EE 491 WEEKLY REPORT 12 **Date: 4/17/2017**

Group number: DEC1705

Project title: Drone Energy Delivery

Client &/Advisor: Geiger/Chen

Team Members &/Role: Dustin Reed: Communication Justin Howe: Team Lead, Jeffery Schons: Webmaster, Chidike Ubani: Key Concept Holder, Eric Himmelblau, Avanish Kuntla

- **Weekly Summary**

  We finished the navigation of the control app, and started focusing on integrating the precise landing capabilities, which will be executed through a combination of OpenCV and a PID controller, into the app.

- **Past week accomplishments**

  · Dustin Reed: Finished waypoint capabilities of the app, did testing of code, did live test of waypoint missions with drone, ordered and received circuit parts

  · Avanish Kuntla: Worked through tutorial of joystick input, live tested waypoint missions of drone, researched how to run C/C++ code in android studio

  · Jeffery Schons: worked on getting cpp opencv code to work on android

  · Justin Howe: Created the PID controller that we will use for final guidance on landing. It will receive the coordinate information from the OpenCV implementation and will then give a valid control input for the drone to correct its course and position.

  · Chidike Ubani: Finished OpenCV C++ code

  Eric Himmelblau: Spent time learning the android version of OpenCV

- **Individual contributions**

NAME	Individual Contributions	Hours this week	HOURS cumulative
Dustin Reed	Finished waypoint capabilities of the app, did testing of code, did live test of waypoint missions with drone, ordered and received circuit parts	8	60
Avanish Kuntla	Worked through tutorial of joystick input, live tested waypoint missions of drone,	7	54

	researched how to run C/C++ code in android studio		
Jeffery Schons	worked on getting cpp opencv code to work on android	7	41
Chidike Ubani	Finished OpenCV C++ implementation.	4	43
Justin Howe	Created and initially tested PID controller for X any Y on landing	5	58
Eric Himmelblau	Spent time learning the android version of OpenCV	4	34

○ **Comments and extended discussion**

We are coming into the home stretch. All of our parts for the app are pretty much done, the only task left is integrating all of the individual parts into a single app, getting them to play nice with each other, and do final testing.

○ **Plan for coming week**

· Dustin Reed: Receive modular parts of code, integrate into the main app, test the main app. Get a function to take photos with camera, and work on assembling the charger.

· Avanish Kuntla: Work on creating a charger prototype, code gimbal usage, improve waypoint mission capabilities

· Jeffery Schons: fully integrate the opencv into app, get app working with photos from the camera,

· Chidike Ubani: Integrate OpenCV with the app

· Justin Howe: Integrate PID with the OpenCV implementation into the app

○ **Summary of weekly advisor meeting**

Our advisors were unable to attend a meeting this week.