

ABSTRACT

Karawaci Tangerang is a densely populated area, which makes the higher Traffic increase causes network communication traffic to decrease in obstacle which prevents the direction of the girlfriend signal. To provide the best service needed a good network telecommunication system by doing improvements in QoS by looking at the parameters RSRP, SINR and Throughput. In this issue to improve the network is done two methods that are planning Microcell and site modification using Automatic Cell Planning in the Atoll software. Planning result of link budget calculation obtained 4 site Microcell that result is simulate to the Atoll software and acquired RSRP-100 dBm up to-90 dBm by 46.674%, SINR 0 dB to 10 dB of 46.41%, and Throughput Downlink 12,800 Kbps to 25,600 Kbps of 29.04%, Uplink 51200 Kbps to 102400 Kbps of 50.741%. While Capacity traffic obtained result 5.37 with a total of 113.81 rejected or 57%, with 100 attempts to get user no coverage 106.74% and no service 6.91%.For the method of modification site ACP RSRP results obtained-100 dBm to-90 dBm by 49.326%. SINR 10 dB to 50 dB for 88,632% coverage area and Downlink Throughput 51200 Kbps to 102400 Kbps at 78.475%, Uplink 51200 Kbps to 102400 Kbps for 47.234% and traffic after the ACP obtained the result 3.36 with a total of rejected 60.1 or 3% With 100 attempts to obtain a user no coverage of 60.1% and no service 0%. The results of Microcell planning and site modification can improve the quality of services.

Keywords : *Microcell, ACP, RSRP, SINR, Throughput.*