SYNCHRONE MOBILITÄT 2023

REMAS

Resource-management system for high-automated urban traffic

Connection of interdisciplinary resources and development activity

REMAS RESSOURCEN-MANAGEMENT

Project description

The project REMAS shall establish the basis and methods for a global ITS-resource-management system in urban areas. Therefore, scientific and technical methods and functions of high automated vehicles flow into the project. The aim is to pool existing resources, especially vehicles, infrastructure, tools for development and simulation, driver simulators as well as the associated data and documents. The biggest challenge is the spatial separation of these processes and interfaces as well as the intelligent linking of these data. REMAS establish a central real-time coordination (REMAS Backend) of complex maneuver involving various vehicles as well as the monitoring of the infrastructure and the integration of simulation environments to describe and influence the maneuvers. With REMAS, technology, method and system knowledge are unified and made usable in order to demonstrate the innovation potential for automated and networked driving.

Contribution Preh Car Connect

Preh Car Connect is responsible for the integration of the connectivity-platform into the vehicle. In addition, an in-vehicle platform will be developed which is based on Android and integrates the existing components in the vehicle (display and control unit, sound system, instrument cluster, etc.). Thus, applications from other projects can be integrated into the vehicle and infotainment.

The complete system provides the driver with all Android functions, including V2X information. The connectivity box integrated in the vehicle enables the REMAS backend to receive instructions for driving maneuvers via mobile radio and to communicate with the vehicles in the surrounding area via IEEE 802. 11p using local communication. This information and communication is visualized in “vehicle views” developed by Preh Car Connect. At the same time, vehicle data is transmitted back to the REMAS backend via mobile radio for monitoring and driving scenario control.

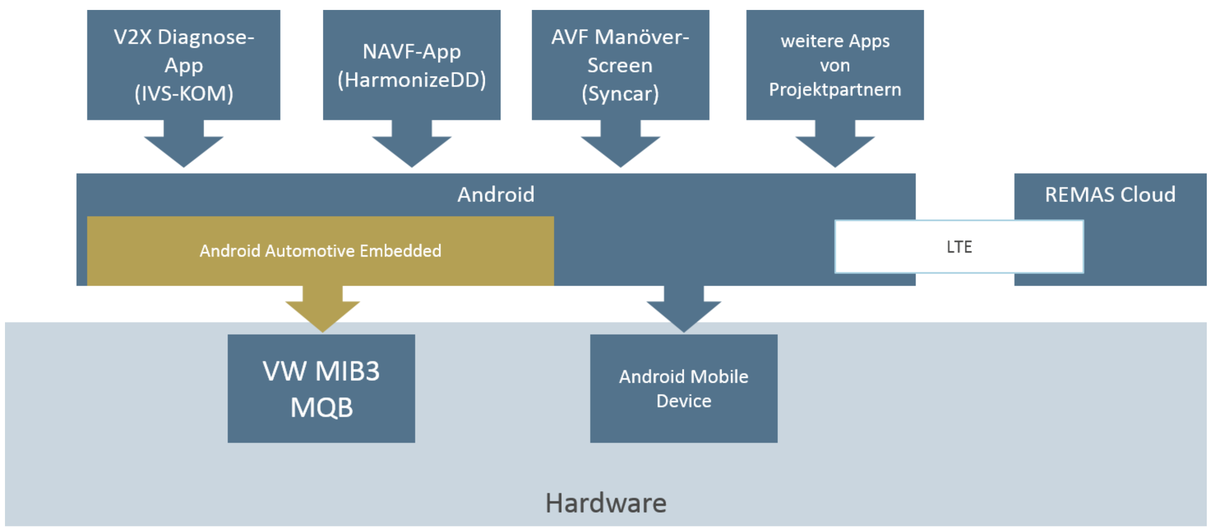

figure 1: Architecture

figure 2: in-Vehicle-Platform

Project partner

- IAV GmbH Ingenieurgesellschaft Auto und Verkehr
- Fraunhofer-Institut für Verkehrs- und Infrastruktursysteme IVI
- FSD Fahrzeugsystemdaten GmbH
- dresden elektronik verkehrstechnik gmbh
- NXP Semiconducters Germany GmbH
- MUGLER AG
- IVM Institut für vernetzte Mobilität GmbH
- Technische Universität Dresden
  Lehrstuhl Fahrzeugmechatronik
- Technische Universität Dresden Lehrstuhl für Verkehrsleitsysteme und –prozessautomatisierung
- Technische Universität Chemnitz
  Professur Nachrichtentechnik

Project lead

Fraunhofer-Institut für Verkehrs- und Infrastruktursysteme (IVI)

Project coordination

Fraunhofer-Institut für Verkehrs- und Infrastruktursysteme (IVI)

Lead partner

Sächsische Aufbaubank – Förderbank (SAB)

Duration

01.09.2015 – 31.08.2019 (48 months)

Funding

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EFRE
Europäischer Fonds für regionale Entwicklung

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