

ABSTRACT

Cirangrang-Cibaduyut Kidul is a potential market area because it has many crowded centers, such as hospitals, shopping centers, education centers, hotels, apartments to densely populated housing. However, based on the results of the drive test and data analysis of Operator XL's Operating Support System (OSS), it is known that this area is indicated to be experiencing low throughput. The average value of the use of Resource Block (RB) in this region is 82.02%. This value has passed the RB usage threshold set by Operator X, which is 80%. This is also in line with the value of the drive test measurement results, it is known that the RSRP in the range of -100 to -50 dBm is 51.54% and 44.21% in the range of 8 to dB. 50 dB for SINR. These two values also do not meet the standard values of RSRP and SINR set by Operator X, which are 70%.

To overcome these problems, in this final project, carrier aggregation planning will be carried out through intra band carrier aggregation with Carrier Aggregation Deployment Scenario (CADS) 1 scenario and through inter band carrier aggregation method with CADS 2 scenario. Based on the simulation results of both scenarios, parameter values are obtained. radio frequency that is in accordance with the standards set by X and can overcome LTE network problems in the planning area.

Keywords: LTE-Advanced, carrier aggregation, CADS 1, CADS 2, throughput, RSRP, SINR.