

To tackle this NP-hard problem, we decompose it into two subproblems: (1) collaborative BS sleep and (2) dynamic symbol shutdown and power allocation. For the first subproblem, we ...

We demonstrate that this model achieves good estimation performance, and it is able to capture the benefits of energy saving when dealing with the complexity of multi-carrier base stations architectures.

To reduce the total power consumption of the heterogeneous networks (HetNets), we propose a scheme to dynamically change the operating states (on and off) of the SBSs, while ...

This article first proposes a dynamic base station switching framework based on deep reinforcement learning (DRL), which optimizes the power consumption of switching BSs.

By comparing the differences in base station energy consumption and network performance indicators before and after the implementation of power saving measures, the impact of this technology on ...

Design an energy saving model for cellular base station: the prediction of cellular traffic load on base station is used with a algorithm for managing the power utilization of base station

This technical report explores how network energy saving technologies that have emerged since the 4G era, such as carrier shutdown, channel shutdown, symbol shutdown etc., can be leveraged to ...

To further explore the energy-saving potential of 5 G base stations, this paper proposes an energy-saving operation model for 5 G base stations that incorporates communication caching and ...

The traditional power-saving effect evaluation scheme of Active Antenna Unit (AAU) is complicated, leading to errors in the final evaluation results possibly. This paper proposes a ...

In response to the energy-saving needs of 5G base stations, this article combines IoT technology, artificial intelligence technology, and thermal design technology to conduct research on energy ...

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