

OPTIMAL POSITIONING OF GSM ANTENNAS BY USING GENETIC ALGORITHMS

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Abstract: This paper focuses on integrating detailed topographic featured situation with highresolution digital terrain models, radio path propagation algorithms with respect to terrain and topographic features, and a parallel implementation of these algorithms by fixing the our restrictions. The used method is genetic algorithm with built fitness function around radio visibility into Fresnel model, optimal dispersion over an analysed area in an economic criteria. We have performed the model with many variants of configurations, some optimal solutions we have found which allow users to decide the most convenient solution should operate.

Keywords: genetic algorithms, radio visibility, optimal positioning, topographic structures.