five_mobile_restricted Turtlebot 1 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 #1.

The runtime of this experiment was 0 hours, 41 minutes, and 33.1 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.
## -2.219000 -0.031980 -0.001827  0.024060  0.113000  0.119500
```

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

```
##      Min.   1st Qu.    Median      Mean   3rd Qu.       Max.
## -0.062170 -0.001895  0.043790  0.030580  0.054230  4.880000
```

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

```
##    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
## 0.00000 0.04426 0.07430 0.07926 0.12560 5.36100
```

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

```
##      Min.  1st Qu.    Median      Mean  3rd Qu.      Max.
## -1.87100   0.03763   0.40220   0.29050  0.46250   0.65370
```

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

```
##     Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
## -0.0436  0.2337  0.2996  0.3164  0.4480  5.1250
```

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

```
##     Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0000  0.4802  0.5505  0.4668  0.5602  5.4560
```