ABSTRACT

The numbers of users of mobile cellular network has increased rapidly. The load of the network exceeding network capacity occasionally. To be able to adopt to the changing traffic condition in the network, operator has to be able to adjust the network elements, especially antennas adaptive configuration, according to analysis carried out on actual performance data of the network. Since this optimalization means detecting cells with capacity problem in the network, a network analist needs a system that able to detect or measure the problem of cells capacity in the network without involving manual calculation. As the result, he/she can determine proper configuration for the cell.

A Decision Support System that decides which cell has a capacity problem in the network was built in this final project that it helps the analist to change the configuration as it should be.

Methods used in this project are Simple Additive Weighting (SAW) and Fuzzy Filtering technique. The software implemented in Borland Delphi 6 and MySQL as the database.

The system analized by it's speed and accuracy in data processing. Result of testing show that system built reach 86,7% in accuracy. New system that built is better than old system, using manual calculation.

Keywords : network capacity, cell, DSS (Decision Support System), SAW, Fuzzy Filtering