Master Thesis

Extension of an existing approach to reduce the test effort for the validation of automated vehicles

A big challenge in the validation of automated vehicles is the high test effort that arises from the multitude of influencing parameters and boundary conditions. FZD has therefore developed a functional decomposition approach that reduces the test effort by dividing the driving function into sub-functions that can be tested independently of each other. However, the approach has only been analyzed for driving SAE Level 3+ on motorways, yet. The suitability of the approach for automated driving in urban environments as well as the associated potential for reducing the test effort should be analyzed in this thesis.

Tasks:
- Analyzing the existing approach
- Creation of an exemplary scenario catalogue
- Extension/adjustment of the existing approach
- Analysis of the potential for effort reduction

Requirements:
- Basic knowledge of automated driving
- Independent and structured way of working

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