

ABSTRACT

Si Jalak Harupat Stadium is a stadium built by the government of District Bandung where can accommodate as many as 27,168 people. Si Jalak Harupat Stadium that is often use in sports event, especially soccer and the characteristics of the Indonesian people more downloads than uploads in using mobile network services. Coupled with the structure of buildings that can reduce the signal from outdoor sites, therefore the need for network planning in the building so that users can still enjoy the good service of mobile technology capabilities.

In this final project, it will be discussed about indoor LTE TDD network planning at the Stadium Si Jalak Harupat with a frequency of 2300 MHz. Before the planning starts, it will be walktest at the stadium and got the RSRP value in the range of -90 dBm s / d -120 dBm and the SIR value in the range 0 s / d -10 dB. And with the condition of the value of both parameters not reached target of KPI standard then it is possible to do LTE network planning by way of calculation coverage and calculation of capacity and calculation of signal propagation used is propagation model COST-231 Multiwall. This planning will be simulated using RPS.4.5 software.

In the calculation using coverage and capacity obtained the number of antennas required as much as 4 antenna and then the placement of the antenna is done by making 2 scenarios. For scenario 1 we get RSRP value for whole area that is equal to -72,83 dBm and in scenario 2 that is equal to -72,18 dBm. Then the value of SIR obtained for the whole area in scenario 1 is 9.08 dB and scenario 2 is 10,79 dB. By using KPI standard reference, the result of simulation of RSRP & SIR parameter values in scenario 1 and scenario 2 has reached the target of KPI Standart. And the scenario that can provide the best quality service to be implemented is scenario 2 because the placement of the antenna in this scenario between the tribune and it allows 1 antenna to serve the user more than one tribune.

Keywords : *LTE, TDD,RSRP, SIR, Coverage, Capacity.*