

SE 491-sdmay19-27

Smartphone Tracking App for Microsoft HoloLens

Week 7

2/25/19 - 3/03/19

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 for our team was to continue testing the mobile application by doing Corner testing, continue to improve the visualization component by creating an absolute path that the avatar should walk on, setup the server api, and get Bluetooth connection/reconnection working appropriately.

Pending Issues:

The issues the visualization team is having is not having the API done on the backend. Right now you can filter any tuples from the database and have to full the entire database and then go through each tuple within a data structure. The conver testing is having different results depending on if you stop at a corner or you continue walk around the corner. We still working on improving the accuracy.

Past Week accomplishments

- Travis Harbaugh
 - Worked on loading an avatar into the Mapbox environment at the durham location. I then move the avatar from throughout the durham building from gathering longitude and latitude from openstreetmap
 - I created an absolute path line render using unity and openGL that will show the path a avator should be walking. This can be used to tell the accuracy of our mobile application
- Ben Homes
 - I finally discovered why the Bluetooth devices are not able to connect and reconnect consistently. It was a server side error, the servers accept socket needs to be interrupted

and recreated after the Client severs the connection. The Android docs claim this is a unique problem to Android, and one which iPhones do not suffer from

- Anthony House
 - Started setting up connections for ryan. Was able to start creating data for ryan using the rethink connections
- Ryan Quigley
 - Added a filter to smooth out compass readings and manually adjusted for continuous heading error
- Jose Lopez
 - Added a section for project components and how each section is to interact with one another
- Cory Johannes
 - Observed Anthony's examples supplied, began making sense of the server files

Individual Contributions:

Team Member	Contribution	Weekly Hours	Total Hours
Ben Holmes	Managed to get the devices capable of connecting and reconnecting multiple times.	5	35
Anthony House	Rethink connections.	4	15
Ryan Quigley	Implemented filter for compass heading.	5	31
Jose Lopez	Asked each team member what the result of what they are working on is, to be able to connect all the different components in the test plan.	3	20
Travis Harbaugh	Avator movement and animation.	8	49

	Created and render absolute path at job site.		
Cory Johannes	Understanding.	4	18

Plans for Next Week:

- Travis
 - Work on gathering data from Rethink Database
 - Continue to work on 3d model for WRLD SDK model of the durham and get it displayed on the map
 - Work on client on with the floor plan visibility issue
- Anthony House
 - Start using sockets to transport data rather than all http requests
- Ben Holmes
 - I will devise a plan for device placement in Durham using triangulations (The art gallery problem)
- Cory Johannes
 - Implement database for Ben
- Jose Lopez
 - Update the web browser to display Ryan's data
 - Fix map display
 - Add true paths to web browser