AMR

Consolidated Report

Pranav Megarajan
Sathiya Ramesh
Supriya Vadiraj

22-11-2017

Motion Controller:

Procedure:

Test Cases:

1. **To check for the combination of linear and angular motion and alignment in a straight line ,tested with coordinate values (x = 3 , y = -3),(x = 4 , y = 5) and (x = -3, y = -2) and validating in all the quadrants.**
2. **Check the angular velocity value keeping the goal point very near**
3. **Plotted and validated against the velocity profile graph.**

Test Cases	Moves in a Straight Line and combines linear and angular motions.	Angular Velocity within maximum value	Follows velocity profile.
Pranav	True	True	No
Sathiya	True	No	No
Supriya	True	No	No

Conclusion:

All the codes move along a straight line, but the angular velocity shoots beyond maximum value for two of the codes.

Bug2:

Procedure:

Test Cases:

1. **Finding goal in simple environment**
   Test the code with goal point (1,1) keeping the bot in the First Quadrant
2. **Finding goal in complex environment**
   Test the code with goal point (-4,-4) keeping the bot in the Fourth Quadrant
3. **Unreachable goal**
   Test the code with goal point as (3,3) keeping the bot in the Second Quadrant

Test Cases	Finding goal in simple environment.	Finding goal in complex environment.	Unreachable goal	Maintaining clearance with the wall in Complex Env
Pranav	True	True	True	Partially works
Sathiya	True	True	Partially works	Partially works
Supriya	True	True	Partially works	Partially works

Conclusion:

When tested with goal point (3,3) with bot in second quadrant, due to clearance problem bot was crashing. Hence in wall follower code clearance value is adjusted.

Wall Follower:

Procedure:

Test Cases:

Case1: Handles convex corners

Case2: Handles concave corners

Case3 : Clearance maintenance while exiting cubicle(i.e turn)

Case4: Maximum Clearance value for which the bug completes a full circle around the map

Case5: Works for both worlds

Test Cases	Case1	Case2	Case3	Case4	Case5
Pranav	True	True	better	0.5	True
Sathiya	True	True	good	0.4	True
Supriya	True	True	good	0.4	True

Conclusion:

All the codes work for both the worlds but one of the code works for higher clearance values and exits the cubicle in a smoother manner.