

Kongres Container

Communication Green Base Station Micro Station



Overview

The increasing energy consumption is a legacy of the fast improvement of ICT (Information and Communication Technology). It is also contrary to the current energy conservation and emission reduction con.

Are green cellular base stations sustainable?

This study presents an overview of sustainable and green cellular base stations (BSs), which account for most of the energy consumed in cellular networks. We review the architecture of the BS and the power consumption model, and then summarize the trends in green cellular network research over the past decade.

Can a 5G base station promote green development of mobile communication facilities?

However, a significant reduction of ca. 42.8% can be achieved by optimizing the power structure and base station layout strategy and reducing equipment power consumption. Overall, this study provides a clear approach to assess the environmental impact of the 5G base station and will promote the green development of mobile communication facilities.

What is a green base station solution?

The green base station solution involves base station system architecture, base station form, power saving technologies, and application of green technologies. Using SDR-based architecture and distributed base stations is a different approach to traditional multiband multimode network construction.

How much power does a micro base station use?

The power consumption of a single macro base station is approximately 5 kW, whereas a Pico Cell requires only about 10 W (Bolla et al., 2012; Deruyck et al., 2014; Hu & Yi, 2014). Deploying multiple micro base stations to cover the blind spots of a macro base station will reduce power consumption during operation, thereby reducing carbon emissions.

What are macro & micro base stations?

Macro and micro base stations are currently being deployed for 5G network. The base station is categorized into micro base station, macro base station, and sub-system based on the coverage range. Micro base stations are being deployed to increase coverage.

What should a base station do in a wireless communications network?

In a wireless communications network, the base station should maintain high-quality coverage. It should also have the potential for upgrade or evolution. As network traffic increases, power consumption increases proportionally to the number of base stations. However, reducing the number of base stations may degrade network quality.

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