Prospective Effectiveness Assessment

ANALYSIS OF POTENTIAL EFFECTS OF AUTOMATED AND COOPERATIVE DRIVING ON TRAFFIC SAFETY

ACCIDENT AS A PROCESS OF INTERACTING FACTORS

Traffic-based Simulation Approach

Identification of relevant traffic scenarios
- Stochastic traffic simulation w/o HAD
- Stochastic traffic simulation with HAD

RESULTs

Example: Minimum Risk Manoeuvre Scenario

- Baseline w/o HAD & MRM
- MRM w. Moderate Deceleration
- MRM w. Strong Deceleration

For a MRM with strong deceleration an increased risk of a collision compared with the baseline without any HAD vehicles is detected; this additional risk can be compensated with high penetration rate of cooperative HAD vehicles.

For a MRM with moderate deceleration no additional risk is detected.

However, in order to achieve a MRM with a moderate deceleration higher technical efforts including better sensors and larger planning horizon need to be taken.