

## ABSTRACT

Telecommunications system in Indonesia is now entering the third and fourth generation mobile phone not only for voice communications, but also used for data services (Internet) and multimedia. This demands a telecommunications network that is built to be able to serve the voice communication well and high data rates. It is therefore necessary for the optimization process improves network performance is good. The process of cellular radio access network optimization is a process where all the information about the hardware configuration, hardware problems, antenna configuration (height, azimuth, tilting), parameter settings, network topology and information activities related to network topology, the definition of KPI (Key Performance Indicator), and also the performance of the network should be collected as a single piece of information for analysis and improvement on a cellular network.

One of the problems in the mobile network including the site overshoot. The case study in this final project, the problem overshoot site on the 3G network Telkomsel Operator in the area of the square Lampung provincial governor's office. Overshoot cell conditions at a site will have an impact on the network an area becomes less good as the pilot pollution.

The final project is done in collaboration with PT. Telkomsel Lampung to optimize network performance by analyzing the data obtained based on the results of the test drive. From the data, the drive test results obtained on the network parameters optimization case study to do better and as expected of standard KPI parameter value operator,  $RSCP > = -92.0$  dB and  $E_c/N_0 > = -9.0$  dB.

Keywords: Cellular, Optimization, UMTS, WCDMA

