

## 1 Goals for the Past Week

The following is a list of our goals for the past week, as well as descriptions of their completion and/or progress:

1. **Use sensor and Inertial Sense data to tune the ROSPlane estimator and improve the quality of the airspeed sensor signal** (*Andrew Torgesen*)  
We have obtained data for this, and work is being done to increase the quality of the airspeed data by Friday.
2. **RC test flights with the new airframe** (*Kameron Eves, Tyler Miller, Ryan Anderson, Tyler Critchfield, Andrew Torgesen*)  
We ran an RC test flight yesterday. Following our preflight checklist, we ensured that the RC and Ubiquiti connections were sound at large distances. After a couple of successful RC flights, our pilot lost control of the aircraft, and it crashed again. This was due to the combination of the tight turns required at Rock Canyon Park, as well as the inherent roll instability of the plane and non-optimized weight distribution in the airframe, all amounting to a difficult flying situation. We have determined that on our next flight, we *must* have a more experienced RC pilot with us as our current RC pilot obtains more experience flying fixed-wing aircraft.
3. **Tuning the gains in ROSPlane for controlled, autonomous flight** (*Brady Moon, John Akagi, Jacob Willis, Kameron Eves*)  
James Jackson recently informed us that the F4 chip that we're using has a bug in the USB serial port code, and we've noticed this bug ourselves. Until this bug is fixed, we will fly RC and use ROSFlight to collect and monitor sensor and estimator data.
4. **Getting the imaging software ready for the mock competition** (*Tyler Miller, Connor Olsen, Derek Knowles, Brandon McBride, Jake Johnson*)  
We appear to be on track, in this regard.

## 2 Goals for the Coming Week

The following is a list of our goals for the coming week, as well as details about how we plan to accomplish them:

1. **Submit the Fall Semester Capstone Design Report** (*Entire Team*)  
Documentation is essentially complete at this stage. The main work that remains is organizing our eighteen-minute presentation and turning in our spiral-bound book.

**2. Run a mock competition with the new airframe** (*Entire Team*)

Because of the time it took to assemble the plane, current issues with ROSFlight on the F4, and because we didn't get a chance to tune the autopilot, we are going to fly the mock competition without autonomous flight. We have been testing the performance of the aircraft under RC control, and give our safety pilot more flight hours to log). Because of yesterday's crash, we will focus on assembling the new airframe as fast as possible, and will fly on Friday if we finish in time *and* we can find an experienced RC fixed-wing pilot to fly with us.

**Please send us any feedback with regards to the progress we've made, as well as our plans for the coming week.**