



On road testing of most advanced automated vehicles

Problem description

Connected and Automated Vehicles (CAVs) are expected to become increasingly prevalent on roads in the near future. As they become increasingly automated and able to perform various driving tasks and become increasingly autonomous, it is critical to continuously evaluate their ability to do so in a correct and proper way and in interaction with other road users and the broader environment. While closed road experiments and simulation allow for indications of their performances, on-road testing of the most advanced automated vehicles is the ultimate and eventually the most important step as it allows evaluation of performance in a setting that can be unpredictable and challenging beyond other forms of testing. For this reason, it is crucial and throws up many challenging situations that designers and experts may not have been aware of or foreseen in advance.

Objectives & Assignment

The objective of this project is to design, setup and perform an on-road experiment with highly automated vehicles to investigate their performance on roads in interaction with other vehicles and evaluate their performance and highlight potential areas that may still require further attention and improved vehicle and/or software design. This will include researching key scenarios and edge cases, discussing and hypothesising potential key design requirements for an experiment and organising all practical aspects of the experiment. This will require a highly motivated and proactive student to take on an exciting and unique thesis topic. The project will be supported by a number of relevant external organisations.

This Master thesis can also include an internship at RDW, RHDHV or another organisation

Research group

DiTTlab, Transport & Planning Department

External support

RDW

Information

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