DESIGN AND DEVELOPMENT OF A MOBILE ROBOT BASED ON PLANING EXECUTION AND MONITORING ARCHITECTURE WITH INTEGRATION OF FUSION SENSORS

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, contains no material previously published or written by another person, nor 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

DESIGN AND DEVELOPMENT OF A MOBILE ROBOT BASED ON PLANNING EXECUTION AND MONITORING ARCHITECTURE WITH INTEGRATION OF FUSION SENSORS

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The objective of this thesis work is to develop a planning executing monitoring architecture for a mobile robot which implements the use of fusion sensor and Kinect ™ sensor in implementing a dynamic obstacle avoidance algorithm and localization of the mobile robot.

The focus of this work is to design and develop the execution and monitoring module. The monitoring module will provide data that is required by the planning module. The transaction of the data is using serial communication.

Keyword: Planning Execution Monitoring Architecture, Serial Communication, Kinect ™ sensor, dynamic obstacle avoidance algorithm

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DEDICATION

I dedicate this thesis to God, my parents, my sister, and all of my friends.

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The author wishes to God for all of His grace and blessing throughout the entire thesis work.

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