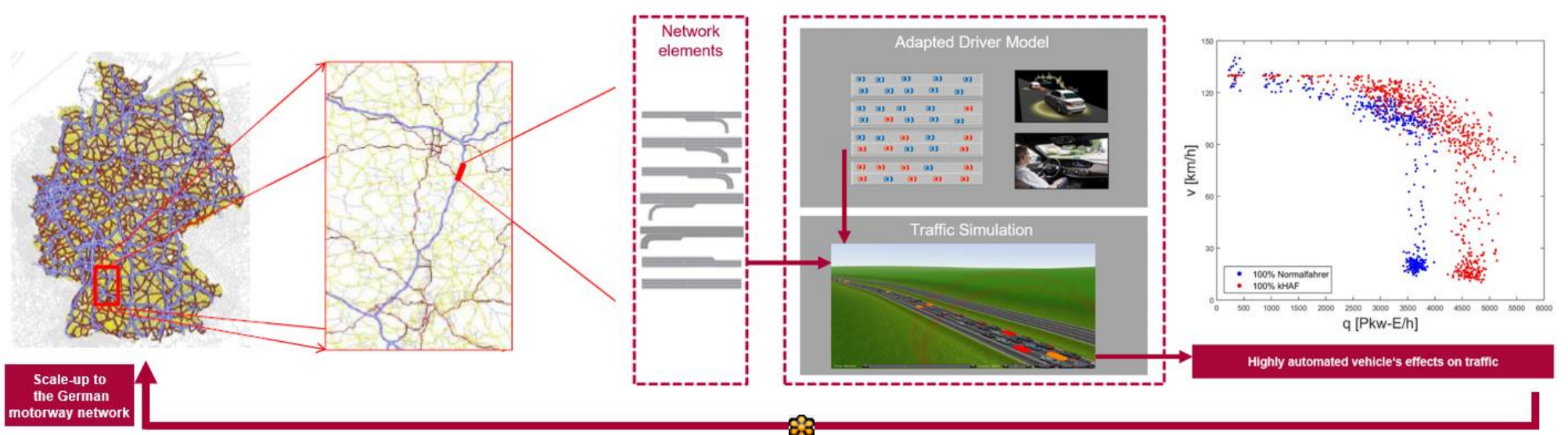


Impact of semi- and highly automated vehicles on the capacity of the German motorway infrastructure

Project Description

The aim of this project is to determine the possible impacts of semi- and highly automated vehicles on the capacity of the motorway infrastructure in Germany. It can be assumed, that with an increase in automation, the effects on the overall traffic flow will be noticeable. Within this project impacts on the capacity of motorways will be considered.



Functions of the semi- and highly automated vehicles are still in the development phase. In order to estimate the impacts, the characteristics of these functions will be defined more precisely. The generic behavior models of the semi- and highly automated vehicles will be developed and illustrated in a microscopic simulation tool. In order to estimate the impact on the whole motorway network, first the network sections will be simulated and then results will be scaled up to the whole network. In each scenario different penetration rates and traffic load proportions will be taken into account.

Task of the Chair

- Definition of the boundary conditions and scenarios: developing a behavior model for the ‚generic HAV‘.
- Simulation and evaluation: simulation of different scenarios with various penetration rates of semi- and highly automated vehicles and determination of the capacity of the network segments.

Duration

May 2015 until October 2016

Contractor

The Research Association of Automotive Technology (FAT)
Working group 7 „Optimisation of road traffic system“

Project Partner

Karlsruhe Institute of Technology (KIT)
Institute for Transport Studies