Supervisor meeting

Wednesday, 5th of October 2016

Tests

- The thrust test has been done with a new setup, resulting in slightly different measurements.
- The drag test has been done using the torque-meter, results seems okay.
- The battery level test is yet to be done.

Simulation

- Talk about the controller design with Christoffer.
- When we change roll, the other to motors change the velocity a little bit. The disturbance is small and may originate from sign-error or from physical implications of the model.
- To investigate the above, the two motors (that maybe should not change) can be turned off in the simulation.

Observer

- A reduced order observer has been designed to determine the angular velocities.
- The Vicon system returns very good measurements, so an observer would not be needed, since the derivative of these angles would be sufficient.
- It is not necessary when only using vicon, but for the learning perspective, it is nice to implement in the system.
- The observer is especially relevant when using on-board sensors like a gyroscope, so designing it now will make the project flexible for later such implementation.

Miscellaneous

- To get an acceleration of 1m/s^2 we need around 0 5rad - weather or not this is a large acceleration is difficult to say. It is not ridicules number.
- We can compute the maximum acceleration from the mass and thrust force of the quadrotor.
- When choosing the magnitude of acceleration we should take the angular disturbances into account.

Next Supervisor Meeting

Wednesdays, 12th of October at 10.00