

ABSTRACT

The development of wireless technology in particular technology Long Range (LoRa) is increasing along with the high demand for data communication services. Based from the regional contours and development, Banyumas regency is a potential sub-urban area for the development of LoRa network infrastructure. This research is divided into three stages including planning a LoRa network that can cover the Banyumas regency area which is carried out using, analyzing the results of coverage areas that can be reached by LoRa technology based on the parameters used, namely Received Signal Strength Indicator (RSSI), as well as a comparison with the two results another coverage are the result coverage research on Detection and Monitoring of Soil Fertility Systems in Banyumas Regency Based on LoRa WAN Technology along with drive test and also coverage of Antares. Where LoRa network planning is simulated using website Radio Mobile with LoRa gateway is positioned at the Rectorate building of the Institut Teknologi Telkom Purwokerto. This research to find out how wide the coverage area can be served by LoRa gateway based on RSSI parameters in Banyumas regency. The result of this research is coverage that is capable of coverage by gateway LoRa area of 478 km². 182 km² for the Good category with the RSSI obtained is -131.44 dBm and 296 km² for the Fairly Good category with the RSSI obtained is -140.98 dBm based on the simulation results coverage which is conducted.

Keywords: *LoRa, Banyumas, RSSI, gateway , Radio Mobile*