

ABSTRACT

Using wireless communication system as a media communication on computer network is rapidly developed. One of Wireless Communication System that mostly use in Wireless Sensor Network (WSN) that applicable to collect some information from node sendor to make easier monitoring process or controlling. There are some important parameters on shrimp dike that should to pay attention, temperaturean pH of the water, and also Dissolved Oxygen. Three of that are most important pparameters that influence the quantity of harvest.

Zigbee is one of WSN that can be flexible to use for many topology, and the bandwidth of it is low, so it can more efficient and zigbee is durable. For the faster process on sending information with the low energy supply, and also o get the good troughput of WSN, it need to use a correct routing method.

This monitoring system is made by two blocks and it measure temperature of the water, pH of the water, and Dissolved Oxygen. The measurement is done in outdoor. And the result of the measurement are showed that maximum range of Xbee PRO S2B can reach is 320 meter. But for the stability of sending data, it is just 50 meter. From the measurement, it also showed that the delay will be more as far as range and the troughput will be down.

Keywords : Quality of Water, Monitoring, Routing, Shrimp, Wireless Sensor Network, Zigbee