

DESIGN AND IMPLEMENT A CONTROLLER FOR MOBILE ROBOT

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Abstract: A mobile robot is an automatic machine that is capable of movement in any given environment. The problem of mobile robot obstacle avoidance is one of the common problem of type reflex Robot (reactive paradigm), it was solved in many different ways. In the topic "DESIGN AND IMPLEMENT A CONTROLLER FOR MOBILE ROBOT", mobile robot obstacle avoidance problem is solved by a controller with eight infrared (IR) sensor modules is created to use for detecting obstacles. The AVR Atmega8 microcontroller process to avoid obstacles. The outputs of AVR are the commands to drive two DC gear motors. The robot model was built to implement experiments to verify the controller algorithm. Experimental results as a basis for developing the base mobile robot for multi robot system in the future works.

Key word: *Mobile robot, Infrared, AVR Atmega8.*