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# Wireless communication from energy storage cabinet to base station

Does deep reinforcement learning increase energy consumption in wireless communication systems?

However, the deployment of numerous small cells results in a linear increase in energy consumption in wireless communication systems. To enhance system efficiency and establish green wireless communication systems, this paper investigates base station sleeping and power allocation strategy based on deep reinforcement learning in UDNs.

How to conserve energy in a wireless sensor network?

Various strategies, such as duty cycle scheduling, EE routing, energy harvesting and EE Medium Access Control can be used to conserve energy in a wireless sensor network. Mobile videos are accountable for the rigorous consumption of energy as they involve the usage of screen display, CPU, audio/video decoder and network connectivity.

Are base station sleep and power allocation related?

Each SBS  $n$  is considered an agent, and each agent can make decisions based on the surrounding environment to get the reward value for the next round of exploration. In this paper, the base station sleep and power allocation are two closely related mechanisms that jointly optimize the resource management of SBSs through DQN.

How to reduce power-intensive base stations?

To address the issue of power-intensive base stations, proposed a combined approach involving base station sleep and spectrum allocation. This approach aims to discover the most efficient operating state and spectrum allocation for SBS to minimize power consumption and network disturbance.

Behind every communication base station battery cabinet lies a complex engineering marvel supporting our hyper-connected world. As 5G deployments surge 78% YoY (GSMA 2023), ...

With the maturity and large-scale deployment of 5G technology, the proportion of energy consumption of base stations in the smart grid is increasing, and there is an urgent ...

In today's 5G era, the energy efficiency (EE) of cellular base stations is crucial for sustainable communication. Recognizing this, Mobile Network Operators are actively prioritizing EE for ...

Optimization of 5G communication base station cabinet based on heat storage of phase change material [J]. *Energy Storage Science and Technology*, 2023, 12 (9): 2789-2798.

Energy storage system of communication base station Base station energy cabinet: floor-standing, used in communication base stations, smart cities, smart transportation, power ...

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The key contributions of this paper are outlined as follows: (1) To fully utilize the idle energy storage resources in 5G BS and BSC, an analysis of their dispatchable capacity in ...

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