

ABSTRACT

The tighter competition lately insists every operator to fulfill the customer's demands as anticipation. Network performance upgrade is one of the ways to face thus competition. A good network performance would support every service to the customers, so that they would not be disappointed.

A simulation and an analysis on the GSM network in this final project is done by modeling users into a cluster. Seven cells of cluster model are simulated; on the each cell, the user will randomly get the voice service and SMS, also do the handover to the neighbor cells. After the simulation is done, the result of blocking, dropping, and the number of users doing handover based on RSL (Received Signal Level) parameter and based on distance is known. This result will be sent to the web server for analyzing; also the general solution of the condition occurred during simulation will be given.

Based on the simulation result, the number of blocking and dropping are almost the same; the greater number of users means the greater number of blocking and dropping. While on the handover distance parameter, the greater number of user will results the less value. For the example, 25 users have zero dropping, zero blocking, 17 handover distance, and 13 handover RSL, while 40 users have 21 dropping, 2 blocking, 10 handover distance, and 13 handover RSL.

Key words : performance, cluster, blocking, dropping, handover, user, RSL (Received Signal Level), distance.