

## **ABSTRACT**

*Turtles are one of Indonesia's biodiversity. Turtles have been used by humans for food, medicine, education and as pets. Therefore, conservation measures are needed so that biological natural resources and ecosystems are always maintained and able to realize balance and are attached to development itself. In order to facilitate the preservation of turtles, an Internet of Things tool is needed that can adjust the temperature and humidity in the turtle egg hatching process. The system consists of a monitoring tool, and a database using the Antares platform. The capacitive soil moisture sensor is used to determine the humidity in the hatching medium, the good humidity for turtle eggs is about 80-90%. Also used DHT22 sensor to find out the temperature in a room, room temperature Incubator is good for turtle eggs 27.8°-29.4°C. In this study, the maximum error reading of the capacitive soil moisture sensor got 1.66% with a sensor accuracy rate of 98.34% and a minimum error of 0.57% with a sensor accuracy level of 99.43% it can be concluded that this capacitive soil moisture v2.0 sensor has good accuracy. For DHT22 sensor readings, the maximum error sensor gets 1.36% with a sensor accuracy rate of 98.75% and a minimum error gets 1.10% with a sensor accuracy rate of 98.90%. so it can be concluded that this DHT22 sensor has good accuracy to be used in designing this tool. The delay value obtained is included in the perfect category according to the TIPHON standard because the delay value is still less than 150 ms. Delay test results from 36 tests are 72,825 ms.*

**Key words:** *Turtle, Monitoring, Inkubator, DHT22, Humidity, Platform Antares*