sdmay20-47: Real Time Volumetric Analysis

Week 2 Report
September 22 - October 6

Team Members

Kenneth Lange — *Team Leader*
Alain Njipwo — *Chief hardware developer*
Daniil Olshanskyi — *Chief software developer*
Luke Bell — *Chief interface developer*
Max Medberry — *Chief backend developer*

Summary of Progress this Report

We have finished installing the needed software on the workstations (ROS, Gazeebo, Hector Quadrotor, teleop_keyboard). Tested how the simulations works and how the simulated drone can be controlled. Found a websocket server to get drone commands from the front end. Established an Apache server to server our web page. Decomposed several ROS packages to understand their architecture and how they function.

Pending Issues

Bridge between websocket server and the teleop_keyboard is still undefined. Web page making in progress. Not all ROS architecture is still clear.

Plans for Upcoming Reporting Period

Finish setting up webpage and putting everything together, testing the final setup altogether (1 week)

Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
Kenneth Lange	Working with ROS, identifying packages, decomposing them, working with inner ROS and Hector architecture. Setting up meetings, communicationg with the Client.	12	0
Alain Njipwo	Figuring out a control framework for the drone. Setting objectives for the hardware. Putting the hardware together and attempting to control the drone via RC.	12	0
Daniil Olshanskyi	Looking for the websocket server, testing all the possible options, installing the websocket server in a propper way, setting up the Apache, testing the websockets.	12	0
Luke Bell	Working with the old version of the cydrone webpage, identifying crucial elements of old	12	0

	web architecture, developing new version of the webpage to suit our needs.		
Max Medberry	Working through the whole stack of ROS technologies. Decomposing ROS and Hector packages, figuring out how the Gazebo simulation objects work. Writing custom ROS packages as a test	12	0

Gitlab Activity Summary

Nothing to report.