**EE CprE SE 491 – MAY1732**

**MicroCART Senior Design Team**

**Weekly Report 28**

**9/25-10/2**

**Faculty Advisers**

Phillip Jones

Nicola Elia

|  |  |  |  |
| --- | --- | --- | --- |
| **Member** | **Position** | **Weekly Hours** | **Total Hours** |
| **Nick Robbins** | **Team Leader** | **12** | **18** |
| **Ben Nelson** | **Key Concept Holder** | **2.5** | **2.5** |
| **Jake Frazier-Flores** | **Webmaster** | **4.5** | **7.5** |
| **Grant Manley** | **Key Concept Holder** | **4.5** | **7.5** |
| **Chengrui Yang** | **Key Concept Holder** | **Not sure yet** | **3** |
| **Cole Beaulieu** | **Communicator** | **12** | **18** |
| **Tianxiang Shen** | **Key Concept Holder** | **Not sure yet** | **3** |

**This Week’s Progress**

1. Quads/Camera System

* New frames for trackables were implemented and are discovered by camera system.
* Was able to better understand how the quads are positioned and why they are positioned the way they are
* Getting them to fly and understanding why they are not taking off and stabilizing every time.
* Got Ben familiar with the scope of the project and added to the group

1. Ground Station

* Set up personal VM’s – Grant, Nick, Jake
* Isolated write and read data functions in CCrazyRadio.cpp file – Cole, Nick
* Reviewed control station code – Jake
* Learned how to change the number of radios and how to change the number of crazyflies added, in quadcopters Grant, Nick, Cole

**Pending Issues**

1. Figuring out how to get a continuous data stream from the quads without getting the bottleneck.
2. How to add more than 4 quads
3. Radios timing out and having to reinitialize the connection every time.

**Plan of Action**

1. Cole – go into the lab every day that I can and continue to try and understand how the communication and acknowledges between the quads and ground station work.
2. Nick – figure out how to improve the communication protocols and better understand the read and write data functions
3. Jake – continue experimenting with the crazyflies and begin altering the communication protocol.
4. Grant – try to get three quads going on one radio
5. Chengrui
6. Tianxiang
7. Ben – get caught up to speed and install a vm and get the code running on it.
8. Work Session Times

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| --- | --- | --- | --- |
| **Sunday**  **(8 - 10 pm)** | **Tuesday**  **(10am to 1pm)** | **Wednesday**  **(6 - 9pm)** | **Thursday**  **(12 to 3pm)** |
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**Contributions**

Cole:

* Tuesday (4 hrs): Experimented with the new frames, and learned how to better postion the quads for more stable flying.
* Thursday (4hrs) : Meet with nick and grant and ben. Got Ben involved and chatted with Ian about quad issues we were having
* Sunday (4hrs): Looked through CCrazyRadio.cpp and quadcpterData.cpp files and learned more about how the communications worked with Nick.

Nick:

* Tuesday (4 hrs): Experimented with the new frames, ran into and solved some other problems we were having with the quads
* Thursday (4hrs): Meet with nick and grant and ben. Got Ben involved and chatted with Ian about quad issues we were having
* Sunday (4hrs): Looked through CCrazyRadio.cpp and quadcpterData.cpp files and learned more about how the communications worked with Nick. Attempted to add two more quads/mixed results

Grant:

* Thursday (4hrs) : Meet with nick and grant and ben. Got Ben involved and chatted with Ian about quad issues we were having. Explained to Cole and Nick about how
* Set up code in personal VM

Jacob: Tuesday(4hrs): Meet with cole and nick and reviewed control station code and worked with Crazyflies.

Set up VM on personal comp.

Ben: (2.5 hrs): got acquainted with the project and got acquainted with the Crazyflies and ground station. Meet with Grant, Cole and Nick on Thursday.

**Meeting Minutes**

* Will be filled out on Monday