ABSTRACT

The quality of the network provided by a telecommunication service is something that is important for users to feel well served by the service and there will be no complaints excessive from its users. In the city of Jakarta with high population and mobility requires that Telkomsel operators always check the quality of 4G LTE network routinely with Drive Test method in all areas of Jakarta and see which areas are categorized as bad area 1 using nemo software. In Jl.Cakung-Cilincing area close to PT. Hua Sin Indonesia found bad area 1 in the area which is wide enough. And on Jl.Cakung-Cilincing precisely in front of the company Cita Baja Autotruck found bad area 2.

After getting any area that is categorized as bad area, we do analysis using nemo analyzer software to know the problem in bad area 1 and bad area 2. Then we do simulation using software atoll by changing the value of Tilt Antenna KBNCLCINGBTVML sector 2 which initially 2 ° become 1.8 °.

The result of optimization simulation is RSRP and SINR value in bad area 1 is better with RSRP -80dBm value and SINR value 11dB. It is a recommendation to change the antenna tilting from 2 ° to 1.8 ° in bad area 1 and to change the serving cell in bad area 2 to get good RSRP and SINR values according to the standard set by Telkomsel Operator.

Keywords: 4G LTE, drive test, nemo, atoll, bad area, RSRP, SINR