

ABSTRACT

Wireless Sensor Network is one example of wireless technology which can give many advantages in our daily activities. Wireless Sensor Network consists of a group of nodes which arranged so that its nodes can communicate with each other. Each node has processing ability, an RF transceiver, initial energy, and can accommodates sensors and actuators. Nodes work wirelessly and can organize itself in ad-hoc fashion. This could revolutionize our way of life and work because it is easy to implement.

Network, whether its wired or wireless, need a routing protocol. Without routin protocol, network couldn't decide how a package should be delivered from one nodes to another. There are many kinds of routing protocol in Wireless Sensor Network. One of them is Hierarchical Routing Protocol. Its main goal is to maximize the energy consumption of each node. LEACH and PEGASIS are the example of Hierarchical Routing Protocol in Wireless Sensor Network. In this experiment, the writer will try to simulate a Wireless Sensor Network using LEACH and PEGASIS and analyze the output. The whole process is using Network Simulator 2.

The simulation result shows that PEGASIS routing protocol shows a better result in node utilization, energy consumption, and total number data sent compared to the LEACH routing protocol.

Keywords: *Wireless Sensor Network*, LEACH, dan PEGASIS