PROJECT

KoFFI

Cooperative interaction between driver and vehicle

Kooperative Fahrer-Fahrzeug-Interaktion

Funding: National (Germany)

Duration: Nov 2016 - Oct 2019

Status: Complete

Background & policy context:

Mobility is a key factor in our daily lives. Therefore, new systems of the human-technology interaction should be developed which contribute to more safety, comfort and reliability in this area.

A more promising approach may be partially automated driving where the vehicle cooperates quite well with the person behind the wheel, especially in repetitive or dangerous driving situations.

Objectives:

The project aims at exploring how a partially automated vehicle as a cooperation between driver and automatic driving functions will work. Therefore, it is necessary to analyse whether driver and vehicle identify critical traffic situations and react together.

The cooperative and intelligent assistance system provides new interaction concepts and technologies that meet the unique demands of the partial and highly automated driving, especially with regard to acceptance and reliability of automated vehicles.

Methodology:

Theoretical models are designed taking into account traffic conditions as well as driver and vehicle condition. These models then allow for innovative approaches for an intuitive interaction between vehicle and driver. Therefore, natural language dialogs and intuitive graphical elements are developed and tested. The validation of the system takes place, making use of the driving simulator as well as on public roads. In addition, all development steps in ethical and legal perspective are constructively and permanently accompanied.

Parent Programmes:

Bringing Technology to the People

Institute type: Public institution

Institute name: Ministry for Science and Education (BMBF)

Funding type: Public (national/regional/local)

Other programmes: Call MTI for intelligent mobility: reliable technology for mobile people

Other funding sources: Federal Ministry for Science and Education BMBF

Partners:

Robert Bosch GmbH, Car Multimedia, Leonberg

Daimler AG, Research and Advanced Engineering, Ulm
European Media Laboratory GmbH, Heidelberg
University of Heilbronn, UniTyLab
University of Stuttgart, Institute of digitale ethics
University of Ulm, Institute for media informatics and Institute for psychology

Organisation: VDI/VDE Innovation + Technik GmbH

Address: Steinplatz 1

Zipcode: 10623

City: Berlin

Contact country: Germany

Telephone: +49 (0) 30 310078-0

Fax Number: +49 (0) 30 310078-141

STRIA Roadmaps: Cooperative, connected and automated transport

Transport policies: Safety/Security, Digitalisation

Geo-spatial type: Urban