**EE CprE SE 492 – MAY1732**

**Crazyflie Swarm Senior Design Team**

**Weekly Report 2**

**1/23-1/30**

**Faculty Advisers**

Phillip Jones

Nicola Elia

|  |  |  |  |
| --- | --- | --- | --- |
| **Member** | **Position** | **Weekly Hours** | **Total Hours** |
| **Nick Robbins** | **Team Leader** | **9** | **96.5** |
| **Ben Nelson** | **Key Concept Holder** | **9** | **74.25** |
| **Jake Frazier-Flores** | **Webmaster** | **7** | **70.75** |
| **Grant Manley** | **Key Concept Holder** | **8** | **73** |
| **Chengrui Yang (Roy)** | **Key Concept Holder** | **4** | **46.5** |
| **Cole Beaulieu** | **Communicator** | **10** | **97** |
| **Tianxiang Shen (Jesse)** | **Key Concept Holder** | **4** | **38.5** |

**This Week’s Progress**

1. Quads/Camera System

* Connected the big quad, the connections are not final, we are waiting for connectors to arrive but we are able to start preliminary testing, need to learn how to program the ESC
* Researching how to conduct the preliminary testing on the big-quad

1. Ground Station/Wifi Systems/Firmware

* Ran test runs of new firmware
* Began testing groundstation and improving it so that it will be easier to test

**Pending Issues**

1. Waiting on part orders from the part shop to finalize the assembly of the new big quad
2. Learning how to program ESCs so we can conduct thrust tests, moment of inertia tests, etc.

**Plan of Action**

1. Cole – pursue methods to programming ESCs and start conducting moment of inertia tests
2. Nick – work to program ESCs and continue testing on the new big quad
3. Jake – Continue testing of new firmware
4. Grant – Continue work on helping Ben and Flores with programming challenges doing document for the clasd
5. Chengrui ­– assist in helping cole and nick in cleaning up the connections, as well as keep on planning how to put wifi module and regulator on crazyflie
6. Tianxiang – assist in helping cole and nick in cleaning up the connections, as well as keep on planning how to put wifi module and regulator on crazyflie
7. Ben – The groundstation is at the point where I can start testing it. It probably has bugs. Next week I am going to keep improving the groundstation to make it easier to test when the time comes round (option to opt-out of packet logging, fixing the packet logging on that’s already there, add more comments and documentation, fix the makefile).

**Individual Contributions**

Cole:

* Monday: 3 hours– assembling the new quad, and meeting
* Tuesday: 1 hour – meet with Dr. Herrera from the physics department and fixed up a fixture
* Thursday: 4 hours – connected the esc, motors and battery and attempted to conduct a thrust test but needed program the ESCs
* Friday: 1 hour – attempted to program ESC
* Sunday: 1 hour – weekly report

Nick:

* Monday 3 hours – Group meeting and assembling quad
* Tuesday: 1 hours – Met with Paula from physics lab to discuss moment of inertia
* Thursday: 4 hour – Set up all connections on quad. Checked motor connections. Tried to fly quad with client and groundstation.

Grant:

* Monday: 2 hours- meeting and making changes to groundstation to work on personal computers
* Tuesday: 2 hours – more groundstation
* Wednesday: 4 hours – working with Ian and independently to make ground station code work on personal computers.

Jake:

* Monday: 1 hour - meeting
* Tuesday: 2 hours – reviewed and remodeled design for Crazyflie and remodeled design for Crazyflie firmware
* Wednesday: 3 hours – attempted new build and fixed compiler issues
* Friday: 1 hour – ran test runs of new firmware

Ben:

* Monday: 2 hours – Meeting and making changes to groundstation code to make it compatible with the new wifi modules
* Wednesday: 3 hours – more groundstation
* Thursday: 2 hours – more groundstation
* Friday: 2 hours – more groundstation

Tianxiang Shen:

* Monday: 1 hour – try to assemble frame to be an X
* Friday: 1.5 hours – review the new arrangement of the quad, find the place for regulator and wires, search for the connector for battery
* Sunday 1.5 hours – implement the regulator on a PCB board

Chengrui:

* Monday: 1 hour – try to assemble frame to be an X
* Friday: 1.5 hours – review the new arrangement of the quad, find the place for regulator and wires, search for the connector for battery
* Sunday 1.5 hours – implement the regulator on a PCB board