

ABSTRACT

Robotics is a field of science that has developed rapidly, one of which is the Autonomous Guided Vehicle (AGV). Discussion of the wheeled robots are now widely ranging from usability, navigation, and control is used. In this thesis aims to implement the control of AGV based automatic navigation control using the data processed sensor 360 degree rplidar 2D laser scanner in order to navigate the robot can move efficiently by using fuzzy logic control in processing. Sensor rplidar is a 2D laser scanner is based on a 360-degree rotation developed by Robopeak [1]. 2D points produced will be used for mapping, localization, and environmental modeling / objects [2]. From the data processed has been obtained in the form of degrees, distance, and the quality of which is processed into a navigation control for autonomous robot using data processing using fuzzy logic control. Fuzzy logic control to determine the direction of movement of autonomous robot based on the input obtained from the sensor 360 degree rplidar 2D scanner.

The processed data that have been tested, can be processed into a navigation system parameters to be applied in autonomous robots using fuzzy logic control as a data processor input obtained from the sensor. Data were tested in the form of input distance and angle. So the robot can move in accordance with movement based on the results of the control method used

Keywords: Rplidar 360 degree laser scanner 2D sensors, autonomous robots, fuzzy logic control, navigation, AGV.