

Lte communication base station inverter frequent switching

How to reduce the energy consumption of a base station?

Using this technique, the energy consumption of a base station can be reduced by turning off energy-intensive devices inside the base station, or by turning off the entire base station and keeping only the sensing module to wake up the base station.

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.

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.

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.

This has led to the development of energy efficient techniques for cellular communications. With base station activity being the highest power consumer, base station sleeping ...

Switching off the central cell during low traffic yields approximately 14% energy savings in LTE networks. Base stations consume 70-80% power even with low or no traffic, wasting significant energy ...

To harvest the benefits of BS ON-OFF switching under these challenges, it is necessary to investigate the technical aspects of switching mechanisms and analyze its challenges in the new ...

Abstract--- In this paper proposed The information and communication technology (ICT) sector is estimated to be responsible for around 2% of the global CO₂ emissions. Within ICT, cellular ...

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 both ...

The adoption of base station sleep modes is considered one of the most effective approaches for the reduction of the energy consumption of radio access networks. Sleep modes ...

Furthermore, the order in which the base stations are switched on and off is specified for minimal handover overhead signaling and fair user capacity sharing. Results showed that variational ...

To reduce the extra power consumption due to frequent sleep mode switching of base stations, a sleep mode

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switching decision algorithm is proposed. The algorithm reduces unnecessary ...

Hence, base station (BS) switching operations have been used to minimize energy consumption while guaranteeing quality-of-service (QoS) for users. In this study, to optimize energy ...

In this paper, our goal is to minimize the total power consumption of the base station by dynamically controlling the switching status of the base station. This article first proposes a dynamic base station ...

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