

In this thesis linear regression is compared with the gradient boosted trees method and a neural network to see how well they are able to predict energy consumption from field data of 5G radio base stations.

Power consumption models for base stations are briefly discussed as part of the development of a model for life cycle assessment. An overview of relevant base station power ...

The network power efficiency with the consideration of propagation environment and network constraints is investigated to identify the energy-efficient architecture for the 5G mobile ...

To understand this, we need to look closer at the base station power consumption characteristics (Figure 3). The model shows that there is significant energy consumption in the base ...

A new power model structure is proposed in order to assess the power consumption of traditional base stations, their extensions, and alternative architectures such as large-scale antenna...

Importantly, this study item indicates that new 5G power consumption models are needed to accurately develop and optimize new energy saving solutions, while also considering the complexity emerging ...

When a mobile device is close to a small-cell base station, the power needed to transmit the signal is much lower compared to the power needed to transmit a signal from a cell tower far away, thus ...

The fifth generation of the Radio Access Network (RAN) has brought new services, technologies, and paradigms with the corresponding societal benefits. However,

These 5G base stations consume about three times the power of the 4G stations. The main reason for this spike in power consumption is the addition of massive MIMO and beamforming, ...

This paper proposes a power control algorithm based on energy efficiency, which combines cell breathing technology and base station sleep technology to reduce base station energy consumption ...

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