ABSTRACT

Increasing numbers of operators, making competition in the telecommunications industry becomes increasingly tight. The situation encouraged the operators to the race in attracting more customers. In an effort to achieve good quality care, then each operator performs the optimization of existing networks. As the operator 3 (HCPT) as one of the GSM operators which use the DCS 1800 system, is to perform network optimization each period to keep service quality.

In this final project, conducted by analysis of optimization 2 (two) BSC on the operator 3 (HCPT) to Jakarta and surrounding areas. In this case, analyzed the performance of BSC Gotong Royong and BSC Tangerang 1 based on the KPI that include: RxLevel, Rx Qual, CSSR, TCH block rate and TCH drop rate. Optimization is done by statistical observation in the OSS and the drive test in the field. The result of drive test before on BSC Tangerang 1, Rx Level >-80 dBm is 94,13%, Rx Qual ≤ 3 is 86,47%, with CSSR 97,20%, TCH block rate 1,55%,TCH Drop rate 2,01%. Whereas on BSC Gotong Royong, Rx Level >-80 dBm is 88,92%, Rx Qual ≤ 3 is 77,50%, with CSSR 97,21%, TCH block rate 1,57%,TCH Drop Rate 2,04%.

By doing the optimization, it can analyze the cause of the decline in service quality and searchable on the improvement of network solutions based on the KPI. Optimization that has been done are reazimuth, tilting antenna, audit parameter dan adjacency. The optimization performed on BSC Tangerang 1, Rx Level >-80 dBm is 95,43%, Rx Qual ≤ 3 is 86,95%, with CSSR 98,50%, TCH block rate 0,91%,TCH drop Rate 1,12%. Whereas on BSC Gotong Royong, Rx Level >-80 dBm is 90,10%, Rx Qual ≤ 3 is 80,14%, with CSSR 98,42%, TCH block rate 0,97%,TCH Drop Rate 1,20%.

Keywords: GSM, optimization, drive test, KPI