ABSTRACT

The health of cattle in Indonesia is considered to be less of a concern. For this reason, it is necessary to have technology that is able to monitor the health of cattle with precision so that the quality of cattle is maintained and even better. In order to increase livestock yields to be better, we need a technology that can monitor the health of the cattle so that the quality of livestock can be maximized.

This final project aims to design a tool (Smart Necklace) that can determine whether the cattle are in a healthy condition or not, using the heart rate, temperature and position of the cows with precision and can be monitored remotely. With this, farmers can find out when their cattle are in abnormal conditions before contracting the disease remotely. For this final project the author is more focused on designing and testing android-based mobile applications that can later be used easily by cattle owners anywhere and anytime.

In designing this android-based application, a cow health monitoring application will be made that can help humans to monitor the state of cow health remotely. The smart necklace that has been paired with sensors that can determine the health condition of the cow, will take the data and send it to the web server for later processing. The processed data is forwarded to the cow health monitoring application.

Based on the results of the system testing carried out, it is known that all functions of the cow health monitoring application can run well and can be connected to the database. Based on the tests that have been carried out, the average value for delay is obtained with a value of 291ms. With this value, based on the ITU-T G.1010 standard, the score is categorized as "Very Good". For the throughput test results, an average value of 14,194 bps is obtained, which value is included in the "Good" category . Testing of packet loss obtained results that referred to the ITU-T G.1010 standard, included into "Very Good" category.

Keywords: Smart Necklace, Application, Android, IOT, Delay, Throughput