

Senior Design May 24, 32

MicroCART Senior Design Team

Week 10 Report

October 17 - October 24

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](#)
- [Tentative Project Gantt Chart](#)

Summary of Progress this Week

We have divided into three groups of two and begun to work three separate tasks: rewriting the crazyflie adapter and crazyflie groundstation using cflib, getting the Pycrocart GUI slotted into the infrastructure, and improving error handling for the current GUI.

For the adapter groundstation rewrite, we created a python application with a main function that has 2 queues. We have successfully tested our class that creates a socket to communicate with the backend, and messages that come from the backend are placed into the input queue. The main function pulls commands out of this queue, and eventually will use these messages to determine which cflib function to call. Any output from the crazyflie will be put into the output queue, which will be used to send messages back to the backend.

Pending Issues

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Individual Contributions

Member	Contributions	Weekly Hours	Total Hours
Justin Kenny	<ul style="list-style-type: none"> • Worked on Engineering Design doc, slides, and recording • Created, developed, and tested python socket class to connect cflib_groundstation to the backend • Worked on Queuing system for cflib_groundstation 	7	39
Steve Frana	<ul style="list-style-type: none"> • Worked on Engineering Design doc, slides, and recording • Reading through cflib documentation • Working on cflib_groundstation 	6	33
Clayton Kramper	<ul style="list-style-type: none"> • Watched backend code video • Getting familiar with current architecture • Working to run front end via console • Start with PycroCart GUI 	4	24
Travis Massner	<ul style="list-style-type: none"> • Almost finished with MP-4 • Continued watching MicroCart videos • Recorded engineering design lightning talk • Started looking into backend 	4	27
Will Maahs	<ul style="list-style-type: none"> • Finished part 2 (well enough) • Finished watching backend videos <ul style="list-style-type: none"> ○ Rewatching them for better understanding • Started getting into the weeds with the current architecture • PycroCart GUI 	4	28
Trevor Friedl	<ul style="list-style-type: none"> • Looked a bit more into the code for the MP-4 GUI • Worked on the design document • Continued to look through backend for better understanding • Started to look into how to add things onto 	5	26

	the team website		
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Comments and Extended Discussion

Plans for coming Week

- Watch remaining instructional videos in the bootcamp **(High)**
- Make Pycrocart GUI MP-4 viable and determine how to slot it into infrastructure. **(High)**
- Edit current GUI to improve error handling with backend interactions. **(High)**
- Combine crazyflie groundstation and crazyflie adapter using cflib. **(High)**
 - Find the corresponding cflib call for each incoming packet type
 - Test sending packets back to backend.
- Begin to consider changes to make for MP-4 lab documentation to push towards improvements **(Medium)**
- Add team information into the team website **(Low)**