

ABSTRACT

Technological developments in Indonesia currently reach the 4th generation of LTE. One area that applies LTE technology is the district of Bandung precisely at Soreang road Pamekaran West Java. From the results of the test drive in the previous year it was found that the value of RSRP and SINR has not been as expected by the customers, causing the signal reception on the customer side to be less good.

In this final project is done optimization process to improve the quality of Long Term Evolution (LTE) network in the area. Methods performed on the optimization process is the drive test and analysis of the results of the test drive in accordance with the standard operator Smartfren. The parameters that become the reference in the optimization process include the RF part of the network that is RSRP and SINR. Type of optimization is done by doing tilting on EnodeB antenna and addition of cell power reference which simulated by software of Atoll 3.2.1.

The results after the optimization process on the LTE network is to simulate with parameters that match the standard operators that organize the LTE network in the area. Based on simulated analysis result using Atoll software got RSRP parameter value before optimization process 30,41% and RSRP parameter result after optimization process equal to 23,86%. So the percentage of areas that do not meet operator standards drops by 6.55%. As for the value of SINR parameters before the optimization process is 44.517% and SINR after the optimization process is 43.27%. So there is a decrease in non-standard areas by 1.24%. So the results can be recommended to the operator as a consideration in improving the LTE network services.

Keywords: LTE, Drive Test, Tilting, SINR, RSRP, Cell Power Reference, Atoll.