ABSTRACT

Signal quality and data services are important in the communication system, especially at the Makassar Sultan Hasanuddin International Airport, specifically the domestic departure boarding lounge which is located on the second floor. The results of the walktest measurement, the RSRP value in the boarding lounge area was obtained at < -90 *dBm which was included in the 'Normal' category. beside that, there was also a blank spot problem at a certain point which made it difficult for passengers to access LTE services.*

This final project research analyzes the LTE indoor network planning at Sultan Hasanuddin International Airport Makassar using the Cost 231 Multiwall propagation model based on the results of the coverage planning and capacity planning calculations to determine the number of sites based on customer estimates, after the design model and calculation results are found, then a simulation is carried out into the Radio Propagation Simulator software. (RPS) 5.4.

The results of this study are to analyze LTE planning using coverage planning and capacity planning to improve LTE network services at Sultan Hasanuddin International Airport Makassar. The parameters used in this study are Reference Signal Received Power (RSRP), Signal to Noise Ratio (SNR), and Throughput. After the simulation, the RSRP value is -142.63 dBm so that it not meets the KPI standard, the SNR value is 10.16 dB which is included in the 'good' category and the Throughput value generated for the uplink direction is 27.391 Mbps and the downlink direction is 20,639 Mbps.

Keyword **:** *LTE*, *RPS*, *SNR*, *Throughput*, *Cost-231 Multiwall*.