LIDAR Testing 12/16/15

Experiment 1 had the following conditions:

- Physical setup as seen in Figure 1.
- Data recorded in the files seen in Figure 2.
- Lighting was exclusively the lab overhead lighting, but the area was mostly in shade, as seen in Figure 1.
- 10 full scans were recorded. Theta ranges from 0-180 degrees no grouped datapoints, Phi ranges from 0 (vertical) to -90 (horizontal) and changes in 10 degree increments.

Experiment 2 had the following conditions:

- Physical layout as seen in Figure 3.
- Data stored in files shown in Figure 4.
- Lighting is the same as in experiment 1, except the scan area is not in shadow.
- 10 full scans were recorded, using the same variables as in experiment 1.

Experiment 3 had the following conditions:

- Experiment conditions were the same as experiment 2, except LIDAR scanner was raised an additional 267mm off the floor.
- Data recorded in the files shown in figure 5.

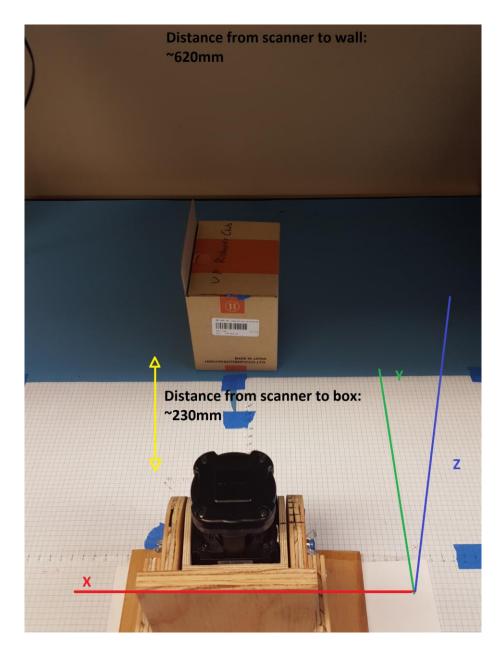


Figure 1 – experiment 1 setup

- test_vectors_2015_12_16_14_53_4
- test_vectors_2015_12_16_14_53_42
- test_vectors_2015_12_16_14_54_6
- test_vectors_2015_12_16_14_54_30
- test_vectors_2015_12_16_14_54_52
- **test_vectors_2015_12_16_14_55_22**
- test_vectors_2015_12_16_14_55_48
- **test_vectors_2015_12_16_14_56_12**
- test_vectors_2015_12_16_14_56_34
- test_vectors_2015_12_16_14_56_57

Figure 2 – experiment 1 files



Figure 3 – experiment 2 setup

test_vectors_2015_12_16_15_30_39
test_vectors_2015_12_16_15_31_48
test_vectors_2015_12_16_15_32_49
test_vectors_2015_12_16_15_33_40
test_vectors_2015_12_16_15_34_43
test_vectors_2015_12_16_15_35_51
test_vectors_2015_12_16_15_36_52
test_vectors_2015_12_16_15_37_51
test_vectors_2015_12_16_15_37_51
test_vectors_2015_12_16_15_38_49
test_vectors_2015_12_16_15_38_49
test_vectors_2015_12_16_15_39_40

Figure 4 – experiment 2 files

test_vectors_2015_12_16_15_57_35
test_vectors_2015_12_16_15_58_11
test_vectors_2015_12_16_15_59_12
test_vectors_2015_12_16_15_59_43
test_vectors_2015_12_16_16_0_21
test_vectors_2015_12_16_16_0_47
test_vectors_2015_12_16_16_1_41
test_vectors_2015_12_16_16_2_33
test_vectors_2015_12_16_16_2_33
test_vectors_2015_12_16_16_3_23
test_vectors_2015_12_16_16_3_23
test_vectors_2015_12_16_16_3_53

Figure 5 - experiment 3 files