

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

March 26 - April 6

**Team Members**Logan 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*

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**Bi-Weekly Summary**

As a team we worked on full integration and testing of our system during this reporting period. This included spending time at the startup factory where the access points we will be using are stored. In addition, much progress has been made pertaining to Unity and Websockets. As the project is getting closer to it's due date we will start working on.

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**Past Week Accomplishments**

- Hololens Team - Josua and Victor:
  - Continued work on the Hololens websocket connection. Made progress in websocket connection. Imported 3 dimensional assets and prefabs into our Unity workspace that we will begin integrating with our portion of the project.
  
- Services Team - Chandler and Jason:
  - Worked on admin data service that acts as a database wrapper with a MongoDB database. Got schema set up and wrote code for the collections that create the database.
  - Tested with outdoor equipment
  - Worked with Hololens team on websocket connection, got it working!
  
- Tracking Team - Chris:
  - Finished working version of python script for determining presence of predefined bluetooth tag
  - Refactored Tracker code for to have less code per file
  - Finished Ansible script to work with newly configured mDNS domain names for the raspberry pis.
  
- Floater - Logan:
  - Finished most of the design of the admin website. Worked on outside testing with team.

**Pending Issues**

- Hololens Team - Josua and Victor:
  - Websockets attempting connection, but still throwing errors. Hololens build errors giving trouble. Integration of certain hololens packages giving issues.
- Services Team - Chandler and Jason:
  - Need to make sure admin website can interact with the admin database via HTTP requests (not really a pending issue, more of a pending item)
- Tracking Team - Chris:
  - Need to figure out what is causing startup error of bluetooth interface on some runs of the newly added bluetooth device presence detection code.
- Floater - Logan
  - Connecting to the db api's Chandler has created.

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**Plans for Upcoming Reporting Period**

- Hololens Team - Josua and Victor:
  - Josh: Focus on Geofencing the new 3D asset. Adding more HoloLens functionality.
  - Victor: I will work on integrating the prefabs and other 3d assets into our workspace so that they do not throw any errors. Get the Hololens app to have moving personnel on the map corresponding to latitude and longitude coordinates.
- Services Team - Chandler and Jason:
  - Chandler: Test admin data service / database wrapper, work with Logan to make sure the admin website can communicate with the database / data service
  - Jason: Get more testing data to make the accuracy of the outdoor system even better
- Tracking Team - Chris:
  - Add Documentation for setting up trackers, with specifics about proper network configuration, remote access, and deployment of python code.
- Floater - Logan
  - Finish the website and connection to the db. Continue testing with new AP's.

## Individual Contributions

Team Member	Contribution	Hours per two week period	Total Hours
Logan Highland	Worked on website and Testing.	16	50
Chandler Chockalingam	Worked on admin data service that acts as a database wrapper with a MongoDB database. Got schema set up and wrote code for the collections that create the database.	12	56
Christopher Stapler	Completed script for determining the presence of a bluetooth low energy tags that will be attached a users PPE equipment. Configured mDNS on Raspberry Pis to give them unique domain names for ease of use with ansible.	17	65
Josua Gonzales-Neal	Helped with SocketIO errors. Mostly out of town due to a Conference	8	40
Jason Ramirez	Tested with outdoor equipment. Created reports from the data. Built tool to take data and improve accuracy of system. Worked with Chandler and Logan to get the website integrated with the whole system. Worked with hololens team to get websockets working.	20	71
Victor Da Silva	Connected WebSockets from Hololens to the backend services. Imported 3 dimensional assets into the Hololens application and got prefabs working properly.	15	57