Latency Comparison of Smart 2025 Base Station Energy Management System Models

Simulation results demonstrated the effectiveness of the proposed technology in reducing energy consumption and improving energy efficiency in ...

Due to infrastructural limitations, non-standalone mode deployment of 5G is preferred as compared to standalone mode. To achieve low latency, higher throughput, larger capacity, higher reliability, and ...

To address these challenges, this paper proposes a composite AI-driven routing framework that integrates reinforcement learning (RL), genetic algorithms (GA), and particle swarm optimization ...

The lean design of 5G NR standards represents a major improvement compared to LTE, enabling unprecedentedly low energy consumption in 5G networks, and beyond.

This article analyzes energy-saving mechanisms in 5G higher-layer protocols and outlines research directions for enhancing energy efficiency in 6G systems, which are expected to adopt ...

The limitations of existing energy management approaches have motivated researchers to explore artificial intelligence (AI) and machine learning (ML) techniques as potential solutions for ...

The suitable energy saving strategy combined with different energy saving functions, including an initial relative threshold to the scenario and executable energy saving time schedule, will be enabled for ...

Our approach combines centralized Artificial Intelligence scheduling for latency-sensitive slices with distributed federated learning for non-critical slices, enhanced by compressive sensing ...

In spite of promising outcomes in optimizing energy usage for Radio Access Network (RAN) Base Station (BS) hardware, deployment, and resource management, existing methods ...

As the new radio (NR) based 5G network is configured to transmit signal blocks for every 20 ms, the proposed algorithm implements withstanding capacity of on or off based energy switching, which in ...

Simulation results demonstrated the effectiveness of the proposed technology in reducing energy consumption and improving energy efficiency in 5G base station networks.

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