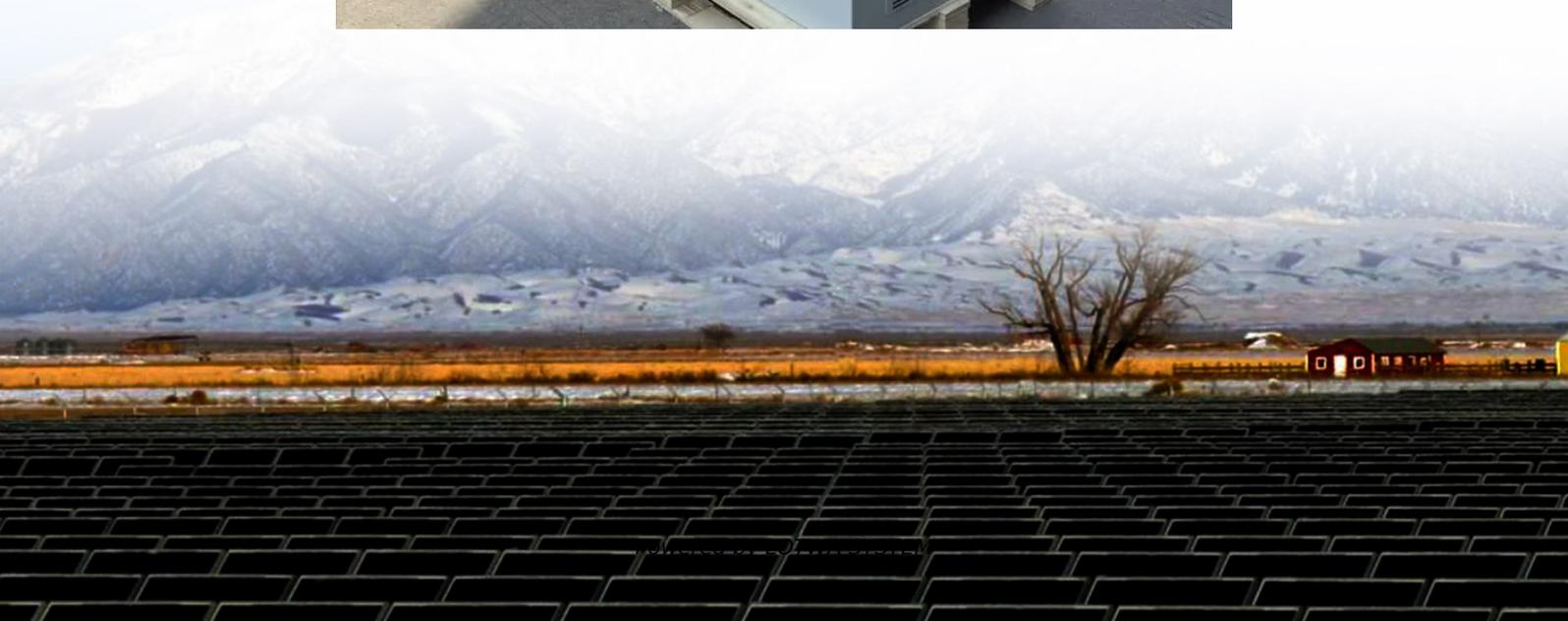


5g base station lighting plan





Overview

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

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

Should 5G base stations be tripled?

To cover the same area as traditional cellular networks (2G, 3G, and 4G), the number of 5G base stations (BSs) could be tripled (Wang et al., 2014). Furthermore, Ge, Tu, Mao, Wang, and Han, (2016) suggested that to achieve seamless coverage services, the density of 5G BSs would reach 40-50 BSs/km².

Can BS be optimized for 5G cellular network planning?

Although previous studies have developed many optimization models to solve the BS location optimization problems in 2G/3G/4G cellular network planning, a robust and spatially explicit optimization model that considers the propagation characteristics of 5G signals for the location optimization of 5G BSs is still lacking.

What is the location optimization approach for 5G BS?

The location optimization approach for 5G BSs aims to cover the service demand area with the minimum number of BSs or to maximize the service coverage area of a given number of BSs. To solve this typical coverage problem, an MCLP model was employed for the location optimization of 5G BSs.



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