Turn off the power of the small base station

Do small cell base stations have a power consumption problem?
Abstract: 5G networks with small cell base stations are attracting significant attention,and their power consumption is a matter of significant concern. As the increase of the expectation,concern for the power consumption problem arises. To solve the problem,we propose a new dynamic power management method.

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.

Does the proposed method have more active base stations?
The results show that the proposed method has more active base stationsthan the method in in all the scenarios,because this paper proposes a solution to ensures the minimum data rate for a larger number of users,resulting in a reduced number of base stations that need to be shut down.

Does a macro base station need a hibernation scheme?
In addition to EE, considering that the macro base station will have additional energy consumption used for user connectivity, the hibernation scheme presented by Yang et al. aims to decrease the energy consumption of the cellular network by utilizing the support of SBS.

Despite the energy required for UAVs to hover, they can significantly decrease energy consumption and environmental impact by replacing terrestrial cellular infrastructure ...

Abstract. With the development of 5G networks, the scale of 5G base stations is rapidly expanding, and the energy consumption of equipment is increasing rapidly. This paper ...

Abstract--Energy saving in wireless networks is growing in importance due to increasing demand for evolving new-gen cellular networks, environmental and regulatory ...

To meet the vast network traffic demand, next-generation cellular networks will deploy a huge number of small-scale 5 th {}^ {text {th}} start_FLOATSUPERSCRIPT th ...

5G networks with small cell base stations are attracting significant attention, and their power consumption is a matter of significant concern. As the increase of the expectation, ...

However, the deployment of numerous small cells results in a linear increase in energy consumption in wireless communication systems. To enhance system efficiency and ...

Abstract--To achieve the expected 1000x data rates under the exponential growth of traffic demand, a large number of base stations (BS) or access points (AP) will be deployed ...

Switching off base stations is a common approach to reduce the power consumption of cellular networks. This work evaluates the potential for reducing power ...

The extended simulator is used to evaluate the throughput, power consumption, and signal-to-interference-and-noise ratio (SINR) of a nightly network with few active users. Simulations ...

Power models are needed to assess the power consumption of cellular base stations (BSs) on an abstract level. Currently available models are either too simplified to ...

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