

## **ABSTRACT**

Wireless Sensor Network (WSN) is a wireless infrastructure network that consists of a group of node sensors placed in a specific area, for monitoring and control that area. It became important so a network sensor has efficient operational cost and good performance. WSN, a technology that bridge real world with digital, is a phenomenon in the industry either academic practice.

Still, there are problems in WSN which need further research, one of it is performance. Network performance is based on QoS that depends on good networks. Good performance indicated with a high value of throughput and low value of delay and retransmission.

This research was analyzed QoS using PEGASIS (Power Efficient Gathering in Sensor Information System) algorithm. PEGASIS is an algorithm that counts based on the closest chain connection. Simulation was done using NS2 (Network Simulator 2) and analyzing topology performance with the following parameter: throughput, delay, and retransmission.

**Keyword:** Wireless Sensor Network, PEGASIS algorithm.