

SE 491-sdmay19-27

Smartphone Tracking App for Microsoft HoloLens

Week 5

2/11/19 - 2/17/19

Client: Optical Operations

Faculty Advisor: Daji Qiao

Team Members:

Ben Holmes - *Android Development*

Anthony House - *Website Development/Security*

Ryan Quigley - *Database Admin*

Jose Lopez - *Website Development*

Travis Harbaugh - *Hololens Development*

Cory Johannes - *Report Management*

Summary:

The goal this week was to meet as a team and work on identifying what components needed to be completed. To discuss our test plan and define the 5 test paths and the hardware needed to test our application.

Pending Issues:

For the hololens I found that 3D model didn't have a great visuation of the Durham building. There was no interior which made it hard to show where exactly the user is at in the building. To fix this issue another map SDK provides a great mapping solution that we will use.

Past Week accomplishments

- Travis Harbaugh
 - Worked on Indoor geolocating the durham floor plan image to the open street map so I can display on the mapbox map in unity
 - I looked at getting WRLD SDK into unity so that I could use the durham floor plan to create a 3d model that would be a better visualization of the durham building that would show user walking
 - Updated our project timeline for our presentation
 - Create an implementation diagram of the components that need to be implemented
- Ben Homes

- The sound emitted between the Bluetooth connections is now a series of four separate tones
- I have begun trying to reconnect Bluetooth devices after the connection is severed, but have not made the progress I need
- Anthony House
 - Worked on getting RethinkDB implemented on Windows
 - Got NodeJS working with Rethink
 - Created an example for Cory to start working with RethinkDB
- Ryan Quigley
 - Implemented GPS tracking for initial position
- Jose Lopez
 - Improved the whole test plan
 - Rewrote the introduction and setup
 - Formatted the objectives and resources into paragraph format
 - Drafted a test case diagram
- Cory Johannes
 - Working with Anthony to understand Node and Rethink

Individual Contributions:

Team Member	Contribution	Weekly Hours	Total Hours
Ben Holmes	Working with re-calibration service. I can send tones at any frequency or any wave shape. I cannot however reconnect to devices once the connection has been severed.	8	25
Anthony House	Rethink Development and implementation.	6	11
Ryan Quigley	GPS tracking added for getting a starting location. Implemented logic to keep user location from entering impossible areas.	12	20

Jose Lopez	Worked on the test plan. Came up with a test case diagram.	5	11
Travis Harbaugh	geolocating the durham floor plan image. Worked on WRLD SDK That has a better indoor visualization.	8	33
Cory Johannes	Working to understand Node and Rethink.	4	12

Plans for Next Week:

- Travis
 - Worked on creating the 3d model from the floor plan of durham into the WRLD SDK map in unity and see if there is any issues rendering it on the hololen
- Anthony House
 - Rethink complete implementation and integration
 - Working api endpoints for the various team members
- Ben Holmes
 - Continue working to discover why the Bluetooth devices are not reconnecting, also to get rid of the device discovery as it wastes battery, and instead just search through paired devices. We will no longer be able to retrieve RSSI values, but we don't plan on using RSSI values anyways
- Ryan Quigley
 - Work on system to modify location based on what is reachable by the user
- Jose Lopez
 - Change the paragraph format of the test plan to bullet points
 - Add more test cases, true paths, and diagrams