ABSTRACT

The development of cellular technology in Indonesia, has reached the fourth generation of cellular networks commonly called 4G, where some mobile operators have implemented the technology in some areas of West Java. Sub Jatinangor located in Sumedang district is one of the areas of application of LTE technology. To maintain service and customer satisfaction, therefore the recently implemented LTE network must provide optimal service and meet the standards applied by the operator. Based on drive test results using Tems Investigation 16.0 software, there are some areas in Jatinangor sub-district that get poor coverage and signal quality. Therefore LTE network optimization must be done in the area to provide optimal service to Smartfren operator customers.

In this final project, LTE network optimization process is applied to Smartfren operator in Jatinangor sub-district by changing the value of tilt antenna at certain sites, where the parameters of SINR and RSRP become reference in analyzing data and determining the type of optimization used.

The value of the parameter achieved in this final project, according to the standard set by Smartfren operator that is> 6 dbm for SINR and> -105 dbm for RSRP. The result of this final project is recommendation of optimization result which is for Smartfren operator and simulation using Atoll 3.2.1 software.

Keywords: Optimization, LTE, SINR, Drive Test, Tems Investigation, Tilt, Simulation, Atoll