**FlyNet Team Minutes**

October 7, 2015 Meeting

Recorded: Austin Anderson

Attending: Drew, Austin, Steve, Matt, Bryce, Taylor, Tyler, Prashant, Ed, Joe Tanner, Eric Frew

Updates were given by team members:

Drew

Zohaib was e-mailed regarding the teams updated plans he had not responded yet.

A second round of orders was submitted including guidance and FliR sensor.

There were found to be no export control concerns for using the FliR sensor.

A mid-semester review/PDR has been tentaively scheduled for Oct. 21.

Austin

Continuing to maintain the architecture diagram.

The diagram needs to be updated to reflect guidance.

Austin will take on the planning subsystem.

Taylor

Taylor developed an initial target tracking system on a laptop.

The system tracks the color green using OpenCV.

The system will support multiple target tracks.

Multi-target tracking is in development.

Taylor will cover target detection and tracking during the PDR.

Tyler

Tyler is building a size, weight, and power spreadsheet for the quadplatforms and sensors.

Tyler is working to estimate flight times based on this spreadsheet.

Tyler will conduct flight tests to verify the flight time estimates using the AlienBee.

Ed

Ed started looking into the DJI SDK.

The size of the code base was found to be significant.

Ed found the DJI controller is marketed as open-source.

Ed will incorporate the pixhawk controller architecure into his Simulink model.

Ed will discuss the DJI autopilor druing the PDR.

Prashant

Prashant is evaulating the ultrasonic and LiDAR sensors using the teensy board.

Header pins were soldered onto the teensy board and the sensors.

Prashant is working on getting data and plots that show sensor performance.

Prashant will present his findings during the PDR.

Matt

Matt is working on the mechanical aspects of the quad.

Landing gears are being constructed for the AlienBee out of PVC pipe.

The old Styrofoam blade gaurds were found to be insufficient for the AlienBee.

Matt will construct a new blade guard design most likley consisting of a flexible ring encircling the quad.

Steve/Bryce

They worked to implement a new GPS protocol in ROS.

The protocol will allow the use of ture GPS, Vicon local NED, or SLAM local NED to be fed

into the pixhawk.

Firmware on the pixhawk is being augmented to accomplish this in addition to the software

being written in ROS.

The remainder of the meeting was devoted to pitching the Guidance sensor and Matrice platform to Dr. Frew as though he were the sponsor. The summary of that pitch is as follows:

1. The evaluation of Guidance should include the effects of using Guidance on all relevant project requirements.

2. The overall system architecture should include data rates and data bandwidth requirements from subsystem to subsystem.

3. It was determined tht Matrice would have difficulty fitting through standard 3' door frames. This needs to be addressed with the sponsor.