

two_mobile Turtlebot 1 Report

Matthew Swartwout

June 24, 2016

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

The runtime of this experiment was 1 hours, 59 minutes, and 3658.7 seconds.

The total number of external pose measurements recieved by the robot during this time was 316370 which means poses were received at an average of 43.9482129 poses per second.

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

```
summary(continuous$x_error)
```

```
##      Min.   1st Qu.   Median     Mean   3rd Qu.     Max.
## -0.909900 -0.495100 -0.099610 -0.241000 -0.009936  0.190200
```

```
summary(continuous$y_error)
```

```
##      Min.   1st Qu.   Median     Mean   3rd Qu.     Max.
## -0.487500 -0.158400 -0.007341 -0.011640  0.080130  0.526900
```

```
summary(continuous$dist_error)
```

```
##      Min.   1st Qu.   Median     Mean   3rd Qu.     Max.
## 0.0000094 0.1185000 0.2275000 0.3341000 0.5529000 0.9607000
```

```
summary(discrete$x_error)
```

```
##      Min.   1st Qu.   Median     Mean   3rd Qu.     Max.
## -1.64400 -0.85840 -0.14190 -0.39460 -0.00673  0.47040
```

```
summary(discrete$y_error)
```

```
##      Min.   1st Qu.   Median     Mean   3rd Qu.     Max.
## -0.62500 -0.05521  0.07399  0.17540  0.36620  1.23300
```

```
summary(discrete$dist_error)
```

```
##      Min.   1st Qu.   Median     Mean   3rd Qu.     Max.
## 0.0000094 0.1721000 0.3690000 0.6025000 0.8749000 1.8620000
```