

## ABSTRACT

With the development of skywalk Cihampelas Bandung, very interesting number of tourists visiting the skywalk Cihampelas. This can lead to heavy traffic in mobile communications traffic and decreased signal quality making it difficult to access the internet. So in this case is very necessary development of microcell network to improve the quality of lte network in skywalk Cihampelas

In this reasearch discusses microcell network planning at skywalk Cihampelas Bandung by considering the capacity and coverage area that happened during this time in result of drive test got average value of RSRP equal to -94,61 dBm, average value SINR equal to -4,75 dB, while the standard KPI operator that will be used is  $RSSI \geq -70$  dBm,  $RSRP \geq -90$  dBm,  $SINR \geq 10$  dB, and  $BLER \leq 10\%$ . In this plan will use the method of Non ACP (Automatic Cell Planning) and ACP (Automatic Cell Planning).

The results achieved in this final project is to design the site in accordance with the site calculation of 2 sites, which has the maximum performance in coverage and capacity, after designed and simulated to get the average signal level value of -79.79 dBm. In this simulation of traffic that failed to connect to the simulation of the percentage is low by 9.5% or 14 users. While the traffic is quite high, that is 90.5% or 133 users. However, in the simulation coverage the results obtained are not maximal and do not meet the standards of KPI operators due to use the method of Non ACP (Automatic Cell Planning) which get results of RSRP-105.42 dBm, RSSI -70.06 dBm, SINR 10.25 dB, BLER 0%, then simulated using ACP (Automatic Cell Planning) that is by optimizing the site has been designed and the results are better than the previous results so as to get RSRP results of -86.1 dBm, RSSI of -50.1 dBm, SINR of 34.5 dB, BLER at 0%.

**Keywords:** *Microcell, Drive Test, Automatic Cell Planning, RSRP, RSSI, SINR, BLER*