

Senior Design May 24, 32

MicroCART Senior Design Team

Week 6 Report

September 18 - September 25

Faculty Advisor: Philip Jones

Members:

Justin Kenny - Scribe

Steve Frana - Technical Lead

Trevor Friedl - Project Manager

Travis Massner - UI/UX Designer

Clayton Kramper - Technical Lead

Will Maahs - Team Organization Lead

Links

- [Shared Google Drive Folder](#)

Summary of Progress this Week

We have started working on Part I of the MP-4 lab. We reached out to last year's team to get a link to the VM that they created. We began brainstorming ways to improve the lab, specifically the GUI. Each team member is in a different spot in regards to Part I of MP-4, so contributions in that aspect are listed in the individual contributions section. We also submitted our Design Requirement document and recorded our lightning talk presentation.

Pending Issues

The lab computers do not have VirtualBox installed, so we are currently running the VMs from our personal computer. Due to the variations in hardware on our laptops, this has led to some performance issues when running the VM. Having VirtualBox on the lab computers would remove some of these issues from trying to work on the project.

When running the GUI, the graphing is behind the drone by a long period of time (30 secs or more). According to the graph, communications seem to drop periodically as the setpoint goes to zero and the drone stops moving (happens for one second about every 15-30 secs). The GUI issues that the group is tasked with fixing are also causing issues, such as freezing, crashing, or not being able to get or set parameters correctly.

Some team members still do not have card access to the lab.

Individual Contributions

Member	Contributions	Weekly Hours	Total Hours
Justin Kenny	<ul style="list-style-type: none">● Worked on Requirements Design doc, slides, and recording● Set up VirtualBox VM on personal laptop● Worked on Part I of MP4 - PID tuning<ul style="list-style-type: none">○ Yaw rate, Pitch rate, Roll rate, and Yaw attitude completed.	8	12
Steve Frana	<ul style="list-style-type: none">● Worked on Requirements doc and slides● Presented slides for the recorded lightning talk with the team● Helped the team get started with Part 1 of MP4 lab	7	10
Clayton Kramper	<ul style="list-style-type: none">● Reached out to Grant from last years team to get the newest version of the .ova● Received access to the lab 3050● Worked with the group on the Requirements doc and slides● continued looking at the Git repo	5	9
Travis Massner	<ul style="list-style-type: none">● Started working on MP4 lab● Troubleshoot the VM problem● Received access to the lab 3050● Worked on requirements doc and slide● Recorded requirements video	4	7
Will Maahs	<ul style="list-style-type: none">● Started watching videos Dr. Jones recommended from the YouTube channel● Started working through MP4 Part 1● Continued exploring the Git repo● Worked on the requirements assignment as a group● Recorded and submitted lightning talk for team	4	4
Trevor Friedl	<ul style="list-style-type: none">● Worked with team on completing requirements document	4	7

	<ul style="list-style-type: none">● Recorded and submitted lightning talk for team● Continued reading through GitLab and watched some more tutorial youtube videos● Worked towards helping set up VM VirtualBox		

Comments and Extended Discussion

Plans for coming Week

- Finish Part I and start on Part II of MP4 (**High**)
- Figure out how to install VirtualBox on lab computers (**High**)
- Begin working on Project Plan assignment (**Medium**)
- Beginning editing Bootcamp document to include correct location and installation instructions of the MP-4 VM. (**Low**)