Development of the Human-Machine-Interface for an Intersection Assistance System

Safety is one of the main issues in the development of Advanced Driver Assistance Systems (ADAS). One particular class of ADAS is the intersection assistance systems. Usually, an intersection assistance system consists of collision avoidance, traffic sign detection, information of the next intersection or traffic light. The driver should be warned by the corresponding Human-Machine-Interface concepts, e.g. voice, beeps, Head-Up-Display or haptic warnings.

In the context of this project work, some literature about the HMI concepts should be reviewed in the first step. Based on such existent HMI concepts, some innovative concepts should be developed and evaluated for different scenarios on the driving simulators offered by the Chair of Mechatronics.

This thesis is divided into the following subtasks:

- Literature review about the HMI concepts for the intersection assistance systems,
- Development of the innovative HMI concepts,
- Design of test scenarios,
- Evaluation of the concepts according to the results of the experiments,
- Documentation und presentation of the results.

Duration: 1 Month

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