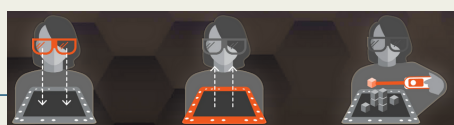




# My Tilt Five Experience

BY JOHN SUELEN



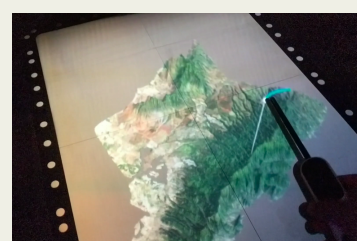
## WHAT IS IT?

The Tilt Five is made up of three components:

Glasses: projects various media from your PC to the board

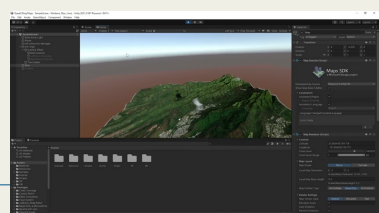
Board: reflects projection, creating stereoscopic 3D effect

Wand: interacts with projections



## THE START

Looking to work in the LAVA lab, I was exposed to existing projects like Create(X), HSEO, and Sage3. Dr. Jason Leigh then suggested I work with the newly released Tilt Five and find a use for it in terms of visualizations. My first task was to project a 3D model of the island of O'ahu on the Tilt Five.



## ADVANCEMENTS

Couple of weeks pass and fellow lab member Ryan Theriot tells me about the Bing Maps SDK for Unity. I was able to quickly implement into onto the Tilt Five. This marked the beginning of the potential of GIS SDKs and the Tilt Five.



## DEMONSTRATIONS

This project did not just involve coding, but also demoing the app and machine to groups ranging from high school classes to government officials. Giving demos not only gives me and others a deeper understanding of the project, but also serves as a good way to receive continued funding.

## WRAPPING UP

I am grateful to have been a part of this project, as it not only strengthened by coding skills, but also my social and problem-solving skills.



## INTERDISCIPLINARY INTERACTIONS

If not for this project, I probably would not have had the chance to work with fellow lab members Eva Morales, implementing the Bing Maps SDK onto the Quest 2 for an HSEO application, or Yoshiki Takagi, implementing his Godzilla AI game onto the Tilt Five to see its applications.

## BUMPS IN THE ROAD

In the initial project, you are able to spawn orbs from the tip of your wand, providing a simple simulation of rain on O'ahu. In Unity, these orbs and the O'ahu 3D model are able to collide with each other since both of them have meshes and a collider. When transitioning to the Bing Maps SDK, I noticed that the map had a mesh but not a collider. There were two options: manually generate the collider or find another SDK. After attempting the former longer than I had hoped, I moved onto the latter and found the Mapbox SDK and ArcGIS SDK. Both seemed viable as they generated colliders in real time, with Mapbox being more similar Bing with its dynamicism, while ArcGIS worked better as a static map. Ultimately, as of now, I chose Mapbox SDK.