ABSTRACT

The use of technology by humans in completing work is a necessity in life. The main impact of the use of technology in everyday life is the high volume of traffic. Therefore we need a network that can meet the needs for high capacity and mobility in the communication process so that the problem of traffic needs can be met.

In this final project, Carrier Aggregation Inter-Band planning on the LTE (Long Term Evolution) network is carried out by combining two different frequencies, namely 1800MHz and 2100 MHz on Operators 3.Carrier Aggregation Deployment Scenario 2 (CADS 2) is implemented as a scenario to produce a design. the best network in the Brga area (City Hall Square). This planning simulation will be carried out using Atoll 3.3 software by taking into account the parameter values of RSRP, SINR, and especially Throughput.

The results of the planning simulation based on the scenarios that have been determined in this final project, namely an increase in the presentation of the average RSRP value of 29.52%, SINR of 10.94%, Downlink Throughput of 119.58%, and Uplink Throughput of 256. , 48%.

Key Words : LTE, *Carrier Aggregation*, CADS 2, *Atoll*