

sdmay20-47: Real Time Volumetric Analysis

Week 3 Report

October 7 - October 13

Team MembersKenneth 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 were further investigating into ROS rechnology, experimenting, finding potentially useful tutorials and ready-up solutions. Setting a c++ websocket server to transfer commands directly to the teleop keyboard module of ROS so the drone in the simulation can be controlled via website.

Pending Issues

Commands to control the drone are getting clustered. For example, if "t" (that stands for "up") is pressed several times even with long periods of no input results in simulated drone flying too high (t's are preformed several times even if pressed once)

Plans for Upcoming Reporting Period

Finish the website. Try to solve the pending issue with commands. Finish assembling the drone. Work in setting up GZWeb.

Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
Kenneth Lange	Worked on getting the images from the simulation to later send them to the machine-learning algorithm. Further learned ROS and decomposed several modules to investigate their architecture.	7	0
Alain Njipwo	Mostly finished assembling the drone. Connected the controller software to the hardware. Calibarated the whole system.	7	0
Daniil Olshanskyi	Worked on transferring commands from the server to teleop keyboard control module. Decomposed and edited the control module to investigate and fix command clustering issue(still in progress). Polished C++-Python interaction of server-controler block.	7	0

Luke Bell	Analyzed and learned the old version of the website. Identified core concepts to be transferred. Set up a minimalistic base website, brings additional functionality to it.	7	0
Max Medberry	Continued learning ROS. Worked with the simulation to get the camera feed. Studied tutorials to further understand the architecture of ROS system.	7	0

Gitlab Activity SummaryNothing to report.
