

# five\_mobile\_restricted Turtlebot 3 Report

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```
## Warning in t1_gazebo$x_position - t1_discrete$x_position: longer object
## length is not a multiple of shorter object length

## Warning in t1_gazebo$y_position - t1_discrete$y_position: longer object
## length is not a multiple of shorter object length

## Warning in t1_gazebo$x_position - t1_continuous$x_position: longer object
## length is not a multiple of shorter object length

## Warning in t1_gazebo$y_position - t1_continuous$y_position: longer object
## length is not a multiple of shorter object length
```

This is a summary of the data from the five\_mobile\_restricted experiment, Turtlebot #3.

The runtime of this experiment was 0 hours, 41 minutes, and 41.6 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.
## -1.503000 -0.015910 -0.015370 -0.015050 -0.014810  0.004075
```

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

```
##      Min.   1st Qu.   Median     Mean   3rd Qu.     Max.
## -0.0101100 -0.0050700 -0.0007408  0.0004774  0.0040310  2.0200000
```

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

```
##      Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
## 0.000000 0.01531 0.01572 0.01684 0.01677 2.51800
```

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

```
##      Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
## -1.55900 -0.07122 -0.07067 -0.06653 -0.07011  0.02013
```

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

```
##      Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
## -0.07859 -0.04946 -0.04459 -0.04043 -0.03968  1.97700
```

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

```
##      Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
## 0.000000 0.07998 0.08294 0.08104 0.08613 2.51700
```