

Group number: 1705

Project title: Drone Energy Delivery

Client &/Advisor: Geiger/Chen

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

o **Weekly Summary**

\_\_ We started working directly with the drone, and started looking at application coding methods.

o **Past week accomplishments**

- Dustin Reed: Studied Part 107 Test, Flew the Drone for the first time, downloaded and compiled test app
- Avanish Kuntla: Flew drone for first time, tested DJI sample app, working on basic waypoint app
- Justin Howe: Flew the drone for the first time, was able to use the basic app provided by DJI to start my own app that uses basic communication with the drone to command very basic flight movement. This proves ability to control and retrieve information from the drone to be integrated into our final server app.
- Jeffery Schons: Looked into preexisting control phone apps, and ideas to make expand on it. Attended meetings, refreshed myself on how to use OpenCV for image processing.
- Chidike Ubani: Attended meetings
- Eric Himmelblau: The default Android Studio Emulator does not provide support for Wifi, Bluetooth, or USB peripherals. I have been looking for a different emulator that offers these features.

o **Individual contributions**

<b><u>NAME</u></b>	<b><u>Individual Contributions</u></b>	<b><u>Hours this week</u></b>	<b><u>HOURS cumulative</u></b>
Dustin Reed	Studied for Part 107 Test, Downloaded and compiled test appattended meetings	5	40
Avanish	Avanish Kuntla:	4	38

Kuntla	Flew drone for first time, tested DJI sample app, working on basic waypoint app		
Jeffery Schons	Looked into preexisting control phone apps, and ideas to make expand on it. Attended meetings , refreshed myself on how to use OpenCV	6	34
Justin Howe	Initial Communication with Drone and implementing SDK	8	36
Chidike Ubani	Attended Meetings	2	27
Eric Himmelblau	Explored various technologies involved with running server based android applications	5	25

○ **Comments and extended discussion**

We received the drone, and started programming an app for it

○ **Plan for coming week**

- Dustin Reed: Follow the tutorial for the configuration for the waypoint app
- Avanish Kuntla: Finish making app that can direct drone to waypoint
- Jeffery Schons: start (and finish) basic demo app for image processing

- Justin Howe: Have an app that can command the drone to not only take off and return home but assign custom flight missions. Further goal is being able to retrieve live images from the drone.

Chidike Ubani: Write a program using OpenCV to recognize certain image.

Eric Himmelblau: Get an Android emulator to connect to the drone's ad-hoc wireless network

- **Summary of weekly advisor meeting**

We discussed the new drone that we now have and how it will affect our project. We covered topics of battery type, drone peripherals and how we can use features currently implemented on the drone/controller to our advantage.

### **Grading criteria**

Each weekly report is worth 10 points. Scores will be awarded as follows:

- **8 – 10:** Progress for your project seems to be suitable. Documentation and hours reported by team members are adequate.
- **6 – 8:** There is scope of improvement both in your report and your project progress. Can consult with instructor/TA after class for further inputs.
- **< 6:** Please talk to instructors/TA after class hours about any difficulties that you/your team is facing.