

ABSTRACT

In the era of modernization of current data communications for people will be needed. Because there are many services that allows us as users to easy access such as chat, video call, e-banking, e-bussines, etc. that require high data speeds, easily accessible in mobile condition. Location of industry in Indonesia today require to good quality data services and fast, since the industry requires a good Internet access to improve the quality of the company. In the work of this study experiment will analyze of the planning LTE indoor in PT.South Pacific Viscose factory environment.

PT.South Pacific Viscose as one of the manufacturing industry of cotton fabric will need quality of data services that can support the needs of data services both for the workers or for that companies. The Circulation Industry activities such as the number of workers and equipment inside the factory as well as building construction of the building can reduce cellular signal on the user side who are in the building to be less good. So that the necessary network planning Indoor Long Term Evolution (LTE). In this research at PT South Pacific Viscose requires an analysis of the number of antenna installation for planning Indoor. This analysis is done by two parameters were taken into account, the quality of coverage and capacity and taken away for most of the second number of antenna parameters of the planning calculations.

At this planning LTE indoor need the software Radio Program Simulator (RPS 5.4) to analyze the quality of the indoor network using 1800 MHz frequency and 20 Mhz of bandwidth system. Before the simulation is also needed walktest to view network performance to be analyzed. For the calculation of the number of antenna coverage is obtained 10 FAP and the number of antenna by capacity is obtained 3 FAP. From the results of simulation that have been done, the best scenario for each floor building have been choosen. For RSL parameter (Receive Signal Level) obtained an average of -55.83 dBm best value, while for SIR parameters obtained the average value of 41.39 dB.

Keywords: Long Term Evolution, Indoor, RSL, SIR, walktest, coverage, capacity