

We employ a simulated annealing algorithm to determine the number of new base stations needed. After rigorous analysis, our optimal solution suggests deploying 131 micro and 19 macro base stations, ...

ABSTRACT A novel analytical approach to optimal base station (BS) location problem is proposed. It is based on the widely used system and propagation path models but, unlike known studies, makes ...

the CNN model has remarkable performance in base station location selection, as well as in network optimization. In summary, the feature extraction and processing ability of CNN are ...

To address these challenges, this paper constructs a multi-objective base station site selection model that simultaneously minimizes costs, maximizes coverage contributions, and ...

In this paper, the optimization algorithm is used to plan the base station site and the main direction angle of the sector, so that the total traffic of the covered weak coverage points can reach the maximum ...

Based on the principle of priority business volume and the cost performance of base station, this paper establishes a set of models to solve the site selection planning problem of urban base station.

This study proposes a practical GIS-based approach to base station site selection. The integrated methodology considers elevation, spatial exclusion zones, and optimized coverage.

The model was capable of finding the optimal base station locations with minimum installation and operational costs considering the capacity and quality of service constraints.

In the actual construction process, we adopt effective site selection, which can not only improve the investment efficiency, but also reduce the construction and maintenance cost of base station. ...

This article conducts an in-depth exploration of key factors influencing 5 G base station deployment optimization, including base station types, locations, heights, and other critical ...

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