



WATCH-OVER

Vehicle-to-vulnerable road user cooperative communication and sensing technologies to improve transport safety

WATCH-OVER will design and develop a cooperative system for the prevention of road accidents involving vulnerable road users in urban and extra-urban scenarios. The system will be adaptable to different users: vehicles, motorcycles, bicycles, pedestrians. The project will integrate information from in-vehicle sensor and communication technologies for reliable detection and positioning of vulnerable road users.

Key aspects are:

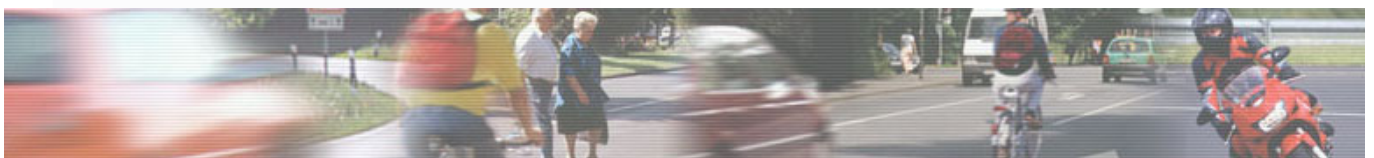
- the selection, adaptation and integration of short range communication and sensing,
- the development of high performance vision sensor technologies,
- the development of a scalable cooperative system using best performing communication and vision sensor technologies that can be applied separately or in combination, depending on the user.

More Information:

www.watchover-eu.org/

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Description of the work

The idea behind the WATCH-OVER approach is that a cooperative system shall guarantee:

- a wide scenario coverage including blind spots,
- simple and low cost on-board systems,
- a flexible and open architecture.

The core of the system is the interaction between an on-board module in the vehicle and a module used by vulnerable road users, which could be for example a portable transmitter. The definition of an architecture that involves all road users will allow improvement in performance compared to stand-alone sensor based systems in vulnerable users detection. The cooperative low cost platform will extend the actual coverage of the state of the art technologies and will be open for integration of localisation technologies.

MAIN PROJECT ACTIVITES

The main project activities are:

- to select and to adapt the most suitable communication and sensing technologies,
- to integrate the selected information from technologies in the applications.
- demonstrators and to validate system performances and users' acceptance.

The applications must be adapted to function in selected scenarios. The suitable technologies will be selected taking into account their performance and most relevant aspects:

- communication (ranges, delays, robustness, etc.),
- electromagnetic compatibility
- localisation requirements.

Project Acronym: **WATCH-OVER**
Project Reference: **IST-2004-027014**
Contract Type: **Specific Targeted Research Project (STReP)**
Start Date: **01/01/2006**
Duration: **36 months**
End Date: **31/12/2008**
Project Cost: **5.914.601 €**
EC project funding: **3.315.000 €**

Participants:

The project is coordinated by Centro Ricerche FIAT (IT). Project partners are DaimlerChrysler AG (DE), Piaggio & C. S.p.A. (IT), Robert Bosch GmbH (DE), MIRA Limited (UK), Technische Universität Chemnitz (DE), ARC Seibersdorf research GmbH (AU), Centre for research and technology (EL), University of Stuttgart (DE), Steinbeis Research Institute Wireless Communications (DE), Faber Software S.r.l. (IT), LogicaCMG Nederland B.V. (NL) and Università di Modena e Reggio Emilia (IT).