Near-end and far-end communication green base station

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.

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.

Why is a base station important?

Environmental protection is a global concern,and for telecom operators and equipment vendors worldwide,developing green,energy-saving technologies for wireless communications is a priority. A base station is an important element of a wireless communications network and often the main focus of power savingin the whole network.

What is SDR soft base station?

The SDR soft base station platform enables a telecom operator to combine networks of different modes and different bands into one network. It simplifies network structure and greatly decreases the number of Network Elements (NEs) and auxiliary facilities, thus reducing power consumption base station power consumption.

NEC"s Energy Efficient Technologies Development for 5G and Beyond Base Stations toward Green Society Millimeter-wave Beamforming IC and Antenna Modules with Bi-directional ...

In order to improve the end-to-end energy efficiency, for the scenario with multiple green base stations (GBSs) wirelessly charging multiple IoTDs, our previous research work proposed a ...

The functions of location information and data communication were developed separately in conventional system designs. For example, the Global Positioning System (GPS) provides geo ...

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 both ...

It ensures efficient precoding for all user equipments (UEs), while removing the need for the base station to identify whether one specific UE stays in either near-field or far-field regions. ...

Green network aims to promote the sustainable development of communication systems, and base station (BS) and cells sleeping has been proven effective in reducing the power ...

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1. INTRODUCTION The advent of 5G networks marks a pivotal shift in wireless communication, offering unprecedented data rates, ultra-low latency, and massive device ...

The most energy-hungry parts of mobile networks are the base station sites, which consume around 60 80 % of their total energy. One of the approaches for relieving this energy ...

5G is the next generation of wireless communication tech-nology that will significantly improve network bandwidth and decrease latency. There are two key wireless communication ...

He is mainly responsible for demand analysis and integrated solution development for high-end wireless communications markets. He has published 30 papers. [Abstract] Base station ...

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