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Title: Base station wind power supply sleep mode

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Why is sleep mode important in a base station?

The importance of this observation lies in the fact that, due to the stability of the user's behavior, the base station does not need to switch frequently between sleep mode and active mode, which can significantly reduce the complexity of the operation and energy consumption.

How stable is the sleep mode switching strategy of a base station?

When dealing with the sleep mode switching strategy of the base station, it was observed that the distribution of user requests showed relative stability over a specific period. For example, during specific periods such as working hours or rest time, the data requirement patterns of users show significant stability.

Can a base station sleep strategy reduce energy consumption in UDN systems?

The goal of this paper is to find a base station sleep strategy in UDN systems that reduces the total system energy consumption while being able to guarantee QoS.

What is adaptive base station sleep strategy?

Adaptive base station sleep strategy is a strategy that dynamically adjusts the sleep and wake-up states of the base station based on real-time network conditions, user demands, and traffic modes.

Abstract 5G base stations (BSs) are potential flexible resources for power systems due to their dynamic adjustable power consumption. However, the ever-increasing energy consumption ...

In This paper, the BS sleep mode algorithm proposes to switch the BSs to sleep mode during low traffic periods of a BS. The process starts with predicting the traffic load of BS and ...

To reduce the extra power consumption due to frequent sleep mode switching of base stations, a sleep mode switching decision algorithm is proposed. The algorithm reduces unnecessary ...

To address this, we propose a multi-cell sleep strategy combined with adaptive cell zooming, user association, and reconfigurable intelligent surface (RIS) to minimize BS energy ...

In this survey, we first present facts and figures that highlight the importance of green mobile networking and

then review existing green cellular networking research with particular focus on...

By periodically switching off the base station transmission, or using fewer transmit antennas, the energy consumption of base station hardware decreases. By delivering less control signalling overhead, the ...

In this paper, we treat the QoS problem accompanying with BS sleep mode from a different perspective: we investigate how much energy can be traded off for a certain amount of delay.

To the best of our knowledge, this is the first article focusing on centralized renewable energy generation for the optimization of energy cooperation integrated with advance sleep mode ...

It takes advantage of changing traffic patterns on daily or weekly basis, and selectively switches some lightly loaded base stations to low energy consumption modes.

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