ecoDriver Subproject
smart feedback for green driving
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Overview

**EU Project**
- 12 partners
- 4 years (2011-2015)
- 10 700 000 € from EU; 14 633 106 € in total

**Focus**
- improvement in energy efficiency by 20 %
- autonomous means (no cooperative systems)
- several powertrains, several vehicle types
- no negative impact on traffic safety
VTI Contribution within subproject (2 yrs)

Simulator Study
- evaluate intermittent vs continuous eco driving support
- contribute with these results to finalised system design

Preparations/Demonstration Field Study
- integrate the finalised solution in the field test car
- equip field test car with an advanced data acquisition system
- demonstrate the field test car
Simulator Study

- truck simulator (high fidelity with linear motion)
- 25 participants (professional truck drivers)
- mean age 40 years (± 11.9 years)
- 4 x ca. 15 minutes of driving (village, rural road, motorway)
  - no eco driving support system
  - eco driving support system with continuous display
  - eco driving support system with intermittent display
  - self selected display
- high quality glance direction data
- extensive interview after driving
Eco driving support systems

- goal set by fleet management
- recommended speed zone
- acceleration indicator
- hill climb support
- speed warning system
- recommended pedal action
- performance feedback
Some pictures from the simulator
Some results

intermittent system appears to be better in terms of glance behaviour
  – generally shorter and less frequent glances
  – concentration around periods with display active
  – glance behaviour adapted to traffic situation

drivers are very positive towards the system
  – customisation important
  – intermittent and continuous features equally attractive

two manuscripts submitted (one revised)
Field study

the final prototype of the ecoDriver system will be tested in the field
– 12 drivers, doing 10 drives of about 1.5 h each
– advanced glance behaviour registration
– data logging of driving behaviour, etc.

within subproject
– planning of experiment
– equipment of vehicle
– testing and demonstration
Field study so far

- equipped vehicle with log instrumentation
- piloted equipment
- ran first baseline test with 12 participants
Still to do

Field Study
- install ecoDriver application (not yet received from partners)
- run the remaining 9 trials (until September 2014)

Project in general
- analyse all data for emissions, acceptance and traffic safety
- scale up to European level (including microsimulation and CBA)
For more information about ecoDriver

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