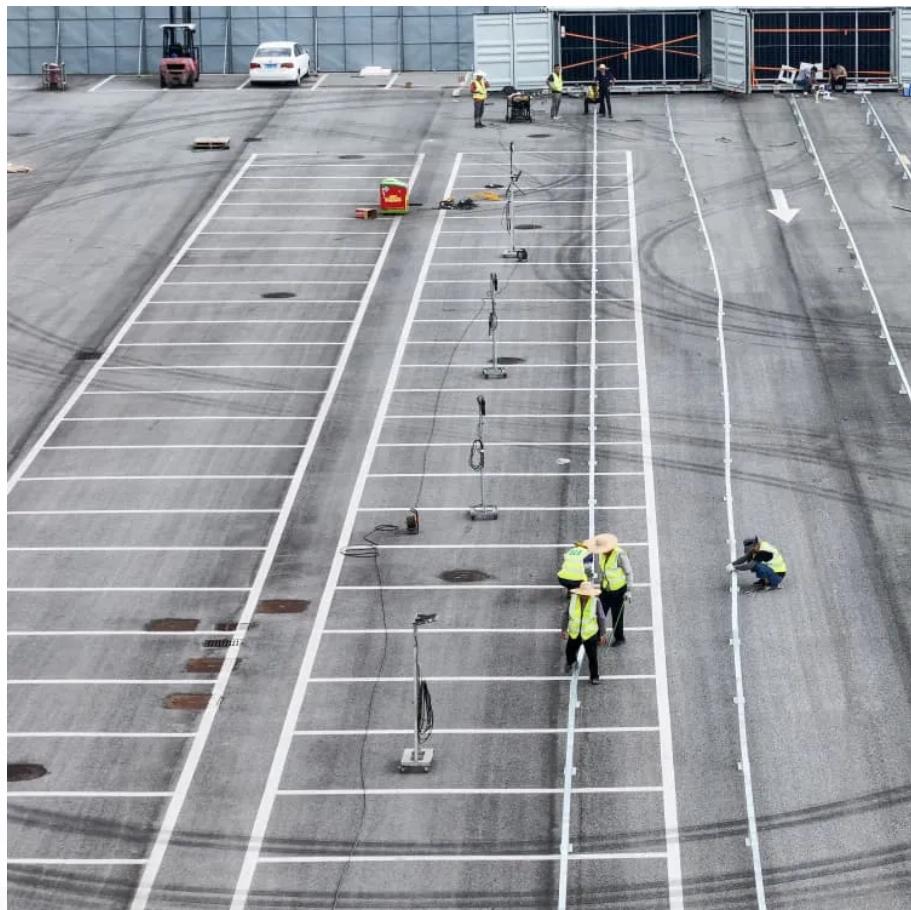




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Communication 5g base station construction is slow





Overview

How effective is 5G base station optimization in urban areas?

Comparison results of 5G base station optimization in general urban areas. As shown in Table 11, the algorithm proposed in this topic reduces the site construction cost by at least 13 %, improves the coverage by at least 5.4 %, and reduces the number of base stations by at least 17.6 % compared to other algorithms.

How 5G mobile communication technology is affecting the network capacity?

With the rapid development of 5G mobile communication technology, the number of 5G users has significantly increased, leading to a corresponding expansion in network capacity . To meet the growing user demand, researchers have begun to focus on improving the throughput of base stations (e.g. Refs. [2, 3]).

What is a 5G base station?

At the same time, a large number of 5G base stations (BSs) are connected to distribution networks , which usually involve high power consumption and are equipped with backup energy storage, , giving it significant demand response potential.

What is the architecture and coordination optimization model of 5G base station?

The architecture and coordination optimization model composed of a 5G communication network and distribution network is proposed in Section 3. Afterward, a distributed coordination algorithm is designed in Section 4 with simulation results presented in Section 5. Finally, Section 6 concludes the paper.

2. Model of 5G base station



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