

sdmay18-25: Autonomous health monitoring of transportation infrastructure using unmanned

Week 7 Report

October 14 - October 27

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

This is a 2 week report that spans the time where we were constantly meeting our client and ironing out the exact parts that we need to purchase. We showed our client our parts proposal with the preferred part and cost. As expected there was some budget issues, especially with respect to the LiDAR sensor that we were researching which cost about \$8,000! We decided as a unit that we can leave that part to be purchased for later, and focus on buying the drone parts and HD camera this upcoming week. Here is the list of few of the choices we came up with for the parts that we can order for this upcoming week:

Name: Tarot T960	FrSky X8R Radio
Description: Frame	Receiver
Supplier: robotshop.com	hobbyking.com
(SKU): TL960A	236000114-0
Units: 1	1
Qty: 1	1
Cost (each): \$299	\$299
Cost Total: \$36.80	\$36.80

Here are two of the twelve parts that we are ready to order. One is the frame of the drone, and one is the Radio Receiver. All in all our total price came up to \$4,631, and this is without the Lidar and other expensive sensors. By doing these steps we have set ourselves on the right path for the upcoming weeks to come.

Pending Issues

The pending issues are to find out if there is a cheaper option for our Lidar sensor. We also need to start ironing out how to build our gimbal and properly assign people to the correct role for software and hardware development.

Plans for Upcoming Reporting Period

The plans for the upcoming period is to finally purchase our parts in this upcoming week, and assign work for software and hardware development.

Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
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Nathan Conroy	Reviewed parts for parts proposal. Started setting up GIT, and assigning tasks. Did research on possible ground station.	8	49
Quade Spellman	Reviewed and discussed part list choices, did some additional research into HD cameras, thermal cameras and batteries.	6	28.5
Kevin Yen	Built a bill of materials. Updated BOM with new accessories and other components not found on the original part proposal.	7	32
Rishab Sharma	Helped finalize our research of our drone parts and sensors so that we can show our client the result and have him check it off so that we can start buying these parts.	7	35
Isaac Bries	Met with Aerospace graduate student to work out possible technical hurdles and establish a knowledgeable base of contact for any future problems our team may have. Revised parts list to conform to our new project requirements.	12	42
Molly Hayes	Continued research on cameras and gimbals. Reviewed parts for proposal.	4	31.5