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# **5g base station intelligent power controller**



## Overview

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Does Mappo reduce power consumption in 5G ultra-dense networks?

In this paper, we thoroughly study the base station control problem in 5G ultra-dense networks and propose an innovative MAPPO algorithm. The algorithm significantly reduces the overall power consumption of the system by optimizing inter-base station collaboration and interference management while guaranteeing user QoS.

What is the ITU-T Technical Report on 5G base station?

This document contains Version 1.0 of the ITU-T Technical Report on “Smart Energy Saving of 5G Base Station: Based on AI and other emerging technologies to forecast and optimize the management of 5G wireless network energy consumption” approved at the ITU-T Study Group 5 meeting held online, 20th May, 2021. 3.1.

What are base station sleep strategies in 5G UDN?

In 5G UDN environments, the use of base station sleep techniques is one of the most widely used methods to reduce power consumption. In this paper, two types of base station sleep strategies are distinguished: threshold-based base station sleep strategies and adaptive base station sleep strategies. 2.1. Threshold-based base station sleep strategy.

Can network energy saving technologies mitigate 5G energy consumption?

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 mitigate 5G energy consumption.

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In 5G heterogeneous networks (HetNets), small-cell base stations (SBSs) are deployed in the coverage of macro base stations ...

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In 5G heterogeneous networks (HetNets), small-cell base stations (SBSs) are deployed in the coverage of macro base stations (MBSs) to improve the system performance.

A base station control algorithm based on Multi-Agent Proximity Policy Optimization (MAPPO) is designed. In the constructed 5G UDN model, each base station is considered as ...

However, there is still a need to understand the power consumption behavior of state-of-the-art base station architectures, such as multi-carrier active antenna units (AAUs), ...

Therefore, in response to the impact of communication load rate on the load of 5G base stations, this paper proposes a base station energy storage auxiliary power grid peak ...

This paper proposes a power control algorithm based on energy efficiency, which combines cell breathing technology and base station sleep technology to reduce base station ...

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Within the context of 5G, Ultra-Dense Networks (UDNs) are regarded as an important network deployment strategy, employing a large number of low-power ...

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