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AIDER - ACCIDENT INFORMATION DRIVER EMERCEMCY RESCUE

On European streets approx. 1.5 million accidents happen per year with 42,000 killed and 1.7 million injured road users. As countermeasure, the European Union supports research projects aiming in the improvements of traffic safety. The aim is a reduction of the road totalities by 50% until the year 2010.

As a post-crash system AIDER focuses on the reduction of the accident aftermath and costs by the use of an optimization of the rescue chain and rescue managements. The AIDER-concept is based on the direct cooperation between the following three components:

- vehicle-on-board-system for the automatic accident recognition
- the communication system, based on GSM/GPRS-technology and an back-up satellite channel via COSPAS/SARSAT
- the control-centre, providing emergency messages to the rescue forces

For the realisation of an effective rescue management biomedical pre- and post-crash data of the passengers (heart- and respiration rate, blood pressure, blood oxygen saturation) but also dynamic data from the vehicle (speed, acceleration, yaw rate etc.) and video pictures from the inside of the passenger compartment respectively from the drivers view are collected by the APU (AIDER-Processing-Unit). With the help of the communication system these information are sending to the control centre (CC), where reliable information about the po-sition and the time of the accident, the accident details, possible injuries of the passengers and their actual medical status are available. By these means an optimi-zation of the rescue chain is expected, because of the fact that already processed and reliable information are given to the rescue team in a shorter time. The results are, reduced accident aftermaths, better healing chances for injured passengers and hence lower costs for the society. In addition the recorded data are available for the police or the assurance companies for an offline reconstruction the accident.

Within this project ika/fka develops a test environment for the system validation. Included are the individual tests, evaluation concepts as well as the definition of test methods and -criteria.

Project partner:

CRF, ika, Daimler AG, IAT-Orantech, Elbit Systems, Tadiran Spectralink, Israel Aircraft Industries - TAMAN, RAMOT (Tel Aviv), GMV Sistemas, Universität Trento, Sinelec, ISM-Institute of Applied Sciences in Medicine.

By the EU assist ika project