institute of media informatics

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Driver Attention Guidance in Automated Vehicles

Open Bachelor/Master Thesis

Background

In conditionally automated vehicles, drivers carry out non-driving-related activities that may shift their attention away from the driving task and the current driving context (e.g., speed limit, other vehicles, or the number of lanes). However, in a takeover, e.g., when the automated vehicle reaches a system boundary, it is critical for drivers to quickly build up attention and an understanding of the current driving situation. A guidance system may support this process by highlighting relevant objects in the environment, e.g., via HUD, windshield AR, LEDs, or sounds.

Research Goal

The aim of this thesis is to investigate visualization methods for such attention guidance system. A related work research should be conducted and a prototype using an existing project (in Unity or SILAB) can be designed and implemented. Finally, the defined hypothesis should be evaluated by conducting a study.

Based on bachelor/master level
the scope is adapted.

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