

ABSTRACT

The old BEC building is a shopping center. The building does not yet have an indoor LTE or IBC network installation. Based on the walk test results obtained average SINR values between -5.58 dB and 5.52 dB and RSRP -121.71 dBm and -98.44 dBm. It has not met the XL operator standard yet. While based on drive test results obtained the average value of SINR and RSRP meet the standard operator XL is -83.89 dBm for RSRP value while for SINR 17.33 dB.

Dense buildings and high buildings around the building cause the signal from eNodeB received by EU inside the building is not the same as outside the building due to signal attenuation. The main cause is the attenuation that causes the EnodeB signal blocked into the building. In order for all users in the area to be served, the right solution is to do indoor Building Coverage on LTE network. To find out RSRP and SINR parameter values at Drive Initial and Walk Test stage using TEMS Pocket software, analyze DT and WT results using Mapinfo software, capacity and coverage calculation and simulate with RPS software.

Through the calculation of coverage and capacity planning obtained antenna number of 33 antennas. Based on the simulation, the average RSRP > -20 dBm to -30 dBm and SINR > 15 dB to 25 dB and RSRP value > -90 dBm is 100% while SINR > 5dB is 72.% - 100%. compare the simulation result according to RF parameter of XL operator parameter to initial WT value found that the planning has fulfilled operator standard causing BEC Building Old building area to increase in side of coverage.

Keywords: LTE, RSRP and SINR, Indoor Building Coverage, Coverage and Capacity Planning, RPS