

FlySense



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Team C: Flysense
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March 21st 2018

Work Done:

The break has been pretty useful as we have been able to cover up all delays.

We have completed the following tasks over the past weeks:

1. Flight testing and data collection (Nihar):

FPV is setup and we can see the integrated bird's eye view (fig 1) which works seamlessly with the setup.

2. Coloring of obstacles (Hari and Joao):

The code for obstacle detection and coloring has been done and integrated into the system. There are small adjustments being made, which we will finalize in a few days.

3. Obstacle avoidance (Joao):

Algorithm developed and implemented on matlab, still need to be ported to C++.

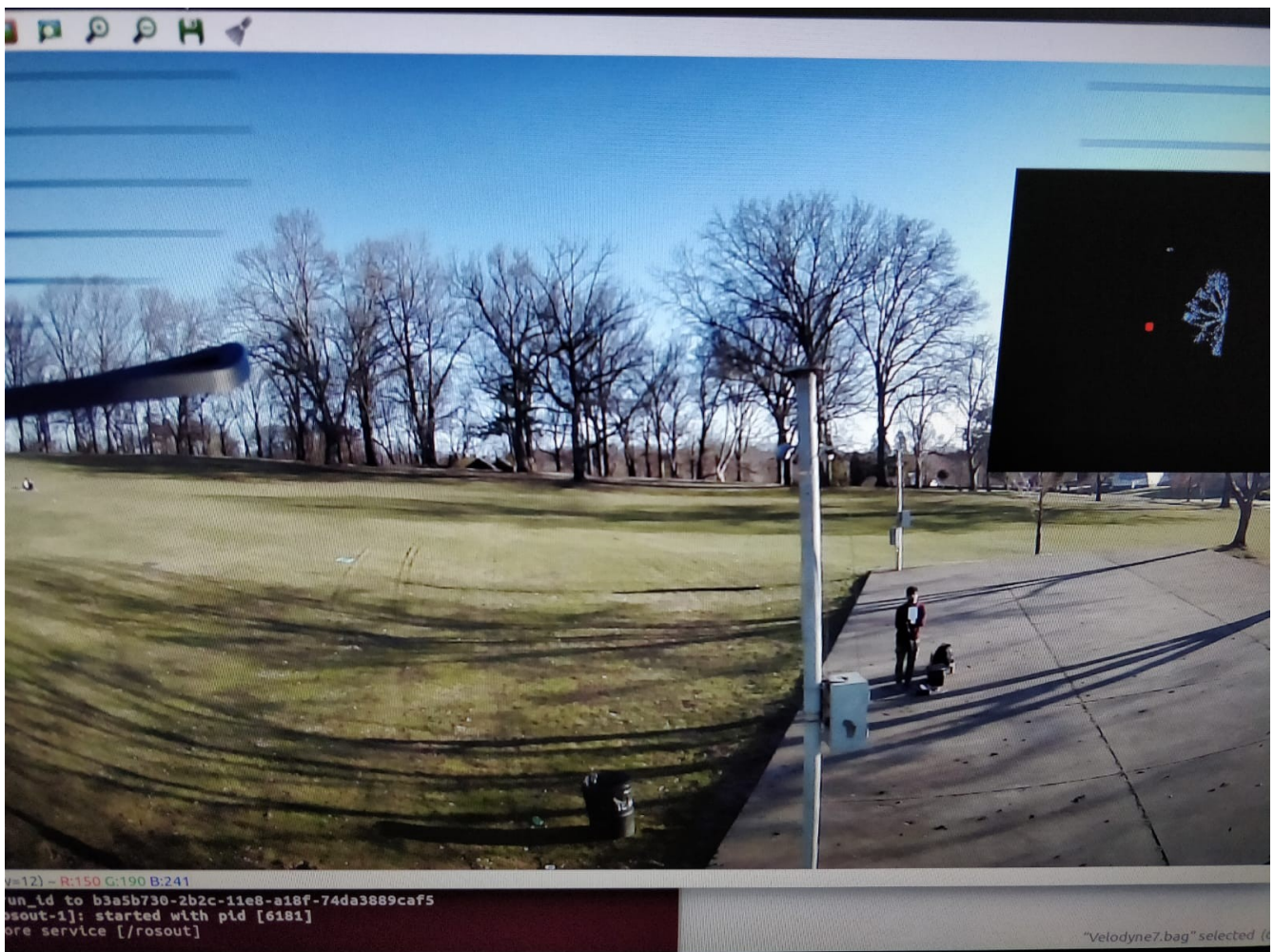


Fig 1: FPV Video with Bird's Eye View

Individual Work:

As mentioned above, I have setup the FPV on the quadcopter and merged the FPV video with bird's eye view image which is being transmitted on rostopics for the Epsilon. Also, Shivang, Hari and I have done some flight testing along with data collection to check the quality of the video (which is very neat).

Problems Faced:

None.

Future Individual Work:

I will be working on changing the Android implementation as we are no longer using voice commands. It will just be a single screen with the FPV background with a bird's eye view image to the right top corner. I also need to find a way to overlay the HUD information on the FPV video.

Team Future Work:

Deploy the coloring and obstacle avoidance code on the Jetson and perform extensive testing and optimization.