Cellular communication base station inverter switching

Overview

This subsystem provides the interface between the cellular system and the circuit-switched telephone network (PSTN). It performs switching and operation & maintenance-related functions. The NSS handles call processing functions such as call setup, switching, tear down, and handover. In the landscape of next-generation cellular networks, a projected surge of over 12 billion subscriptions foreshadows a considerable upswing in the network's overall energy consumption. The proliferation of User Equipment (UE) drives this energy demand, urging 5G deployments to seek more. Since access networks are designed to support peak time traffic, the utilization of base stations can be very inefficient during off-peak time because the traffic profile is time varying. We study the dynamic switching of base stations (BS) to reduce the energy consumption considering the time. Abstract—In this paper we study base station sleep modes, which are today considered a viable approach to improve the energy efficiency of cellular access networks, by reducing power consumption in periods of low traffic. LTE cellular systems are typically designed for providing full coverage and good performance for a given (nominal) user density.

Article Content

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