
sdmay19-43: UAV Assisted Energy Delivery

Week 9 Report

November 5 - November 11

Team Members

Kevin Angeliu — *Chief Engineer - Communications*

Garth Flaming — *Facilitator*

Alexandra Lowry — *Report Manager*

Kaitlyn Maass — *Meeting Scribe*

Brendan Rohlik — *Head of Timeline*

Connor Wehr — *Facilitator*

Summary of Progress this Report

Connected to drone. Put our code on drone, looked through code still on drone from previous group. Connected to drone via SSH as well as directly. Tested code using simulations, but were unable to figure out how to get our code to run the drone itself rather than the simulation. Had issues with getting correct ports open, so currently trying to reset OS to factory settings. Looked more into fine landing control and 3D printing of carriage design. Revised carriage design. Started image processing code in Python.

Pending Issues

Drone cannot run code as intended, can only run simulations. SSH stopped working after trying to fix some configurations, so can only connect to drone directly. Still need to reset OS, but there might be an issue with how Ubuntu was installed by previous group.

Plans for Upcoming Reporting Period

Continue trying to fix drone connection issues and reset OS. Hopefully meet with Garrett to see if he has any tips we missed in his groups documentation about getting code to run properly. Continue researching more specific parts of autonomous flying and landing. Get carriage 3D printed.

Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
Kevin Angeliu	Continued to look into fine movements for landing control. Started to look into color mapping and edge detection for image processing in Python. Revised carriage design with Brendan, continued to investigate battery placement on drone.	8	60
Garth Flaming	Team meetings, SSH into drone, got files off drone, get files on drone, run files on drone, go through drone settings, research SSH into drone, research drone execution, research	14	62

	<p>config, work on damaged packet removal, worked on upgrading, worked on clean up, worked on reimage, research override channel code, research waypoint add code, research ports, extra mission code acquired.</p>		
Alexandra Lowry	<p>Met with CprE group members to connect to and test code directly on drone, as well as get code off of drone. Started looking into different options for drone connection (SSH through terminal or other program, direct connection). Started looking into resetting drone OS to either Ubuntu or Yocto. In contact with Garrett about meeting to figure out why we cannot get the drone to run code properly, instead of using just the provided DroneKit simulation.</p>	13	59
Kaitlyn Maass	<p>Attended the meetings for the group Monday and Thursday. Worked on connecting with the drone on Tuesday, Wednesday, Saturday, and Sunday. Got old files off the drone looked into its connection possibilities. Tested connecting with SSH. Working on getting our files and testing them on simulation and with the actual drone. Working on how to wipe and reset the drone or reset/format it to change the settings from the previous groups. Still working on updating and resetting firmware of the drone.</p>	13	59
Brendan Rohlik	<p>Looked into 3D printing. Redesigned the carriage for less materials. Looked into edge detection in python code.</p>	9	58
Connor Wehr	<p>Full group meeting, planned for future documentation assignments on Monday. Met with other CprE and SE group members to test connections with the drone on Tuesday, Wednesday, Saturday and Sunday. Working to reset OS to a clean state prior to the previous group. Explored options to change movement precision from meter to centimeter.</p>	10	53

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Gitlab Activity Summary

Nothing to report.
