

ABSTRACT

The use of Automated Guided Vehicle (AGV) in the process of distributing goods has an important role in the business activities of a company to increase the amount of production. Usually in the process of distributing goods, the operation of AGV is monitored by utilizing a variety of communication system technologies. However, problems arise when AGV cannot be monitored due to limited access to the communication system used.

This research will discuss the wheel speed monitoring system and the position of the WLAN-based AGV network to support the improvement (development) of the AGV monitoring system in the distribution of goods. This system works by measuring the rotation of the two AGV wheels using a Rotary Encoder. Then by using NodeMCU the data is processed so that it can be represented as a realtime AGV position, then the results are uploaded to the WLAN network to be accessed by users via the Web interface.

As a result of this final project research, sensor readings have an average total error range of 0.996% or 2.813 cm in a straight line of 282.5 cm. The error value is caused by slippage on the AGV wheels and also the slippery floor surface. In the Web interface, the system runs properly capable of displaying wheel speed data, moving tracking from AGV in realtime.

Keywords: *AGV, NodeMCU, Rotary Encoder, Web Server, WLAN*