

ABSTRACT

Users of cellular communications that are increasingly increasing require a good quality network to serve the needs of users. But there are differences in the quality of indoor and outdoor cellular networks. And usually indoor quality is not good. As happened at the Pos Indonesia Building Cilaki Bandung. This is due to construction of buildings, building materials, and the absence of signal catchers in buildings that cause signal quality in the building to be not optimal.

Therefore, the quality of cellular networks in buildings is a very important requirement to meet the Long Term Evolution (LTE) technology services in today's world. One of the right places to do cellular network planning is the Pos Indonesia Building Cilaki Bandung, this is due to the large number of users and close to the West Java government center. One other factor is the construction of buildings or thick walls of the building. And the XL operator's LTE cellular network in the building has RSRP of -110dbm, SNIR reaches 3db. See from these 2 parameters that it is bad for LTE networks. In the building there is also no signal catcher. Causing cellular signal reception on the user side inside the building to be less good is not the same as the condition outside the building where the RSRP is -66dbm and SNIR 6db which is considered good but signal weakening in the building.

In the LTE indoor network planning is done to overcome the damping problems that occur in the area of the Cilaki Post building, Bandung, by calculating based on coverage and capacity, this is to get the number of indoor antennas and antenna placement needed right and accurate. In the Final Project the design of this LTE network was simulated using the Radiowave Propagation Simulator (RPS) software. The results targeted from this plan are achieving the target RF standard parameters used by XL operators.

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