

ABSTRACT

LTE technology is 4G technology continued evolution of mobile communication system standards defined by 3GPP (Third Generation Partnership Project) Release 8 which is capable of IP-based services. Cimahi is a new area that implemented LTE network, to get better network quality and high work results, that measured by measuring the quality of the LTE network in the Cimahi area.

In this final project, LTE network quality measurement will be done by using drive test method. These measurements were performed using software Nemo. The study area case in this Final Project is Cimahi. From the results of the measurement and survey will be analyzed using Nemo Analyze. Based on the analysis and testing found the performance problems of LTE network, then optimization is done in Cimahi area. Optimization is applying physical tuning method by tilting antenna and re-azimuth antenna transmitter.

In the optimization process must meet the parameters set by the operator that includes RSRP, RSRQ, SNR and throughput in the area Cimahi. Based on the results of the analysis, there is a bad coverage problem in Margaluyu area that has RSRP value before -109.8 dBm has increased to -96.5 dBm. While in the Kolonel Masturi area also increased where the RSRP value before -103.2 dBm increased to -94.3 dBm. Besides having bad coverage problem, Margaluyu and Kolonel Masturi area also have bad quality problem. In the Margaluyu area the SNR value before -1.9 dB increased to 6 dB. In the Kolonel Masturi area also experienced a quality increase from -0.3 dB increased to 6.1 dB. The RSRQ value also increased, in Margaluyu area RSRQ before value of -12.3 dB increased to -9.6 dB. In the area of Kolonel Masturi also an increased in RSRQ value of -10.8 dB increased to -10.6 dB. The throughput before value the Margaluyu area of 6.24 Mbps increased to 9.62 Mbps and in Kolonel Masturi area have throughput before value of 7.44 Mbps increased to 13.49 Mbps

Key: LTE optimization, RSRP, SNR, RSRQ, throughput, Cimahi