

sdmay18-34: Integration of personnel tracking in an Augmented reality environment

March 12 - March 23

Team MembersLogan Highland — *QA Lead*Chandler Chockalingam — *Project Manager*Christopher Stapler — *Report Manager*Josua Gonzales-Neal — *Chief Engineer*Jason Ramirez — *Software Architect*Victor Da Silva — *Chief Engineer*

Bi-Weekly Summary

For the first week of the reporting period we were on Spring Break and were not able to make our weekly meetings in person. As such, our team worked on our individual tasks. As a group we have tested the tracking accuracy of the system and will testing addition methods to increase accuracy. The system begins to be closer to becoming fully functioning. Our client is working with Cisco to get more powerful APs up and running for testing.

Past Week Accomplishments

- Hololens Team - Josua and Victor:
 - Spring break took up one week of time. Set up goals and progress to expect for the client. Continued to work on Socket.IO connections movements.
- Services Team - Chandler and Jason:
 - Spring break took up one week of the time. Worked on software architecture diagrams for our client. Worked on Save User Location service.
- Tracking Team - Chris:
 - Worked on Ansible playbook for starting, stopping, and getting the status of the tracking process on the Raspberry Pis. Researched a new Bluetooth Low Energy beacon for PPE equipment detection in addition for automated script for determining the presence of a Tile.
- Floater - Logan:
 - Spring break took up one week of the time, around that I have started creating the admin website, allowing the admin to go in and set up our demo by doing things like registering worksites and setting up the APs.

Pending Issues

- Hololens Team - Josua and Victor:
 - Figuring out if Socket.IO is the best option to go forward with or change to HTTP connection to continue with the project.

- Services Team - Chandler and Jason:
 - N/A

- Tracking Team - Chris:
 - Determine a workaround for interference when too close to many access points.
- Floater - Logan
 - Will have to work with Chandler to make sure I am sending the correct info to the DB.

Plans for Upcoming Reporting Period

- Hololens Team - Josua and Victor:
 - Josh:
 - Victor: I am going to work on the Socket.io package implementation to connect to the services portion of this project. Continue working on the User Interface for the Hololens portion.

 - Services Team - Chandler and Jason:
 - Chandler: Work on Admin Data Service and make plan for data to be stored
 - Jason: Finish start up instructions for server and worksite environment

 - Tracking Team - Chris:
 - Working on base station path loss constant calculations. Finish up automated scripts for deploying tracking program simultaneously to Raspberry Pis.

 - Floater - Logan
 - Finish the Admin website and also finish testing it to make sure it works properly.
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Individual Contributions

Team Member	Contribution	Hours per two week period	Total Hours
Logan Highland	Started Work on Website, development planning with team and creating the final MVP's for the semester.	10	34
Chandler Chockalingam	Worked on Save User Location Service and developed plan for end of the semester	12	44
Christopher Stapler	Worked on calculating a more accurate value for n by writing a script that takes the average rssi values for a distance. Ran tracking system tests determining amount of interference inside and outside a building	11	48
Josua Gonzales-Neal	Worked on deliverables and Socket.IO issues.	12	32
Jason Ramirez	Recreated software architecture models and future plans for our client to show to investors	15	51
Victor Da Silva	I worked on the User Interface portion of the Hololens application. I also got user control working for the Hololens application. Socket.io imports.	12	42