

**CONFIGURING AND SIMULATING SWARM ROBOT
BEHAVIOUR USING V-REP SIMULATOR AND ROBOT
OPERATING SYSTEM (ROS)
CASE STUDY: HFTR AND AGV**

By

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STATEMENT BY THE AUTHOR

I hereby declare that this submission is my own work and to the best of my knowledge, it contains no material previously published or written by another person, not material which to a substantial extent has been accepted for the award of any other degree or diploma at any educational institution, except where due acknowledgement is made in the thesis.

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ABSTRACT

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Dr. Ir. Prianggada Indra Tanaya, MME, Advisor

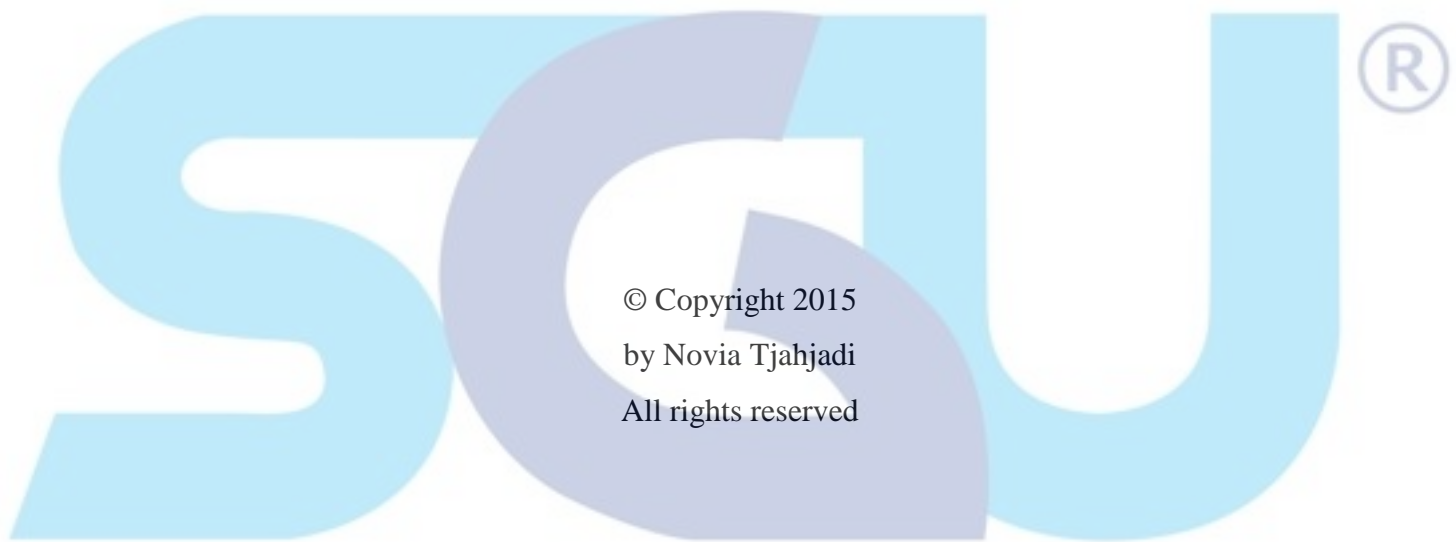
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The purpose of this Thesis work is to design a framework for cooperative swarm robot with further study about their analysis behavior. The framework developed also uses V-REP simulator which is also integrated with ROS as its Application Programming Interfaces (API).

This study discuss about structural and communication behavior on both robots. Which were using a virtual model of transporter robot and Autonomous Guided Vehicle (AGV).

This thesis work also provides an improvement from previous thesis work by Nirmala[1]. Despite the system using an external API with ROS framework, this simulation gives a different work to learn more about the possibilities for their behavior to develop in real systems.

Keywords: cooperative swarm robot, robot's behaviour, V-rep, ROS.



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DEDICATION

I dedicate this thesis to my family, my friends and also my advisor, Dr. Ir. Prianggada
Indra Tanaya, MME.



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