

FP5

Frames highlighted as yellow has lidar ttc way off. It happens due worse lidar points distribution (more noisy, more outliers). Worse distribution could be seen via interquartile value, which is greater for worse cases than for good cases. Also lidar points distribution is visualized on “3d objects” image. Worse cases have thicker rectangular.

frame number	ttc camera, s	ttc lidar, s	irq lidar (q3-q1)
1	15.2965	3.8601	0.305155
2	13.6988	8.69929	0.0912104
3	11.8873	12.0939	0.0270267
4	11.4178	9.42285	0.0303313
5	12.6225	12.1971	0.0374197
6	5.90091	7.99253	0.0676392
7	10.8382	1.19402	0.26572
8	12.8307	2.33935	0.151908
9	10.5709	1.42359	0.373718
10	14.0454	1.17171	0.32376
11	10.3828	3.73676	0.189203
12	11.1433	7.53956	0.0896743
13	10.3608	4.44657	0.0854152
14	11.2967	3.55511	0.167206
15	8.72293	1.11169	0.166553
16	9.80694	1.14076	0.230267
17	9.91206	6.98947	0.0715015
18	8.50046	6.30383	0.0803714

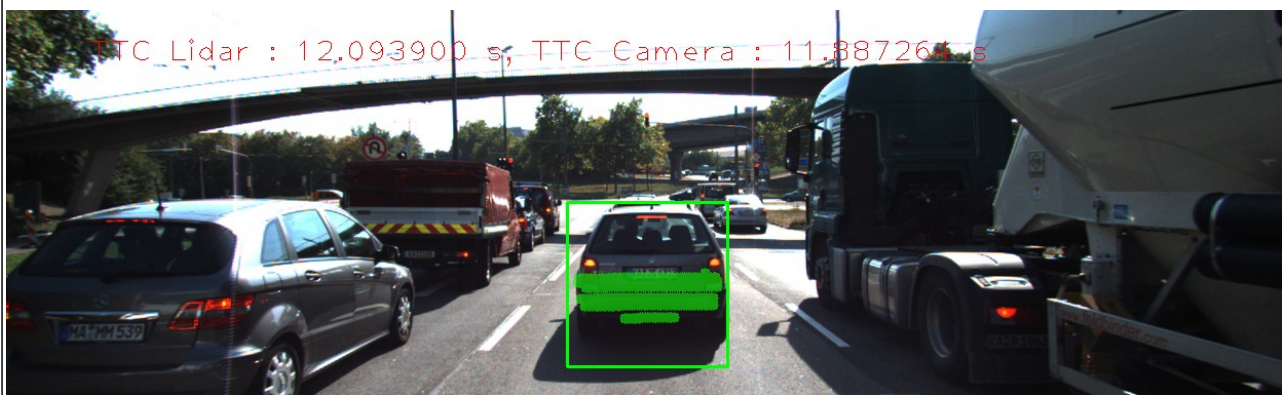
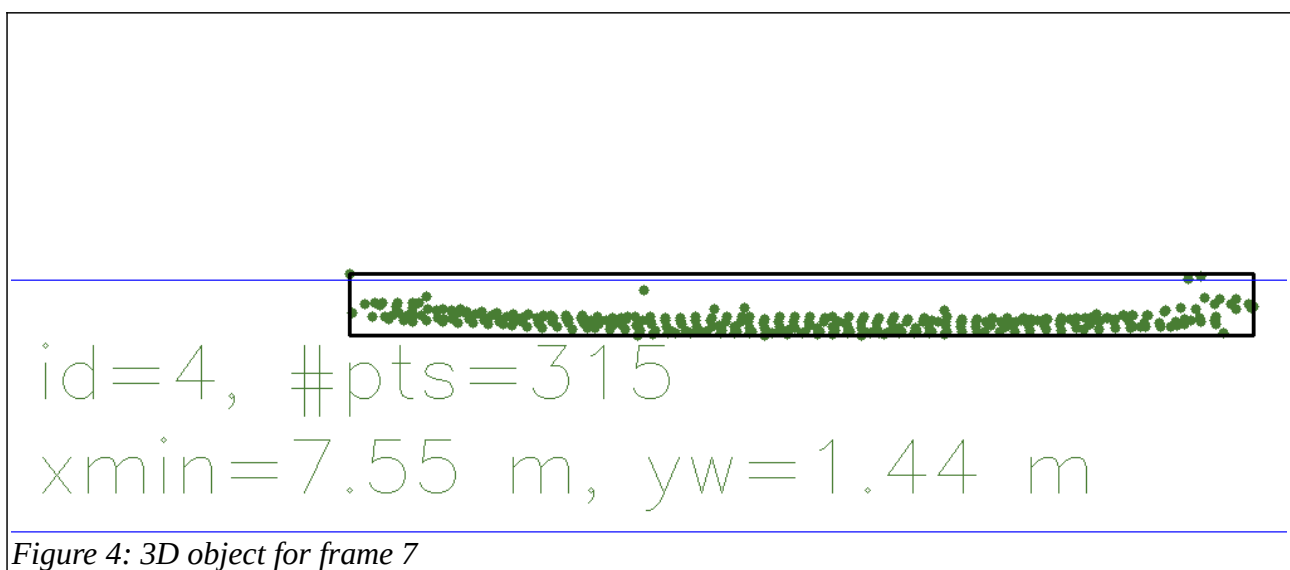
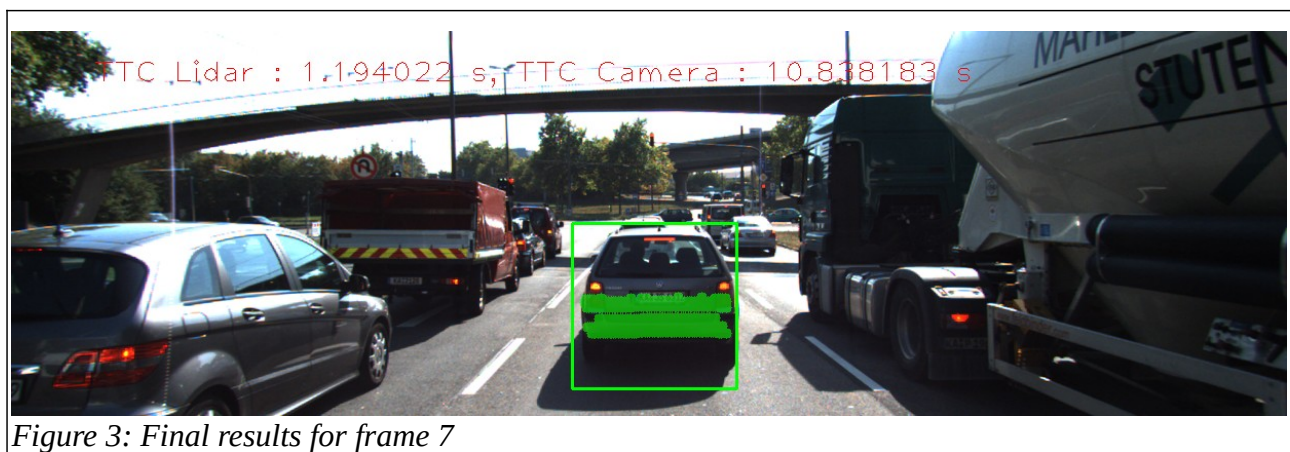
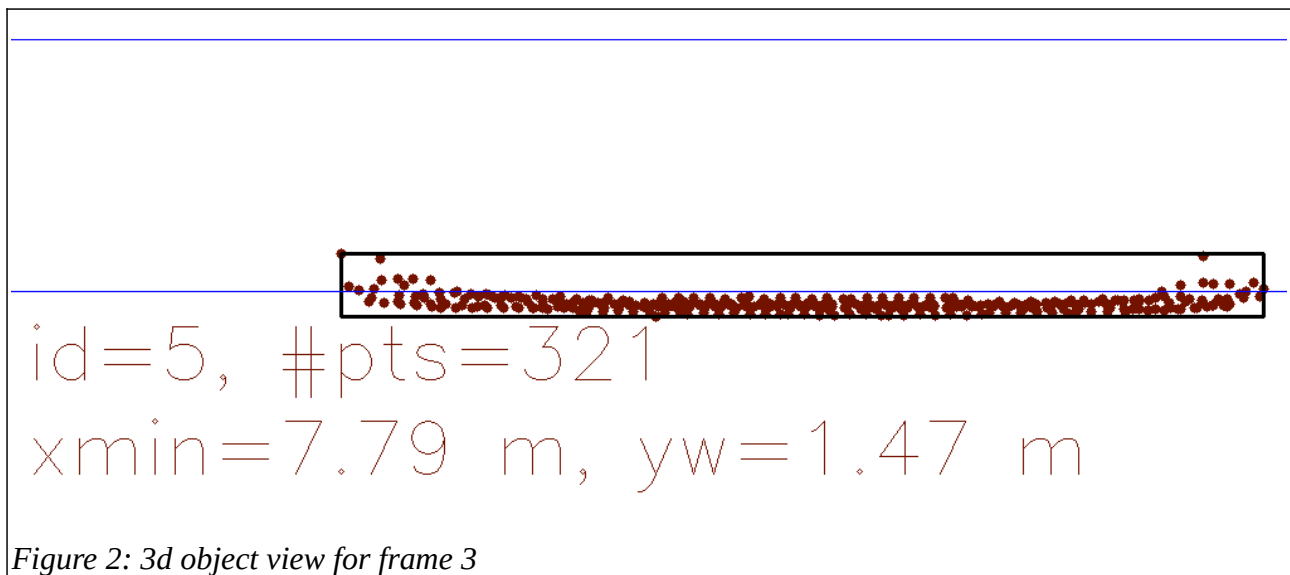


Figure 1: Final results for frame 3



FP6

BRISK, ORB in all allowed combinations with descriptors are the best detector types.

The worst is HARRIS detector. It could be explained as only few keypoints matches are found. Eg. HARRIS uses average 11 points, while BRISK uses 172 keypoints. See spreadsheet.