

Ingenieurspraxis

Probability parameters of 5G RANs featuring dynamic functional split

The architecture of 5G radio access networks features the division of the base station (gNodeB) into a centralized unit (CU) and a distributed unit (DU). This division enables cost reduction and better user experience via enhanced interference mitigation. Recent research proposes the possibility to modify this functional split dynamically, that is, to lively change the functions that run on the CU and DU. This has interesting implications at the network operation.

In this topic, the student will employ a dedicated simulator developed by LKN to characterize the duration and transition rates of each functional split under multiple variables: population density, mitigation capabilities, mobility, etc. This characterization may be used then on traffic models to predict the network behavior.

Prerequisites

MATLAB, some experience with mobile networks and simulators

Advisors

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