

ABSTRACT

The quality of cellular networks in buildings is a very important need to meet the current Long Term Evolution (LTE) technology services. One of the right places to do cellular network planning is Gedung Graha Pos Indonesia, this is because there are many offices from various companies that cause many users to be in the building. One other factor is that the construction of buildings or thick walls of the building causes reception of cellular signals on the user's side inside the building to be unfavorable signals from eNodeB received by the EU in the building occur signal attenuation. The main cause of all this is attenuation that prevents eNodeB signal emission as experienced in the Graha Pos Indonesia Bandung building.

In LTE indoor network planning which is done to overcome the problems that occur in the Graha Pos Indonesia building area by doing calculations based on coverage planning and capacity planning methods, this aims to get the number of indoor antennas that are needed precisely. This LTE network planning is simulated using the Radiowave Propagation Simulator (RPS) software.

The results of LTE indoor network planning in the Graha Pos Indonesia Bandung building obtained simulation results for the RSSI parameter values in the basement 1, basement 2, floors 1 to 8 respectively -46.65 dBm, -46.50 dBm, -49.55 dBm, -50.49 dBm, -47.03dBm and -48.44 dBm, -48.76 dBm, -50.89 dBm, -47.15 - 46.7 dBm and for the SIR parameter values obtained from the simulation results at basement 1, basement 2, floors 1 to 8 respectively 12.71 dB, 16.25 dB, 25.67 dB, 34.41 dB, 30.41 dB, 27.89 dB, 30.2 dB, 30.60 dB, 31.53 dB, 18.73 dB The results obtained from this plan have reached the RF parameter standard target used by XL operators.

Keywords: Indoor Planning LTE, Coverage Planning, Capacity Planning.