EE 491 WEEKLY REPORT 11   **Date: 4/10/2017**

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

o **Weekly Summary**

Started assembling our code for our central control app. We have started working on the prototype for the charging system in earnest instead of simply research. We have gained more experience with the drone SDK and android programming.

o **Past week accomplishments**

·   Dustin Reed:Took and passed the FAA Remote Pilot Certification test, developed method for Waypoint mission execution, worked on charging solution, ordered charger parts

·   Avanish Kuntla: Worked on finding alternatives to microchip based charging including battery to battery chargers, finalized microchip choice for charging battery

·   Jeffery Schons: started some work on recognizing two rectangles in object. Made and got materials for prototype node, updated website

·   Justin Howe: Added others' code to my own in the Comm app, experienced startup issues that now seem corrected but I do not fully understand the process of connecting to the drone enough for it to be reliable.

·   Chidike Ubani: Got shape detection and coordinates for a red circle using OpenCV.

        Eric Himmelblau: Worked on OpenCV. Attended meetings.

o **Individual contributions**

NAME	Individual Contributions	Hours this week	HOURS cumulative
Dustin Reed	Took and passed the FAA Remote Pilot Certification test, developed method for Waypoint mission execution, worked on charging solution, ordered charger parts, attended meetings	6	52

Avanish Kuntla	Worked on finding alternatives to microchip based charging including battery to battery chargers, finalized microchip choice for charging battery, Attended meetings	5	49
Jeffery Schons	Did some work on recognizing two rectangles in object. Made and got materials for prototype node, updated website, attended meetings	8	41
Chidike Ubani	Got shape detection and coordinates for a red circle using OpenCV. Attended Meetings	8	39
Justin Howe	Spent a lot of time debugging the launch issues with the app communication. Attempting to combine existing code from Avanish and Dustin into the Comm App.	9	53
Eric Himmelblau	Worked on OpenCV. Attended meetings.	5	30

○ **Comments and extended discussion**

App is coming along. We have the start of a working prototype that allows communication with the SDK servers and the drone, but it is still flaky.

- **Plan for coming week**
- Dustin Reed: Work on debugging the app, build charger prototype when parts arrive
- Avanish Kuntla: Work on comm app, work on designing charging circuit prototype
- Jeffery Schons: work on opencv to detect landing pad (node) that and implement it on android.
- Chidike Ubani: Get object detection working for squares which we will use on our landing pad. Implement OpenCV code in android.
- Justin Howe: Hand off comm code to more capable android dev hands. Work on PID controller that receives location on an image to control the drone's exact movements.

- **Summary of weekly advisor meeting**

The advisor meeting went well this week, we seemed to have more to show in the past few weeks than we have for the first half of the semester. We continue to zero in on exactly how we want to go about solving the problems we will be encountering next semester (charger contact/accuracy).