InDriVE - Hybrid Simulator

Innovative Driver Vehicle Environment

Due to new requirements concerning the development of vehicles with better fuel consumption and reduced emissions, while maintaining a good road performance, hybrid drive concepts have been developed by most vehicle manufacturers.

Today the different drive concepts and strategies of those vehicles can be simulated using available calculation and simulation tools. These abstract simulation results do not always make it easy to evaluate the road performance of the designed vehicle.

The InDriVE Hybrid Simulator allows experts and customers to experience the simulation results in reality and gives the possibility for an extensive evaluation of the drive concept before constructing a prototype. This accelerates the time- and money-consuming development process.

The InDriVE Simulator is equipped with a powerful electric drive which allows to simulate a big variety of drive concepts.

Aims

- Exact reproduction of different hybrid concepts (mild-, full hybrid, electric drive)
- Simulation of energy consumption and emissions
- Reduction of development time and costs
- Evaluation of the customer acceptance of new drive concepts
- Evaluation of the drive concept in realistic public traffic

TU-Berlin sub-project: transmission development

For the InDriVE vehicle a transmission with differential gear is designed, manufactured and tested. The transmission has to meet the following features:

- connection of one or two electric motors as desired
- transmission of high torques
- transmission of high rotating speeds
- shiftability (future stage of development)

Project partners

- Ingenieureigellschaft Auto und Verkehr GmbH
- Technische Universität Braunschweig