

5G base station on wind power tower





Overview

How to optimize base station deployment in 5G wireless networks?

In previous research on 5 G wireless networks, the optimization of base station deployment primarily relied on human expertise, simulation software, and algorithmic optimization.

What is 5 G Technology?

Introduction With the rapid advancement of global communication technologies, fifth generation (5 G) networks have increasingly become the cornerstone of the information age (e.g., [1, 2]). Driven by 5 G technology, there has been an explosive growth in user numbers, which has raised higher demands for base station deployment.

How to deploy a base station in a complex network environment?

Previous research has extensively explored strategies for base station deployment using intelligent optimization algorithms. These studies employed advanced algorithms such as the sparrow algorithm, artificial immune system algorithm, and genetic algorithm, aiming to find optimal base station layouts in complex network environments.

Can a daqga optimize base station layout?

The use of existing base station locations is considered to reduce construction costs. Moreover, we propose a dynamically adjusted quantum genetic algorithm (DAQGA) to optimize base station layout, with coverage and construction cost as objective functions.



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5G base station using wind power generation technology

A 5G, base station technology, applied in the field of base station communication, can solve problems such as increased operating costs, low solar energy conversion efficiency, and ...

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