1 What I've done

- Used MATLAB do regsitration with ICP
- Tried to do some more investigations into what cause the bad depth estimates (angle, distance, speed). But the timestamps didn't record properly.

2 Parts of report to look at

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3 Questions

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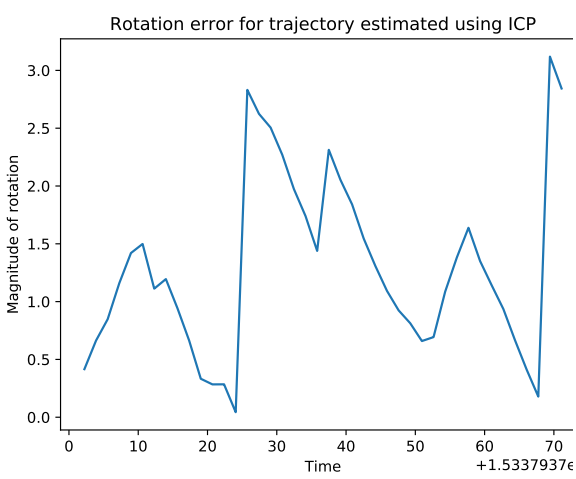
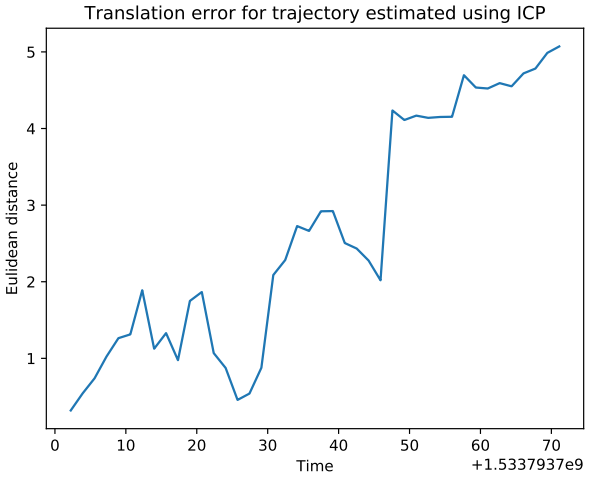
4 Comments

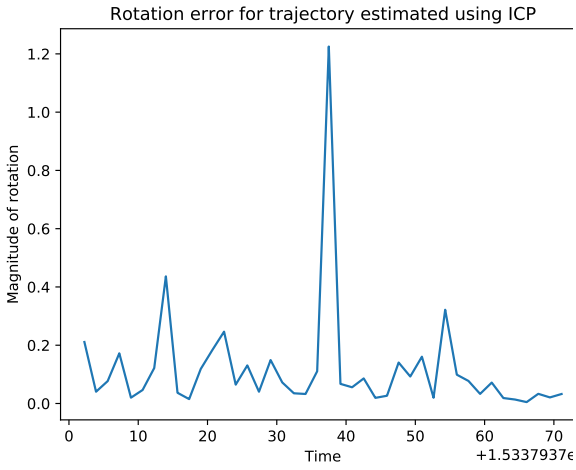
- The MATLAB registration did not work very well. It was also very fiddly to find processing frequencies where the registration wouldn't throw an error. I also ended up having to downsample the point clouds to get it to work (and because otherwise it was very slow). I might be able to get something that's less terrible by trying different frequencies to find one that works without downsampling. But I doubt the results will be particularly good, and it will be very slow.
- The timestamps for the depth measurements of the last few rosbags I've recorded haven't been working properly (wrong timestamps, the RGB ones seem to be fine though).



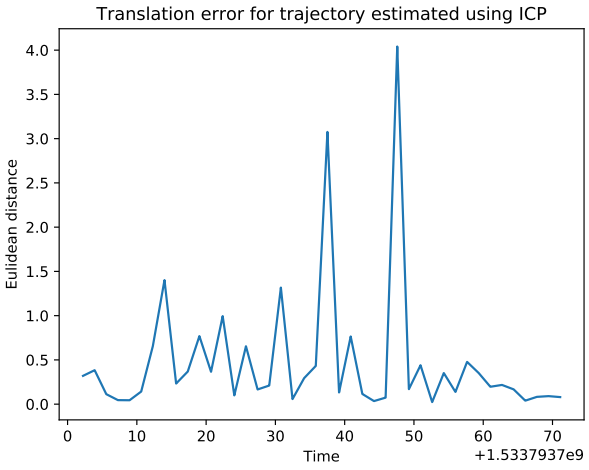
(a) Absolute rotation error



(b) Absolute translation error

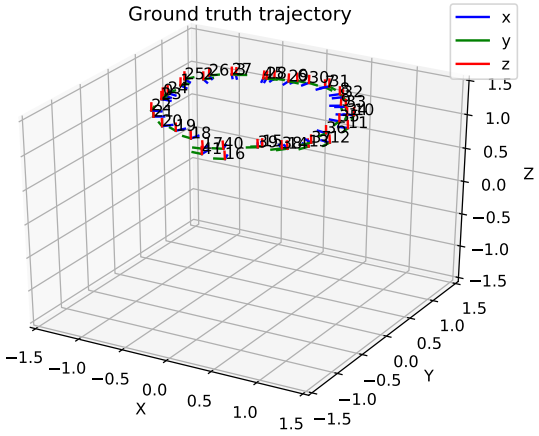


(c) Relative rotation error

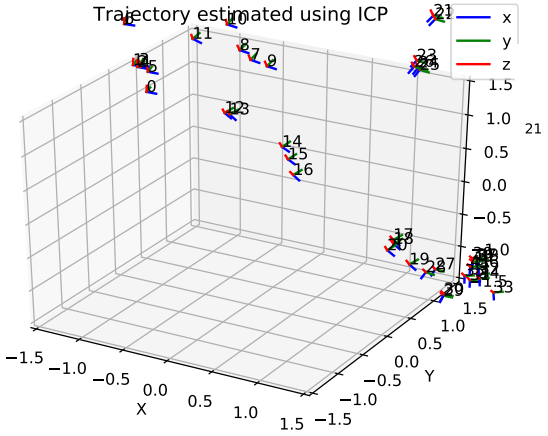


(d) Relative translation error

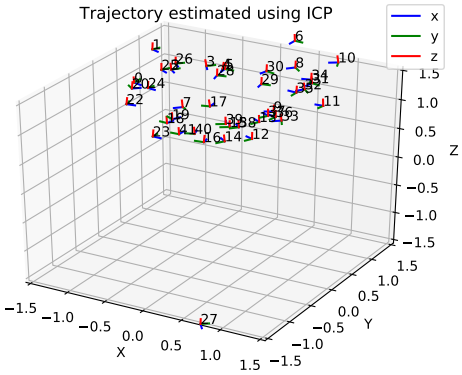
Figure 1: Registration error for ICP on the quadcopter 1 dataset, with 50 frames skipped.



(a) Ground truth trajectory (skip 50)



(b) ICP absolute trajectory



(c) ICP relative trajectory

Figure 2: Trajectories for ICP on the quadcopter 1 dataset, with 50 frames skipped.