CMPE 195B

10/29/2017

Update for Project ARD

Group Updates:

Turned in Chapters 6-7.

MidPoint presentation given.

Copyright Licenses Added.

Requesting meeting with professor to sign paper for lab access this wednesday November 1, 2017.

-Requesting access to hardware.

Requested meeting this Wednesday (11/1/2017)

Anahit

* Ordered parts list
* I2c driver for RPi to CF
* Met with Rajarth.
* Code prototyping.
* RPI configurations
* Custom mounting.
* Handing out L’s.

Ali

* Tested some software for the QGC flight control software
* Researched how to interface Laser sensor to CrazyFlie
* Read the CrazyFlie schematic to prepare for GPS module installation
* Checked all pins on the Big Quad for proper voltage reading in order to connect CrazyFlie
* Met with Rajarth to order GPS module and look at their project for improvements/advice

Max

* Researched GPS requirements
* Created team gantt and PERT chart
* Produced and communicated with group members in order to write chapter 6.1, 6.2, and 7.1
* Researched PX4 documentation to find compatibility between Rpi and Crazyflie I2C communication

Brian

* Created the rough chassis mount design in SolidWorks
* Researched obstruction avoidance methods
  + Currently obstacle avoidance is not implemented according to the website
  + Laser sensor data to RPi
  + RPi sends MavLink Command to the CF
    - How this connection works
      * Maybe connect an antenna to RPi that goes to qGC and qGC sends to CF drone…. Need to look deeper into possibility
* -Researched functionality of BigQuad pins
  + **CPPM(external receiver)**
    - **Need to look into options here**
  + **MON(battery and current monitoring)**
    - We might need to connect the plug on the LiPO to the MON pins, but not sure. I tried to find information on what the pinout is but no luck
      * [LiPO battery](https://www.venompower.com/products/venom-20c-3s-2100mah-11-1v-lipo-battery-with-universal-plug-system)
* Researched ESC firmware
  + We are up to date on ESC firmware according to: [BLheli](https://github.com/blheli-configurator/blheli-configurator/wiki/BLHeli_S-Firmware-Knowledge-Base)
* Spec’d out parts needed for drone assembly continuation
  + Parts were ordered last week

To-Do’s

* + -Charge LiPO
  + -Request address info for PX4 object detection
  + -See if BigQuad Drivers are installed with PX4
    - <http://discuss.px4.io/>
  + -Install connectors + wires onto drone headers
  + -Install motor wire connectors (Chassis)
  + -Install motor wire connectors (Core)
  + -Complete measurements on drone chassis
  + -Finalize dimensions in CAD for mount
  + -Finalize constraints in CAD for mount
  + -3D print mount
  + -Install mount
  + -Fix hardware to mount
  + -Wire interface RPi's to CF
  + -Mount lasers
  + -Wire laser interface
  + -Mount LiPO battery