

Fly Sense



Team C – ILR 10
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Team Work Done:

- Clustering points from Velodyne to speed up processing of the Bird's eye view
- Sound warnings integrated in the jetson
- Obstacle avoidance code integrated
- Virtual obstacles integrated in Gazebo

Birds Eye Upgrades:

- Fixed window size for obstacles
- Blinks at most likely collision

Flight Test:

- Just had a complete flight test today, everything works fine.

Teammate	Work Done
Shivang	Worked on integrating obstacle avoidance in the simulator
Joao	Worked with Hari in generating sound warnings
Nick	Worked on generating virtual obstacles for the quad in simulation
Hari	Did most part of the work in the past couple weeks. Processed sound warnings in the Jetson.

Individual Work Done:

- Setup the complete pipeline for displaying information on the Epson (see fig1)
- Changed ROSjava code to accommodate camera and HUD information
- Setup android tablet for demonstration (see fig2)



fig1: Direct camera picture through the Epson Lens

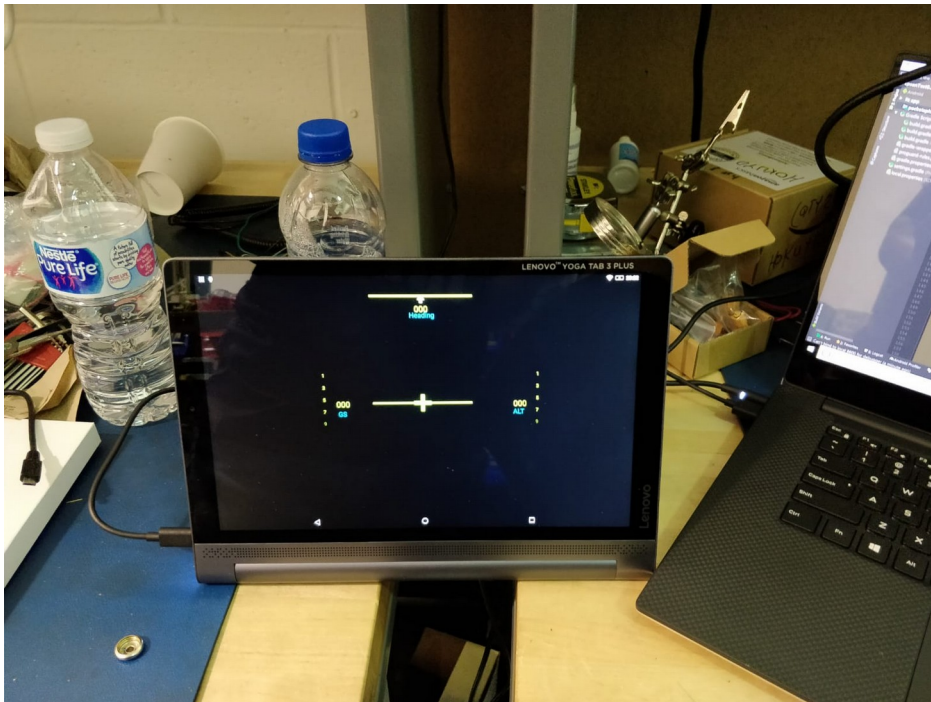


fig2: System setup on the tablet

Milestones for Coming Weeks:

- Tomorrow's flight at Nardo.
- Looking to take away some important points from tomorrow's flight test. We have some crucial items that we are looking for feedback on.

Problems Faced in the Past Weeks:

- Lag in video display on the Epson

- Speaker box malfunction on the Epson, no idea how we can fix it
- Low grades in ILRs

Key Risks:

- Workload from other heavy courses
- Multiple projects across courses, really difficult to keep shuttling between Android, ROSjava, Python and C++.