

ABSTRACT

The quality of 4G technology apart from its capabilities and wide range still needs to be upgraded. This considers the enthusiasm of customers in welcoming the presence of the new internet technology with fast speed. Padjajaran University is one of the universities in Bandung that's located around Sumedang Region in which is the centre of the activities for students who need a good quality of cellular communication services. Therefore, the condition of the LTE network that's being implemented must meet the standard set in order to serve the customers.

In this final project, there have been a trial to optimize the LTE network specifically for XL operator in Padjajaran University's area. This measurement is using the drive test method by using Tems Pocket as the software and then the results of the simulation will be analyzed using the Atoll 3.3 software in which the paramater such as RSRP, SINR, and throughput used as the reference to analyze the data.

Based on the result of data analysis, in Padjajaran University's area considered indicated as Bad RSRP, Bad SINR, and Low Throughput. In the areas the percentage for the RSRP $>-100\text{dBm}$ is 72,9% and after being optimized, it integrated to be 73,3%. Next is the SINR percentage in which SINR $>3\text{dB}$ is 83,2% before being optimized, and then integrated to be 90,3% afterward. And last is the throughout percentage in which has a value $>5\text{Mbps}$ is 90,9% before the optimization, and then integrated to be 92,4% as the aftermath.

Keywords : *Optimization, LTE, Drive Test, Tems Investigation, Atoll.*