TECHNICAL PROJECT PROGRESS REPORT MEMO

NAIT

**To**: Marc Anderson, CNT Instructor, CMPE 2960

Kelly Shepherd, English Instructor, CMPE 2960

**From**: Ervin Hernandez, CMPE 2960 Student

**Date**: 17-03-2016

**Subject**: 3-axis self-stabilizing Camera Mount \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Introduction**

As per our 3-axis self-stabilizing Camera Mount proposal, this report is to set up and discuss the challenges and successes that my partner Gabriel Natividad and I have had while building our 3-axis self-stabilizing Camera Mount proposal.

**Summary of Deliverables**

We are currently ahead of schedule to completed project by the end of thirteenth week of CMPE semester (April 4th). In the proposal we had stated that we would have the following completed:

* Finish writing the code for *yaw* angle estimation

(Completed by Gabriel Natividad)

* Constructing a circuit that power all 3servos at the same time

(Completed by Gabriel Natividad and Ervin Hernandez)

* Building and Connecting the frames together into one working prototype

(Completed by Ervin Hernandez)

**Status of Deliverables**

Finish writing the code for the *yaw* angle – Once Gabriel finish writing the code for the *pitch* and *roll,* he started working on the *yaw* angle. While working on it, he encounter several problems with coding the *yaw* angle. It started to yield estimation errors. Consulting with our instructor, Gabriel was able to create a rough code to obtain the *yaw* angle. The code was finish but it was behind by a couple of weeks.

Constructing a circuit that power all 3 servos at the same time – While Gabriel was working on the code, I started doing research on the layout of the circuit. When we found a general layout, I gather the part from my tool kit and Gabriel started building it. After several testing and adjustments we were able to complete the task on time.

Building and connecting the frames together into one working prototype – With all the components coming together. I started building and connecting the parts. I grab scrap wood from my garage and created a small platform for the prototype to be mounted on. As each bracket was being built in the 3d printer, I connected the frames with nuts and bolts. Each frame connect to the bracket, I mount the servos in to the frames and test each one if there is any lose parts moving around. The task was completed on time.

**Deliverables to be completed**

The following task still need to be completed by both Gabriel and I. Through effective communication, we are able to work on different segments of the same task, and achieving results quicker and more efficiently than working alone.

* Filter through the program and debug any issues that may occurred.
* Attend to any issues or unknown risks that arise.

**Revisions to Scope**

There are no revisions to the scope at this time, although we have both thought about additional features in case of an early finish.

**Conclusion**

With the current pace we are working at, I am optimistic that we will be able to complete our 3-axis Self-Stabilizing Camera Mount on schedule. If there are any inquiry, point of interest or motivations that you would like to give, please contact me at ervinlubi@gmail.com.