

## ABSTRACT

*In the industry, freight transportation system plays an important role and so we need media that can work in a continuous and constant without experiencing errors. Automatic Guided Vehicle (AGV) is a mobile robot that is still growing and is very appropriate for use in the transportation system of production. One of the developments in the optimization of freight transport is the shortest path selection.*

*In this final project will be discussed about the design and implementation of Automatic Guided Vehicle using Dijkstra Algorithm for finding a shortest path. Fuzzy Logic method is use to read the path that will be passed, and for position information RFID will be used in every node and place that will be visited.*

*The use of 16 rules is not affecting fuzzy logic execution time on multiple different sensor inputs that is 2.63 ms. Node reading by using RFID can be sent at a distance of 3.6 cm and Dijkstra's algorithm can generate calculations based on the shortest distance between vertices.*

*Keyword : Dijkstra Algorithm, Fuzzy Logic Control, Radio Frequency Identification, Automatic Guided Vehicle*