sdmay18-25: Autonomous health monitoring of transportation infrastructure using unmanned a
Week 5 Report
September 30 - October 6

Team Members
Nathan Conroy — *Software Lead*
Quade Spellman — *Meeting Facilitator*
Kevin Yen — *Hardware Lead*
Rishab Sharma — *Report Manager*
Isaac Bries — *Test Engineer*
Molly Hayes — *Meeting Scribe*

Summary of Progress this Report
Each individual is given a specific parts list to research and have the best one picked out so we can discuss about the benefits. The parts list and the individual assigned to a part can be seen here:
Isaac:
Lidar Sensor
Motors
Propellers/Blades
Rishab:
HD Camera
Battery
Quade:
Thermal Sensor
Nathan:
Flight Controller
Wireless Transmitter/Receiver
Electronic Speed Controller (ESC)
Molly:
Gimbal
Kevin:
Drone Frame
Remote Controller

Pending Issues
Are the parts that we picked out compatible with each other?
Is there sufficient information to order each individual part?
How will we able to 3D print a gimbal? Or are we purchasing a gimbal to modify?

Plans for Upcoming Reporting Period
Decide if each part that we found is compatible with each other, and each part meets the specification for the project.

Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
Nathan Conroy	For this week, I worked on the flight controller research to get ready for our meeting with our professor. This research included looking into telemetry radio, which is found on many major flight controllers. Looked into using this standard to transfer data to a ground station. Looked further into software products, with a favor of Ardupilot over PX4. Also looked at DJI's SDK further, but was not impressed by it to justify the price jump	5	35
Quade Spellman	Did some more research on pros and cons of rc remotes transmitters, rc receivers, and thermal cameras for uavs.	2	16.5
Kevin Yen	This week's work was spend more on research the frame and radio transmitter/receiver for the project which needed to get done for the purchase proposal. Compatibility, material, reviews, and past projects were a few of ideas that I looked into. I ended up with a recommended parts list for the frame and transmitter/receiver.	2	19
Rishab Sharma	Continued research on my specific topic of HD cameras and Battery for our UAS system to present to our client. After having a lengthy discussion with him, we are know making a Doc that helps pick out a specific piece for each of the parts we are assigned to.	4	22
Isaac Bries	This week I spearheaded the creation of our parts purchase proposal that we will send to our client. This document outlines all of the parts necessary to create our UAV, along with a few different possibilities for each part so the client can tailor the purchase towards which parts will work best for them. After collecting the parts specifications, I calculated the price and performance of the entire drone as well as I could without the physical drone in front of me. I made sure to tailor the proposal to the client's wants while still providing suggestions that our team felt were the best choices. In filling out my own sections (lidar, motors, and propellers), I	6	22

	collected all of the important datasheets on each part so I could make the most informed suggestions.		
Molly Hayes	This week I focused on researching camera gimbals for our drone. I realized quickly that the gimbal depends heavily on the camera we choose, so I also researched popular drone cameras. I found that GoPro was a popular brand and it seemed that there were a lot of gimbal options. After our meeting with the client I continued research and compiled a list of three possible gimbals as part of our Proposal.	4	21.5