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 \leq 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 \leq 3 is 86,95%, with

CSSR 98,50%, TCH block rate 0,91%,TCH drop Rate 1,12%. Whereas on BSC Gotong Royong,

 $Rx \ Level > -80 \ dBm \ is \ 90,10\%, \ Rx \ Qual \le 3 \ is \ 80,14\%, \ with \ CSSR \ 98,42\%, \ TCH \ block \ rate$

0,97%,TCH Drop Rate 1,20%.

Keywords: GSM, optimization, drive test, KPI

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