

## **ABSTRACT**

*With mobile service users using LTE (Long Term Evolution) technology is increasing, it raises several problems, such as RF Parameter value below the standard set by the operator in an area, especially the decreasing of throughput value in an area. There are several ways to overcome these problems such as changing tilting and azimuth antenna, and adding new sites.*

*In addition to the two methods of optimization that are often performed by operators in increasing throughput value and RF Parameters, there are other optimization methods that can be used by operators to increase throughput value and RF Parameters desired by replacing the regular sectoral antenna by using multisector antennas. With the use of this multisector antenna will increase the value of RF parameters and throughput value due to an increase in antenna power to 2x40 watts and increased throughput value to two times compared to the previous throughput value.*

*In this final project will be measure the increasing capacity and coverage using multisector antenna. By using multisector antenna there is an increase in coverage and capacity in accordance with the criteria desired by XL operators this is indicated by the increase of good categorized RSRP 3%, the increase of good categorized SINR by 17.25%, the increase of good categorized DL throughput value by 47, 49 %, and a good UL throughput value increase by 3.81%.*

**Key Words :** *Capacity, Coverage, Throughput, SINR, RSRP, Multisector Antenna*