GHENT UNIVERSITY

Progress Report - Group 8

Robotics (E019370A) – A Minesweeping Robot

Week 3: 30/11/2020 – 7/12/2020

Below a small progress update can be found of group 8 concerning the minesweeping robot project of the 'Robotics 2020-2021' course. The left column describes what has been done during the last week, the right column describes what is planned as final steps during the last week.

What has been done?	**What is planned for week 4?**

General
• Follow-up on subtasks and integrating them (Together)
  ○ Team meeting on 4/12/2020, 7/12/2020
• Writing progress report week 3 (Lauren)
• Writing report: introduction + reasoning (Lauren)
 	
Simulation
• Extending test environment for the Turtlebot: correct mine sizes, multiple test areas, optimal Gazebo settings etc. (Lauren)
 
• Extending ROS-node for interaction with Gazebo: deleting, adding, changing, logging elements etc. (Lander)
  ○ E.g mine detection, change mine color etc.
 	
Robot Algorithms
• SLAM for map and planning (some difficulties) (Flor)
• Implementing different 'dumb' sweeping strategies (Henrique, Flor)
 	
Evaluating Strategies
• Automating simulations (Flor)
• Logging detonated mines (Lander)
	General
	• Follow-up on subtasks and integrating them (Together)
	  ○ Team meeting on 9/12/2020, 11/12/2020, 14/12/2020
	• Writing and completing report (Together, mainly Lauren)
	• Submitting report and code on Github (Together)
	
	Simulation
	• Bug fixes to Gazebo simulations and related ROS-Gazebo communication if necessary (Lauren and Lander)
	
	Robot Algorithms
	• Completing SLAM for map and planning (Flor)
	• Adding smart sweeping strategies to ROS package (Flor, Henrique)
	
	Evaluating Strategies
	• Simulating various sweeping strategies in different environments (Together)
	• Analyzing simulation data (Together)
	• Comparing and evaluating results (See report writing.) (Together)

Team members: Henrique Rodriques, Flor Sanders, Lander Verloove and Lauren Van De Ginste