„Watch-Over – Co-operative Smart Technologies to Improve Road Safety for Vulnerable Road Users“

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Abstract:

The WATCH-OVER project aims to avoid road accidents that involve vulnerable users such as pedestrians, cyclists and motorcyclists. This topic is in line with the ambitious goal to reduce road fatalities by 50%, as stated in the White Paper on European Transport Policy for 2010.

The project will carry out R&D activities with the aim to design and develop a cooperative system for the prevention of accidents involving vulnerable road users in urban and extraurban areas. According to the IST Strategic Objective 2.4.12 “to develop and demonstrate co-operative systems for road transport that will make transport more efficient and effective, safer and more environmentally friendly”, the system concept will be based on nteractions between an in-vehicle module and users’ devices.

It foresees the development of a cooperative system integrating low cost communication technologies, as an extension to autonomous sensor based systems, in combination, if feasible, with localisation technologies, to cover the most critical situations.

The main objectives of the WATCH-OVER project are:

- to identify specific road scenarios;
- to select and to adapt the most suitable communication and sensing technologies;
- to integrate these technologies in the demonstrators;
- to technically validate the system and to test users’ acceptance.

Main innovation aspects are represented by:

- the selection, the HW/SW adaptation and the integration of short range communication and sensing technologies for the detection and positioning of vulnerable road users;
- the development of algorithms for the localisation of the vulnerable users;
- the development of a low cost cooperative system to avoid accidents that involve vulnerable users.