ABSTRACT

Pasar Baru Square building is one of crowded shopping center in Bandung. The good network quality inside the building is an important requirement to fulfill LTE technology services. In a closed area with a building wall, the density of the building, and the height of the building cause the quality of eNodeB signal received by the user inside is different with the signal quality outside the building, due to signal attenuation. The main factor is the attenuation that causes eNodeB signals are blocked. Therefore it is necessary to have an Indoor Building Coverage plan on the LTE network to serve all users in the building. Based on the results of initial walk test, the average RSRP value is <- 90 dBm and SINR <6 dB that indicate poor network quality.

Indoor Building Coverage (IBC) installation planning is the right solution to overcome these problems. In IBC planning, capacity and coverage are calculated, then determine the value of the RSRP and SINR parameters using TEMS Pocket software at the walk test before stage, and simulating by RPS software. The simulation results target of the planning are >-90 dBm for the average RSRP value and the average SINR value in >6dB.

Through the calculation of coverage and capacity planning obtained 2 sectors and 3 antennas for each floor. Based on the simulation results, the average SINR ranges from 14.63 dB to 31.71 dB and the average RSRP value is -68,98 dBm to -55,01 dBm. Thus the results of planning have met the operator parameter standards 3.

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