Base station power sleep technology

An energy consumption optimization strategy of 5G base stations (BSs) considering variable threshold sleep mechanism (ECOS-BS) is proposed, which includes the initial ...

ks. Among these, base stations (BSs) in radio access networks (RANs) account for over half of the total energy usage. To address this, we propose a multi-cell sleep strategy combined with ad.

To enhance system efficiency and establish green wireless communication systems, this paper investigates base station sleeping and power allocation strategy based on ...

Optimizing energy consumption and aggregating energy storage capacity can alleviate 5G base station (BS) operation cost, ensure power supply reliability, and provide ...

A 5G BSs sleep model is recommended to reduce the energy consumption of a cel-lular network. The proposed model states that the BS can switch between different levels of SMs, each of ...

The present invention relates to a method for operating a communication system and a communication system, and particularly, although not exclusively, to a system and a method ...

In 5G communications, base stations are large power consumers, and about 80% of energy consumption comes from widely dispersed base stations. It is predicted that by ...

These technologies involve strategies for dynamically adjusting the operational status of base stations, such as activating sleep modes during periods of low demand, to ...

Abstract and Figures 5G base stations (BSs) are potential flexible resources for power systems due to their dynamic adjustable power ...

Exploring power system flexibility regulation potential based on multi-base-station cooperation self-optimising sleep strategy for 5G base stations Xiaoyan Ma1

Since mmWave base stations (gNodeB) are typically capable of radiating up to 200-400 meters in urban locality. Therefore, high density of these stations is required for actual 5G deployment, ...

Aiming at the problem of wasting network resources caused by low-power nodes during low-load period in ultra dense networks, we study a kind of base station sleeping ...

Firstly, a system energy consumption model for UDNs is established, which is divided into two sub-problems

based on the final optimization problem, namely base station ...

Base station energy savings may be accomplished via two methods: hardware and software. Hardware power savings are realised ...

In this article, the authors introduce a load based sleep scheduling mechanism with reduced state transitions for IEEE 802.16e Networks. The mechanism encompasses two phases, load-based ...

For the latter, although energy consumed for service provisioning in high traffic load scenarios may be seen as justifiable, energy saving techniques in spatial-, time-, power-, ...

In this paper, we propose a practical learning approach to obtain policies for BS sleep control via MARL with data-driven radio environment map (REM) calibration. In this approach, we first ...

Abstract: As the primary source of energy consumption in communication networks, the power usage of 5G base station (BS) is a significant concern. The sleep mode (SM) of BS can be ...

To meet the exponential increasing high data rate demand of mobile users, heterogeneous ultra-dense networks (UDN) is widely seen as an essential technology to ...

The FAQ page for the Index base stations is also applicable to 2.0 bases from HTC, and the only thing not mentioned there I can think of at the moment is the "Stand-by" power management ...

The power consumption of a 5G base station using massive MIMO is dominated by the power consumption of the radio units whose power amplifier(s) consume most of the energy, thus ...

Figure 1: The energy performance journey of mobile networks In LTE, the energy consumption of the radio access network (RAN) was dominated by base stations that ...

By adopting a user association and sleep strategy in this paper, BS power consumption can be reduced and the power system can allocate more power resources to ...

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