Non-error in automated driving situations

Problem description

Consider a perfect law-abiding automated vehicle driving on a long, uneventful stretch of road. You, as the driver, monitoring the road ahead, become bored due to its uneventfulness, and decide you can read your work emails on your laptop, which is perfectly fine, since the automation can handle the drive perfectly fine. In absence of your supervision, however, the car approaches a car parked halfway on the street at a nearby house, and it slows down until it stops right behind it, unable to overtake the parked vehicle, as the road bares a solid line. Correctly law-abiding, yet unsuccessful in getting you to your destination. How to solve that?

Objectives & Assignment

The objective of this project is to investigate how to handle and/or avoid situations in which the automated driving system (ADS) acts correctly, but thereby ends up in a sort of limbo state, not being able to drive to its destination. This project will have a human-oriented perspective, meaning that in some way, the human driver must be able (and made aware) to regain control of the vehicle in time. Some of the questions that could be answered are: "What is it that characterizes human flexibility in complex situations?" and "Is it possible/desirable, and to what extent, to reproduce such flexibility in an automated system?"

External support by relevant partnering organisations, such as SWOV, RDW, ANWB, etc. may also be available.

This Master thesis may be able to include an internship at one of the partnering organisations.

Research group

Transport & Planning Department and Ethics and Philosophy of Technology Section
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External support

TBD

Information

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