



How Meaningful Human Control may change automated vehicle design

Problem description

With the continued emergence of automated vehicles (AV) on roads, many questions have been posed in regard to their safe use and integration in existing traffic flows. The concept of Meaningful Human Control (MHC) has been coined as a concept to design and evaluate how well automated systems remain controllable by humans, even if humans are not operationally in control of the system, the AV in this case. Currently, AV's are designed based on reasonable assumptions in regard to safety and controllability. However, in many cases this will not meet the conditions that are set by MHC. Therefore, we are interested in investigating what requirements MHC may bring about and how AV's may be designed when MHC is taken at the starting point for design.

Objectives & Assignment

The main objective of this project is to propose design requirements for AV based on MHC and to propose a potential AV design that would be acceptable. An initial literature review is required to understand the principle of MHC and how AV's are currently designed and perform. Thereafter, requirements for MHC AV design should be derived. These should be evaluated, which may be performed through driver simulator or other types of experiments.

This Master thesis may also include an internship with an external organisation.

External support

TBD

Information

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