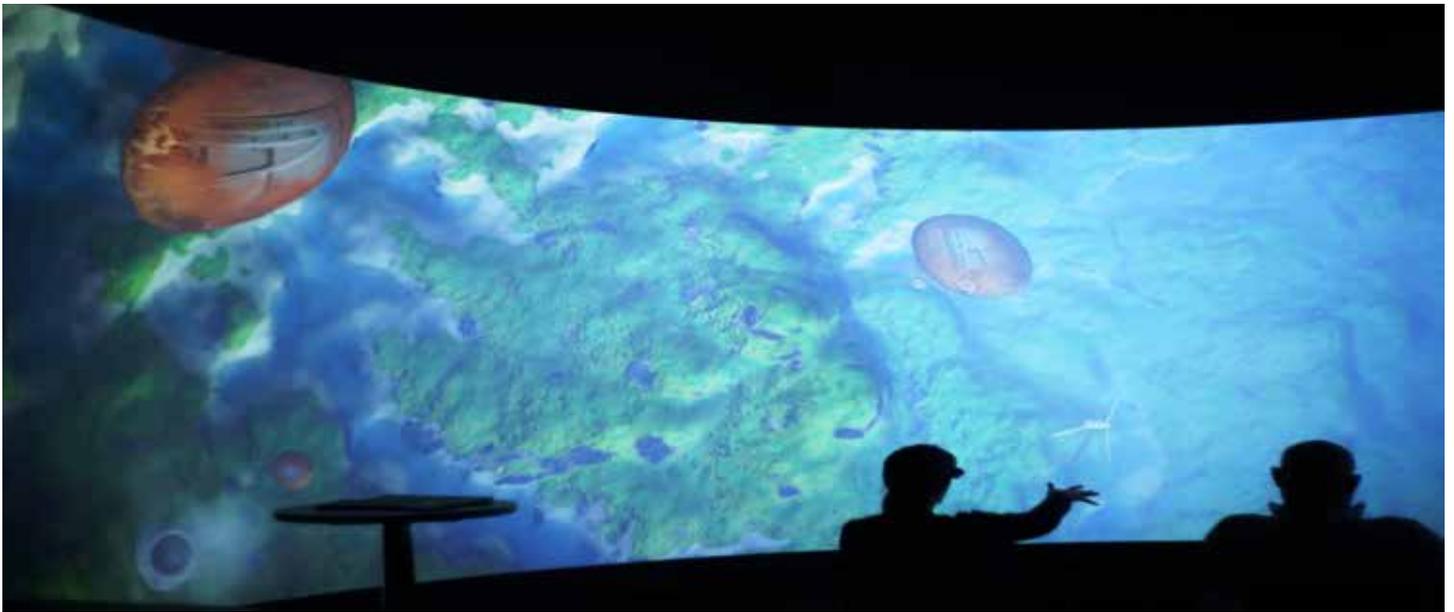


**DIGITAL**  **PROJECTION**

# Virtual Reality Case Study





## Macquarie University Aligns its VR Lab to the Cutting Edge HIGHlite Laser

In a move to incorporate its Virtual Reality (VR) Lab in line with its broader Simulation Hub in 2015, Australia's Macquarie University embarked on an upgrade plan to find a visual system that would enhance its virtual experience.

The upgrade team, guided by virtual reality, visualisation and simulation solutions experts, VRSpace (now GHD) opted for an 8m diameter (18.8 wide) 240 degree, cylindrical, fully immersive laser projection system for its new VR Lab: the Digital Projection HIGHlite Laser (WUXGA 1920 1200). The projector was sourced through Digital Projection's distributor in Australia, Amber Technology.

With its stable solid-state light source capable of producing over 20,000 hours of illumination, Digital Projection's HIGHlite laser projection technology is a revolution of ease and simplicity. Not only is the technology maintenance free with no lamp replacement, dramatically reducing the overall cost of ownership, it is dramatically brighter than its lamped predecessors, producing 13,000 lumens of impactful imaging.



The university's Simulation Hub is a collective of virtual reality environments in a single location. The VR Lab, initially established in 2003, provides just one of five different environments encompassing a variety of scenarios.

The upgrade objective was to provide a high-performance 3D-capable projection solution to allow participants in the VR Lab to fully immerse themselves in the virtual research environment. A high level of immersion had already been achieved in the original VR Lab, using a curved front projection screen, filling 160 degrees of the viewers' peripheral vision and projecting onto the canvas in active stereo (frame sequential stereo) to simulate depth in the 3D virtual environment.

The Digital Projection HIGHlite Laser presented the perfect solution. Four projectors in total were required to provide the four-channel warp and blend, active stereo 3D, 240-degree cylindrical panoramic projection spanning 18.8metres. HIGHlite provided flexible mounting orientation, vital for the complex requirements of Macquarie University's VR Lab. The installation also included other technology such as 3D positional audio and a cyber glove input device to complement the highest possible quality of cutting edge laser projection.

### HIGHlite Laser II

#### Key Features of the HIGHlite Laser

- WUXGA Resolution
- Laser illumination
- 13,000 ANSI Lumens
- 20,000 hours illumination on laser models
- 3-Chip DLP



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