

Energy-saving and consumption-reducing measures for communication base station EMS

Does a green wireless network reduce the energy consumption of base stations?

The measured results revealed that the proposed model reduces the energy consumption of base stations by up to 18.8% as compared with the traditional static BSs, which is a step forward towards the implementation of green wireless communication. 1. Introduction

What is the energy-saving technology of base stations?

This technical report focuses on energy-saving technology of base stations. Some energy saving technologies since 4G era will be explained in details, while artificial intelligence and big data technology will be introduced in response to the requirement of an intelligent and self-adaptive energy saving solution.

How can a base station save energy?

There are two main methods of base station energy saving, including hardware and software.

How to monitor energy consumption of Base Transceiver system during low traffic?

Energy consumption of base transceiver system during low traffic is monitored. Wastage of energy consumption is monitored during low traffic. An algorithm for dynamic transmitter shutdown technique is proposed. Pilot test is conducted on dynamic transmitter shut down technique by using proposed algorithm.

What is energy saving technique?

The energy saving technique considers transmitter shut down duration, cell availability & channel availability ensuring the quality of service at the time of transmitter being switched off. The dynamic shut down technique algorithm has the potential to switch on/off the transceiver as per the traffic generated and reduce the energy consumption.

What are the different energy saving techniques in cellular networks?

The different energy saving techniques in cellular networks are the efficient hardware design, hybrid energy sources, network planning & management and energy- aware radio technology. In this study, DTST has been studied critically which is a promising technique to save energy and is the main theme of this research.

To further explore the energy-saving potential of 5 G base stations, this paper proposes an energy-saving operation model for 5 G base stations that incorporates communication caching ...



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