ABSTRACT

Water is the most basic need for humans, such as drinking, washing, and so forth.

Water can also be a source of livelihood for humans, such as raising fish, maintaining

aquatic plants, and so forth. But the lack of human consciousness to keep the water on earth

causes water to become polluted. The cause of contaminated water is the culture of dumping

waste into the river and disposal of waste into rivers or the sea. Water pollution is causing

the death of some or all of the ecosystems in the water. In addition to the disappearance of

ecosystems, waste pollution can also cause eutrophication that makes plants that grow on

the surface of the water becomes very fast and causes the oxygen content in the water thins.

The immediate effects of water contamination on humans are poisoning and skin diseases.

Therefore, the utilization of Wireless Sensor Network (WSN) is needed for monitoring water

pollution, whether water is feasible for consumption, suitable for use for fish farming or not.

So people who rely heavily on river water can avoid polluted water so their health is not

disturbed.

WSN application here use star topology by using sensor node, coordinator, and

monitoring through smartphone application which can be accessed by user. The node sensor

consists of a water pH sensor and a temperature sensor that can indicate if there is water

pollution somewhere. The sensors are then connected to the microcontroller, and the

received data is then forwarded to the coordinator which is then stored in the database and

displayed in the application.

It is expected that the use of water pollution measurement sensors can be resolved,

as they can be quickly identified before the water indicated by pollution is used by the

community for their living needs. So there are no casualties or losses caused by polluted

water.

Keyword: WSN, star topology, water pollution

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