**EE CprE SE 491 – MAY1732**

**Crazyflie Swarm Senior Design Team**

**Weekly Report 9**

**10/31-11/06**

**Faculty Advisers**

Phillip Jones

Nicola Elia

|  |  |  |  |
| --- | --- | --- | --- |
| **Member** | **Position** | **Weekly Hours** | **Total Hours** |
| **Nick Robbins** | **Team Leader** | **8.5** | **70.5** |
| **Ben Nelson**  | **Key Concept Holder** | **6.25** | **46.25** |
| **Jake Frazier-Flores** | **Webmaster** | **8** | **46.75** |
| **Grant Manley** | **Key Concept Holder** | **6.5** | **49.5** |
| **Chengrui Yang (Roy)** | **Key Concept Holder** | **5** | **26.5** |
| **Cole Beaulieu** | **Communicator** | **7.5** | **67.5** |
| **Tianxiang Shen (Jesse)** | **Key Concept Holder** | **3** | **22.5** |

**This Week’s Progress**

1. Quads/Camera System
* We were able to forward a message from one Wi-Fi module to another. This will give us the ability to implement mesh networking. We
* Changed the syslink used on the wifi modules to match what the crazyflie is expecting. This will enable us to switch out the communications link.
* Successfully connected to the big quad expansion deck and were able to see each motor work when using the controller
1. Ground Station/Radio Systems
* Continued full function trace of the packets in the radio systems and firmware systems
* Created groundstation flow chart for how we can replace the link with the wifi module

**Pending Issues**

1. Figure out how ack is being sent out by TX
2. Find out how to replace integrate the wifi module in the firmware and groundstation

**Plan of Action**

1. Cole – continue working with the big quad expansion deck and start integrating wifi module code into groundstation
2. Nick – Start integrating wifi module into groundstation. Possibly start working on creating a new PID for big quad.
3. Jake – Continue interfacing with prototype big quad, get webstie team together
4. Grant – get the big quad programmed to fly and learn WiFi mesh network
5. Chengrui ­– interface with big quad expansion board and old quad
6. Tianxiang – interface with big quad expansion board and old quad
7. Ben – working on instruction for getting python client workin

**Individual Contributions**

Cole:

* Monday: 3.5 hour – meeting prep and meeting, worked on mesh network with Nick and Jake
* Thursday: 3 hours –put expansion board on quad
* Sunday 1 hours– weekly report

Nick:

* Monday 3.5 hours - Meeting prep and working on mesh networking
* Tuesday: 2.5 hours – Design Document
* Thursday: 2.5 hours – Connecting to expansion board and flying it with PC client

Grant:

* Monday: 30 min- group meeting
* Tuesday: 2 hours - working quadcopter radio
* Wednesday: 1.5 hours - working with Ben and Cole to get quad copter flying
* Thursday: 1.5 hours – design document work
* Saturday: 1 hour – website work

Jake:

* Monday: 4 hours - meeting prep and meeting
* Thursday: 2 hours – sent signals from one wifi module to the other using mesh network. Worked on forwarding data from station to other mesh networks
* Friday: 1 hour – worked on design document
* Sunday: 1 hour – finished symlink protocol for wifi module

Ben:

* Monday: 3 hours - Creating STM and Groundstation flowcart, working on group meeting presentation, and group meeting
* Thursday: 2.5 hours – Researching the WiFi module, looking through the WiFi team's code, working on understanding CRTP packet structure, Helping with Big Quad
* Sunday: .75 hr – Design document

Tianxiang Shen:

* Wednesday: 2 hour – Reviewed old emails and links about expansion deck.
* Friday: 1 Hour – working on design document

Chengrui:

* Monday: 1 hour – group meeting
* Tuesday: 1 hour – learned how to use crazyflie client
* Wednesday: 3 hours- worked with big quad expansion board

**Meeting Minutes**

* Will be filled out on Monday and sent to the group via email.