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Title: Microcell base station power consumption

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How to reduce the power consumption of cellular base stations?

In order to reduce the power consumption of cellular base stations (BSs), the following BS architectures have been developed: micro cell BSs, and remote radio head (RRH)-based BSs. In this paper, we propose a novel BS power consumption model for comparing the power consumption and energy efficiency of above three different BS architectures.

Can a microcell BS switch reduce network energy consumption?

However, the network energy consumptions of base stations have been growing quickly. How to save energy consumption in these dense layered network has become a problem we have to face. In this paper, we proposed a microcell BS (MicBS) switch algorithm to reduce the network energy consumption.

What is micro base station (micbs)?

With the rapid development of wireless services and the improvement of coverage requirements, lots of micro base stations (MicBS) have been added to conventional Macro base station (MacBS) network. Heterogeneous deployment is one of the main features in future cellular network [1, 2].

What is the power level of a wireless base station?

In the simulations, we have tried several power levels, such as 20W, 40W. According to the rules of 3GPP organization, wireless base stations are divided into four categories, namely macro base station, micro base station, pico base station and femto base station.

A model for this power consumption of wireless access networks is presented and three base station types are investigated: macrocell, microcell, and femtocell base stations.

In this paper, a power consumption model for both macrocell and microcell base stations is proposed. This model is validated by temporal power measurements on actual base ...

ated Placement of Individual Millimeter-Wave Wall-Mounted Base stations for Line-of-Sight Coverage of Outdoor Urban Areas. IEEE Wireless Communications Letters, 2016, 5, 316-319.

In this paper we have developed a power consumption model for macro base stations which comprises of a static power consumption part only. In contrast to that, a power consumption ...

However, the network energy consumptions of base stations have been growing quickly. How to save energy consumption in these dense layered network has become a ...

The power consumption of microcell base stations is about 70-77% lower than for macrocell base stations but a macrocell base station is more ...

In general and based on the assumptions made, a macrocell base station consumes about 4.4 times more than a microcell base station. However, a microcell base station is less energy ...

This paper presents a model for this power consumption and investigates three base station types: macrocell, microcell, and femtocell base stations.

In order to reduce the power consumption of cellular base stations (BSs), the following BS architectures have been developed: micro cell BSs, and remote radio head (RRH)-based BSs. ...

In this paper, an energy efficiency model for microcell base stations is proposed. Based on this model, the energy efficiency of microcell base stations is compared for various wireless ...

The power consumption of microcell base stations is about 70-77% lower than for macrocell base stations but a macrocell base station is more energy-efficient than a microcell base station for ...

This paper presents a model for this power consumption and investigates three base station types: macrocell, microcell, and femtocell ...

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