

Establishment of a fuzzy algorithm in a mobile robot
For the detection and the avoidance of the obstacle

Using HC12 Compact interface

Benhelal bilel

Department of Electronics Engineering

University of Saad Dahleb

Somaa Street Blida .Algerie

Abstract

In this paper, one proposes an intelligence of avoidance obstacle to establish in a mobile robot, by using a fuzzy controller. With this algorithm the mobile robot can avoid different the obstacle meeting in its displacement. The robot can detected the obstacle with a numerical camera (CMU Cam), and an infra red sensor will check the distance which separates him from the target, firstly the robot acquired information from the camera to identify the obstacle then it check the distance, the infra red sensor will be a safety measure allowing the robot the non collusion, the identification and the checking of the obstacle is controlled by a fuzzy algorithm established on the compact Motorola 68HC12, which is a Micro controller Motorola HC12À8 chart, in communication with a PIC 16F877 Using the predefined fuzzy function in the HC12.