

PROJECT

SMART-VEI

The smart-vehicle

Funding: European (7th RTD Framework Programme)

Duration: Mar 2008 - Feb 2011

Status: Complete



Objectives:

Smart-Vei project aims to design, develop a portable "predictive-adaptive" learning system. Vehicles equipped with the Smart-Vei system will be able to provide an intelligent driver-assistance; the Smart-Vei will be portable devices able to detect and report characteristics and attitudes related to the driver's profile. The system will be a learning system as it will build the user profile (reported in the VEI-Pod device) by storing, monitoring, and analysis the user's behaviour while driving.

The intelligent component of the system will use descriptive and explicative models for the car driver behaviour and profile building. The Smart-Vei will be able to provide innovative control strategies based on the best input and cues (or other classes of services) to be provided to the specific user. The decision support system of the Smart-Vei will merge information from the users (real time state and behaviour track record) together with the information from the road environment and the vehicle itself. Smart-Vei has been designed to be an effective driver-assistance system.

In fact the driver-assistance system has to continuously monitor not just the surrounding environment and vehicle state but also the driver's behaviours. That way, if a dangerous situation occurs that requires intervention; the vehicle can recognize it and accurately alert the driver. Moreover an intelligent driver-assistance should provide support to the driver in a smart way: a rich and user-friendly informative environment without adding the driver's workload.

In developing systems that proactively assist drivers (and occupants), human intent is a critical piece of information for determining whether the system's actions will help or hinder the user. By design a system with a lighter alerting mechanism in some instances, an alert might not arrive when the system encounters a situation beyond its design specifications.

Parent Programmes:

[FP7-ICT - Information and Communication Technologies](#)

Institute type: Public institution

Institute name: European Commission

Funding type: Public (EU)

Partners:

- ALTRAN TECHNOLOGIES SA (France)
- AMINIO AB (Sweden)
- ANKO ANONYMOS ETAIREIA ANTIPROSOPEION EMPORIOU KAI VIOMICHANIAS
- FERRARI SOCIETA PER AZIONI ESERCIZIO FABBRICHE AUTOMOBILI E CORSE (Italy)
- GOV3 LIMITED
- HEWLETT PACKARD ITALIANA SRL (Italy)
- IDS SCHEER CR S.R.O. (Czech Republic)
- MAGNETI MARELLI SISTEMI ELETTRONICI S.P.A. (Italy)
- NEXENSE LTD (Israel)
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- SESA - COMMERCE HANDELSGMBH (Austria)

- SKODA AUTO A.S. (Czech Republic)
- TECHNISCHE UNIVERSITEIT DELFT (Netherlands)
- TWT GMBH INFORMATION & ENGINEERING TECHNOLOGIES (Germany)

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Technologies:

Advanced driver assistance systems
Human Machine Interface and Human-in-the- Loop Connected Driving
Assistance

Development phase: Research/Invention

STRIA Roadmaps: Cooperative, connected and automated transport

Transport mode: Road transport

Transport sectors: Passenger transport

Transport policies: Safety/Security, Digitalisation

Geo-spatial type: Other