



Colter Wehmeier

Sophomore, Architecture

Mentored by the
Advanced Visualization Laboratory

Project Objective

Integrate various motion tracking systems into virtual 3D environments in order to create more immersive and interactive experiences.

Research the use of motion tracking and virtual/augmented reality systems in the context of virtual workspaces and presentations.

Approach

Build interactive demos to understand various motion tracking solutions in VR

Demonstrate work to others, and iterate demo design to reduce confusion and increase usability among those inexperienced with VR

Present Final Sophomore Architecture Project to peers and reviewers using a VR demo built in lab.

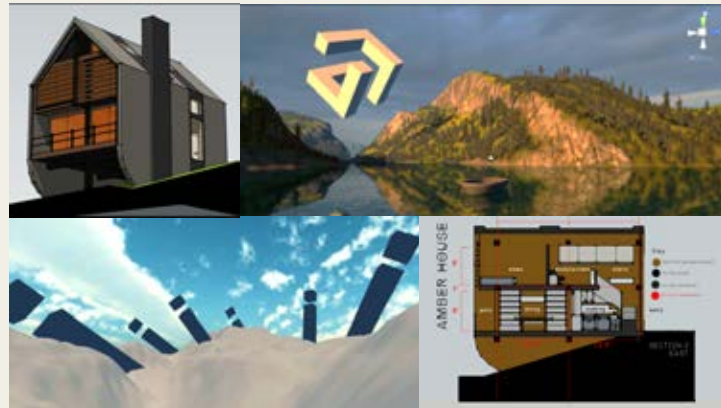
Status

Built Body/Head Tracking "Boat" Demo in Unity 3D using the Oculus Rift and Microsoft Kinect with Sam Fu

Built Hand Tracking "Flight" Demo in Unity 3D using the Oculus Rift and Leap Motion with Shubham Gupta

Built Architectural "Home" demo in Unity 3D and Google Sketchup using the Oculus Rift and Xbox360 Controller

Demonstrated various demo builds to interested parties involving a Chicago Architecture firm, the local press, and interested patrons.



Questions

- How can we authorize digital content using virtual/augmented reality and post-mouse/keyboard user interfaces?
- What are the most effective ways to communicate/create spacial concepts utilizing VR?
- What will future developments in VR/AR, body tracking, and 3D printing/scanning have in store for workplaces and entertainment?