

five_mobile Turtlebot 1 Report

Matthew Swartwout

June 24, 2016

This is a summary of the data from the five_mobile experiment, Turtlebot #1.

The runtime of this experiment was 1 hours, 59 minutes, and 3658.1 seconds.

Shown below is the summary of each filter's error for both x and y coordinates, and also the error in total distance.

```
summary(t1_continuous$x_error)
```

```
##      Min.   1st Qu.   Median     Mean   3rd Qu.     Max.
## -0.13800 -0.10160 -0.08779 -0.06070 -0.02183  0.11190
```

```
summary(t1_continuous$y_error)
```

```
##      Min.   1st Qu.   Median     Mean   3rd Qu.     Max.
## -0.07317  0.01750  0.10390  0.07038  0.12130  0.13230
```

```
summary(t1_continuous$dist_error)
```

```
##      Min.   1st Qu.   Median     Mean   3rd Qu.     Max.
## 8.000e-08 5.645e-02 1.234e-01 1.086e-01 1.570e-01 1.676e-01
```

```
summary(t1_discrete$x_error)
```

```
##      Min.   1st Qu.   Median     Mean   3rd Qu.     Max.
## -0.15080  0.05167  0.08085  0.08009  0.09453  0.48840
```

```
summary(t1_discrete$y_error)
```

```
##      Min.   1st Qu.   Median     Mean   3rd Qu.     Max.
## -0.47540 -0.24870 -0.24840 -0.22770 -0.22880  0.09483
```

```
summary(t1_discrete$dist_error)
```

```
##      Min.   1st Qu.   Median     Mean   3rd Qu.     Max.
## 0.0000001 0.2580000 0.2626000 0.2584000 0.2840000 0.5664000
```