

Semester II Bi-Weekly Report II

Advisor(s): Gary Tuttle

Client: NASA Marshall Space Flight Center

Members (Roles): **Isaac Johns**-Team Communicator, **Ryan Bissett**-Team Communicator, **Tom Henry**-Webmaster, **Luke Dahlman**-Team Leader, **Anh Ho**-Key Concept Holder, **Dustin Pierce**-Key Concept Holder, **Antjuan Buffett**

Project Title: Remote Deployment Circuit and Mechanism for Lightweight CubeSat Solar Panels

Bi-Weekly Summary

Over the last couple weeks each individual member finalized their respective part testing. We have begun fabricating our design starting with cutting the steel rod and PVC piping. The acrylic box has been cut out with puzzle-like fittings. The 6 sides of the box fit together and hold without anything holding them in place due to the puzzle-like fittings. Moving forward we are planning to meet this Thursday (3/5/15) to start putting the design together with the parts we've received thus far.

Group Member Contributions and Plans

Week 1 (2/23/15):

Team Member Name	Weekly Comments	Total Time Spent
Isaac Johns	Continued search for silicone wheels and alternatives. Went to Lowe's searching for our fixed wheels. Went into ECpE shop to fabricate rollers and axles. Signed group up for laser cutter.	4:30
Thomas Henry	Work on Boom, Boom Testing	3:30
Dusting Pierce	This week we had our meeting with John Carr and brought him up to speed on our project and design. I also took the training with Lee for using the design room. Objectives, last week Anh and i were not able to meet. This week, I will be meeting with Anh and we will be making the	2:15

	AutoCAD video. I will also do the training for the laser cutter..	
Luke Dahlman	<p>Started to produce the parts for the CubeSat. Identified a time to use the laser cutter. Further documentation on FPGA testing.</p> <p>Next week: Cut the acrylic for the box, talk to Dr. Carr about the TracBoom,</p>	5:00
Ryan Bissett		
Antjuan Buffett	Meetings and gathering space rated information on motor and motor controller that nasa will use for their final product.	2:00
Anh Ho		

Week 2

Team Member Name	Weekly Comments and Plans for the Next 2 weeks	Total Time Spent
Isaac Johns	<p>Helped set up files before laser cutting.</p> <p>Helped laser cut.</p> <p>Went to Lowe's for adhesive, searched for gears and silicone polishing wheels.</p> <p>Wrote bi-weekly report.</p> <p>Future plan: Find silicone wheels other than on Ebay. Help build design and search for gears.</p>	4:30
Thomas Henry	<p>2 hours spent on training for using the Laser Cutter in the Design building.</p> <p>2 hours spent on using the laser cutter to cut the acrylic box for the</p>	6:00

	<p>project. 1 hour spent on updating testing procedure for the solenoid. 1 hour spent on starting component fabrication in the ECpE Shop.</p>	
Dusting Pierce	<p>accomplished: we had our weekly meeting where we discussed what everyone needed to get done. I took the training for the use of the laser cutter in the design building. We then met in the design building to cut out our acrylic box for our prototype. Next i spent more time researching bearings and lubricants that NASA has found to work best in space conditions. I have also found testing on what bearings we will advise NASA to use in the final design.</p> <p>Nest week: i hope to finally meet with Anh so we can make the video and show how our project is intended to work.</p>	5:30
Luke Dahlman	<p>Over the past week: -assisted in the laser cutting of our cube -finished testing for the Atmel FPGA board and design board Plan for next week: -Finish documenting the design/testing/fabrication of boom -Finalize the gears --Determine the state of the parts we are still waiting on</p>	6:00
Ryan Bissett	<p>2hrs - Talking to Vulcan Spring 1hr - Updating testing procedure</p> <p>For next week I want to pick out a specific spring from Vulcan for the report and to start work on building the project itself.</p>	3:00
Antjuan Buffett	<p>Calling Moog for actual testing reports and seeing how they rate space motors. In the next few weeks I will be testing my parts to</p>	1:00

	see their functionality alone.	
Anh Ho	<p>In the past week, I spent 1 hour for our team meeting 1/2 hour updating the CAD box layout 1/2 hour with team using the Laser Cutter 1/2 hour working on the Laser Cutter training 1 hour gathering information to update the CAD video</p> <p>Next week, I will meet with Dustin Pierce to continue and hopefully get the CAD video to perform right correctly.</p>	3:30