

ABSTRACTION

The way which is frequently used for RBS (Radio Base Station) positioning is modeling cell in the form of hexagonal geometric or manual positioning. However, both ways often disregard the important geographical information which frequently influences the RBS performance, and often results in desired coverage area could not be reached. And if information geographical aspect is calculated by manual positioning, it is often time consuming because each position or area has different geographical information.

Simulated Annealing algorithm is an algorithm to find solution or parameters solution takes analogy from the annealing process. Annealing is a technique which is known in metallurgy area, which is used to study the crystal forming process in a material.

This final assignment will find solutions for RBS positioning problems by paying attention to geographical information aspect automatically from RBS position calculated manually. The solution seeking phase was using Simulated Annealing algorithm.

The result of RBS placement using simulated annealing algorithm was shown by the rising of temperature value, cooling factor and iteration value, bigger value of best cost function and less time to reach it. The result of RBS location placement using simulated annealing algorithm which is conducted in Bandung obviously boost up the coverage of RBS equal to 3 % and also decrease blank spot on downtown area by moving area of blank spot to the edge of the city.