ABSTRACT

Based on the survey results in the Taman Kopo Indah 2 area, there are many housing and market potentials in the Taman Kopo Indah 2 area which results in traffic congestion in cellular communication traffic, especially on the 4G LTE network, and decreases in signal quality, resulting in poor access to the area. data.

In this final project, a plan that is commonly called a microcell in the Taman Kopo Indah 2 area will be carried out at a frequency of 1800 Mhz which uses the cell splitting optimization method to increase the coverage area and capacity in the Taman Kopo Indah 2 area. This planning uses two scenarios that were comparing the application of cell splitting and not in Atoll 3.3 software by analyzing several parameters, namely RSRP, SINR, and throughput obtained from the results of the driving test.

The results achieved from the simulation in this final project design a microcell that has maximum performance in coverage and capacity. Has increased in the average RSRP value of 6.24%, SINR of 153.72%, and throughput of 141.207%, by the standards of the tri operator to improve network quality and increase traffic on cellular communication traffic, especially 4G networks. in the Taman Kopo Indah 2 Bandung area.

Keyword : *Microcell, cell splitting, RSRP, SINR, throughput.*