

ABSTRACT

Wireless Sensor Network (WSN) is a wireless network device that consists of a lot of sensor node, computation or data processing device, and also communication device to send or receive data. WSN might be used for communicating, monitoring, tracking, and controlling.

This research analyzed the comparison of the simulation result from routing protocol on WSN using Gradient Based Approach and Geographic Based Approach. Gradient Based Approach is a method that search the cost of each node in the beginning, then send the data following the cost that was already determined. Geographic Based Approach is a geography based method where the data sending is based on geography location on each node. The processes that was done are planning, second simulation of the routing method, then analyzing the comparison from the both of the method.

From the result of the simulation, it was compared the most efficient routing from hop, distance, and energy that was used at the data sending from 100 node to BS. The most efficient from the result is Gradient Based Approach with the total hop of 375, distance 4414.3822 meter, and the used energy 0.0767189 Joule. The simulation result of Geographic Based Approach is the total hop of 411, distance 4588.4049 meter, and the used energy 0.0836362 Joule.

Key word : Wireless Sensor Network (WSN), Gradient Based Approach, Geographic Based Approach