Assessing Driver Acceptability of the PROSPECT Systems

Objectives and Motivation

Acceptance testing is an important part of PROSPECT. It provides knowledge on users’ perception of the systems developed within the project, and an indication of their likelihood to purchase such a system.

Fundamentally, it is crucial for the success of such active safety systems that they are acceptable to the drivers (e.g. judged to be useful and trusted).

Common Method

A common ‘acceptance’ methodology was developed within the project based on existing questionnaires:

- Acceptability assessment administered before and after the experiments
- Evaluation of the criticality of the situation during the experiments

Experiments carried out by the partners

- Video-based experiment & Focus group
  - IFSTTAR
- VIL methodology & Simulator experiment
  - Audi/TME
- Simulator experiment
  - UoN
- Test track & Simulator
  - VTI/Volvo

Acceptability assessment

- Before/After experiment
- Trust
- Acceptability
- Usefulness, Ease of use, Satisfaction
  - Van der Laan et al., 1997
- Intention to use
  - Jian & al., 2000
- Willingness to buy

Criticality of the situation

- During experiment
- Trust
- Frequency
- Predictability
- Controllability
- Fear
- Stress
  - (Bellet and Banet, 2012)

8 Use Cases for Demonstrators are investigated during the experiments

Main results

Results show a high likelihood of acceptance of PROSPECT systems. Participants were most positive towards the warning function, but also indicated a high likelihood of using the braking and steering functions.

Willingness to buy was influenced by various factors, such as: the situation experienced (dummy versus bike), and the time at which the warning occurred (TME). Participants’ willingness to buy increased after they were presented with ‘critical’ situations (IFSTTAR).

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