

Title: Mobile communication green base station survey

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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.

Are cellular network operators moving towards green cellular BS?

Figure 10 reveals that many cellular network operators in the world have still not shifted toward green cellular BS. Most of these operators are located in developing countries with limited electricity supply and unreliable electric grids. The financial issues in these countries must be investigated further. 4.5.

How do cellular network operators shift to green practices?

Cellular network operators attempt to shift toward green practices using two main approaches. The first approach uses energy-efficient hardware to reduce the energy consumption of BSs at the equipment level and adopts economic power sources to feed these stations.

What is a green communication initiative?

The green communication initiative primarily aims to improve the energy efficiency, reduce the OPEX, and eliminate the GHG emissions of BSs to guarantee their future evolution [2, 3]. Cellular network operators attempt to shift toward green practices using two main approaches.

In this survey, we mainly focus on energy efficient techniques in base stations and mobile terminals as they constitute the major sources of energy consumption in wireless access ...

This paper investigates several methods to find the optimal solution for the heterogeneous network including cellular base station and small cell base stations (SBSs) using renewable ...

In this work, we have first identified existing surveys on Energy-efficient wireless communication. Then the important key parameters that are discussed are identified and ...

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We apply this framework to evaluate the energy performance of homogeneous and hybrid energy storage systems supplied by harvested solar energy. We present the complete ...

hnikes to enable an energy efficient or "green" cellular network. Since base stations consume a maximum portion of the total energy used in a cellular system, we will first provide a compre ...

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 ...

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