TITLE : The Mobile Robot System Development with Fuzzy Logic

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ABSTRACT

This research is to study and develop the mobile robot system with fuzzy logic. The fuzzy rules from the custom design are need for analyzing the directional mobility. The learning process of the robot is done by data from the infrared sensors through fuzzy logic. The direction and distance of the obstacle will be detected as the reference for the mobile. On the hardware, PIC 16F877 microcontroller is usual as the premise controller. The decision to make the move is done by fuzzy logic without human interface. Design and development of this research can be used as basis in developing other kinds of robots efficiently.

The result of this research and development shows that the robot can be able to use data from sensors to fuzzy logic. The mobility of the robot is controllable correctly.

Keywords : Mobile Robot , Fuzzy Logic and Robot, Learning Fuzzy Rule, Robot Control