

ABSTRACT

The application of automation technology in the industrial world has increasingly developed at this time. One of them is the use of Automated Guided Vehicle (AGV) in its application to facilitate human work, specifically in the field of transportation. The more volume of vehicles available today, the more difficult motorists are required for four-wheeled drivers to find parking spaces such as in malls. With this tool, it is easier for motorists to find parking locations for their vehicles.

In this final project, a research is conducted so that the movement of AGV can be in accordance with the trajectory and can transport loads using a remote control car. The developed AGV is still in prototype form. Radio Frequency Identification (RFID) is used to determine the purpose of AGV to find a predetermined parking location. This AGV uses the principle of follower robot line. The line sensor used consists of 8 photodiodes.

Tests conducted in this thesis is to determine the number of prescribing percentages of robots that can reach each parking destination. The track used contains 5 destinations, each of which has an RFID tag. The average success for carrying a load is 88% and the average success for taking a load is 87%. On the track there is also an RFID tag to determine the action taken by the robot. The placement distance between the RFID reader and the RFID tag is 1 cm because the results of the assessment show a percentage of 100% on the RFID tag reading with a distance of 1 cm.

Keywords: AGV, automated parking, RFID Tag, RFID Reader