

Master's Thesis

Optimized Multi Access Edge Computing in Aeronautical Networks

Aeronautical applications such as satellite communications and in aircraft systems have enhanced the range of applications for 5G, bringing new opportunities and potentials.

In the new 6G era these industries are envisioned to receive even more attention due to the high coverage possibilities that they provide. Applications such as unmanned aerial vehicles, flying taxis, moving base stations are just a few to name. In that regard, to support these wide range of applications, new 6G network urge for new and more efficient architectures.

In this thesis the student shall focus on the analysis of existing architectures for 5G/6G for aeronautical applications and shall perform a comparison, defining potentials for the development of new architectures to reduce delay and increase the network performance. To this end, a comprehensive analysis is required to define the right metrics for comparison and identifying the potentials for improvement. An initial simulator based on the defined metrics is to be created to enable the comparison of similar algorithms in the future.

Prerequisites

- Good knowledge of simulation environments such as Matlab, Python.
- Good mathematical background.
- Knowledge about satellite communications is a plus.

Advisors

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