

Forschungspraxis

Evaluation of traffic model impact on a context-aware power consumption model of user equipment

Energy efficiency is one of the key performance requirements in the 5G network to ensure user experience. A portion of devices, especially the Industrial Internet of Things (IIoT), run on limited energy, supported by the batteries not placed over the lifetime.

Therefore, the estimation of the power consumption and battery lifetime has recently received increased attention. Multiple context parameters, such as mobility and traffic arrivals, impact the device's power consumption.

In this thesis, the student shall focus on analysing the impact of different traffic models on the power consumption of user equipment. Different source and aggregated traffic models will be implemented depending on the number of devices n in the scenario. The implemented traffic models will be evaluated based on a context-aware power consumption model for the user equipment.

Prerequisites

- Good knowledge of Python and Matlab programming.
- Good mathematical background.
- Knowledge mobile networks.

Advisors

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