Students and researchers from any discipline can explore the pyramids of Giza or the cosmos, map historic structures or the nanostructures within the human brain, work out big-data projects with CERN or the folding of proteins, or rehearse Shakespeare performances with people in England — all without ever leaving Merced — by building 3-D visualizations on the WAVE.

The WAVE allows research to share a virtual environment connected by a high-speed network for collaborative science and scholarship.

**WIDE-AREA VISUALIZATION ENVIRONMENT (WAVE) SYSTEM**

**THE SYSTEM FEATURES:**
- 20 4K OLED 3-D TV monitors in a half-pipe configuration;
- 10 rendering nodes with two GTX 1080 Founder’s Cards (one for each screen means a total of 20);
- Intel dual-link 520 SFP+ Converged Network Interfaces, running a 10G subnet for internode communication;
- AR-Tracker advanced real-time tracking for human interaction;
- A head node and FIONA DTN with Mellanox ConnectX®-5 dual-port adapters;
- A Layer 1 path to UC Merced/CENIC edge;
- A Cubix GPU Expansion Chassis with additional 8 GPUs supporting RDMA;
- An 11.2 Dolby Atmos® System for immersive sound and perceptualization; and
- More than $100,000 worth of content production equipment, including drones, cameras, audio and software.