

ODOMETRY CORRECTION CONSTANT TEST

GROUP 4

2nd December 2016
Verison 1

Abstract

This test will help us find the CS_Distance and CS_Angle. We obtained 34 for the angle value and 15.8 for the distance value.

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1 BACKGROUND

1.1 Edit History

Jake Zhu: 2016-11-26, Added table, expected result and procedure

1.2 Test Information

Tester: Alexis, Tristan, Ben, Jake

Author: Alexis, Tristan, Ben, Jake

Hardware Version: 3.03

Software Version: b650642

2 GOAL

To test whether our improvised odometry correction works.

3 PROCEDURE

Setup:

1. Assume that the robot is built.

Test:

1. Upload OdometryCorrectionTest.java onto the robot
2. Run the code through WiFi.
3. Let the robot spin on its axis. Once it finishes, check which quadrant it lands in. Change the angle to make sure it lands on an axis.
4. Do the same previous steps, but this time check for distance. The robot should not land far away from the origin. Change the angle so this is the result.

4 EXPECTED RESULT

We expect the robot to be able to correct the odometer based on the black lines it sees.

5 TEST REPORT

5.1 Angle

Trial	Angle	Quadrant
1	20	(-,+)
2	18	(-,+)
3	15	Error
4	15	(-,+)
5	22	(-,+)
6	25	(-,+)
7	27	(-,+)
8	32	(-,+) close
9	35	Y-Axis
10	35	Y-Axis
11	35	(+,+)
12	34	(+,+)
13	34	Perfect (X-Axis)
14	34	On X-Axis
15	34	Perfect (X-Axis)
16	34	Perfect

5.2 Distance

Trial	Distance	Distance from (0,0)
1	20	+2cm
2	18	+1cm
3	15.8	0cm
4	15.8	0cm
5	15.8	0cm

6 CONCLUSION

Our odometry correction works well under the using the values of 34 for the angle and 15.8 for the distance.

7 ACTION

Our odometry correction is complete.

8 DISTRIBUTION

Software Team