RADICLE - Robust Automotive Data- Intensive CLoud-Edge-Communication

The project pursues the main goal of ensuring the robustness of automotive cloud-edge communication for mobile communication-based applications and supporting the secure and robust operation of simultaneously active mobile communication-based mobility and logistics services.

The ongoing digitalisation of the automotive sector is manifesting itself in a growing number of mobile communications-based applications for connected and automated mobility. C-ITS, CCAM, teleoperation services, cloud-based vehicle functions, video streaming, vehicle data collection and software-over-the-air updates (SOTA) generate large amounts of data that must be processed via cloud-edge communication. The simultaneous use of several such services increases the network resource requirements for a single vehicle. Without a comparison of currently available and required network resources, robust cloud-edge communication and thus the robust operation of these applications cannot be guaranteed.
A holistic approach that integrates the network requirements of parallel services, compares them with the currently available network resources and, based on this, ensures the robustness of cloud-edge communication despite fluctuating network quality is currently not available.
The RADICLE project aims to record the network requirements of mobile-based applications operating simultaneously in real time and to develop adaptive mechanisms, such as dynamic resource allocation, that enable the robust operation of such services even with fluctuating network quality. The focus is on developing practical solutions that meet current market requirements.

Funding programme

BBA2030: GigaApp.
2. Ausschreibung, 3. Einreichstichtag

Duration

01/2026 – 12/2027

Budget

€ 1.191.943,-

Project partners

Robert Bosch AG Österreich

Joanneum Research

contact details of the project manager: Dr. Thomas Novak

+43 5 0804 33299, thomas.novak@fh-steyr.at