ABSTRACT

The rapid development of telecommunications systems today brings people to be able to enjoy a variety of communication and information technology. People can use and enjoy telecommunication services in the form of 4G LTE (Long Term Evolution) 4G LTE network provides better services than previous technology, namely 3G, where 4G LTE has better network quality with high data transmission speed. Internet is needed in various daily activities, especially in teaching and learning activities and communication in education. This study was conducted to analyze the 4G LTE network at the Faculty of Industrial Engineering in the Telkom University Landmark Tower (TULT) building using the drive test method. Measurements were made three times at the same time but on different days. This research focuses on data analysis based on RSRP parameters, (Received Signal Reference Power), RSRQ (Reference Signal Received Quality), and SNR (Signal to Noise Ratio). With the measurement of these three parameters can be obtained 4G LTE network quality on the object of research. The results of the analysis of the three parameters are adjusted to the KPI. Based on the results of the analysis in this study, the results on the RSRP parameter with an average signal range $\geq$ -90 dBM, the highest value is on the 4th floor with a percentage of 97.53% which is included in the very good category. While in the RSRQ parameter with an average signal range $\geq$ -10 dB, the highest value is on the 4th floor with a percentage of 10.71% which is considered bad. In the SNR parameter with an average signal range $\geq$ 0 dB, the highest value is on the 1st floor with a percentage of 96.17%% which is very good.

Keywords— 4G, RSRP, RSRQ, SNR, drive test