Pre-crash Application All Around The Vehicle

Scheda informativa

Informazioni relative al progetto

CHAMELEON

ID dell’accordo di sovvenzione: IST-1999-10108

Sito web del progetto

Finanziato da FP5-IST

Bilancio complessivo € 4 758 698

Data di avvio 1 Gennaio 2000

Data di completamento 31 Dicembre 2002

Contributo UE € 2 500 000

Coordinato da CENTRO RICERCHE FIAT SOCIETA CONSORTILE PER AZIONI

Italia

Obiettivo

Every year in the EU roads more than 1,200,000 accidents happen with about 1,600,000 injured and 42,000 deaths. Recent studies have estimated an annual saving of around 120,000 deaths and serious injuries from the introduction within the car of passive safety systems in order to minimise the consequences of the impact once it has occurred. This positive trend increases introducing within the vehicle a pre-crash sensorial system able to detect the impending danger in all scenarios.

Objectives:
Main objective of CHAMELEON project, is to support, to guide and to validate the development of a pre-crash sensorial system necessary for near impending crash
detection all around the vehicle and in all scenarios. Under this point of view, there are several objectives to achieve this goal.

The first issue regards the improvement of the already existing sensors performances, their robustness and their operative range extension. Then it is necessary to study new strategies for the activation of the safety restrain system and of the safety requirements. Naturally, all these systems should be tested, so that a validation procedure has to be performed in order to verify the system in a dedicated test site with the evaluation of social impact and productivity, including cost/benefits and investigation of legal and liability application. Furthermore, the analysis of the integration of such system with other applications could be very important, in order to make possible to use the same sensors for different functions (that means to consider every reference to other Advanced Driver Assistance System (ADAS)).

Work description:
To achieve the projects goals, CHAMELEON adopts the recommended phases of RTD&D projects. The project starts with the identification of the system concept and requirements (operational and technical). From the results obtained, the project determines the sensorial system architecture and data exchange protocol. The next step is the sensorial system realisation including sensor fusion algorithms, and the building of the demonstrator (mock up). In parallel, it is necessary to build a test site for the technical and functional tests and for the final validation. The last phase concerns the exploitation of the results, with relevance on ISO standard recommendations, system concept, architecture, safety, dependability and legal issues, including risk analysis.

Milestones:
The project planning follows a conventional timing of work and can be summarised by major milestones. First of all, it is necessary to specify the system concept, the operational requirements and technical specification. Then, also the sensing system interface and a complete system design including standardisation guidelines has to be taken into account. After this, the sensor system should be ready for installation. Once the overall system is implemented, it is necessary to analyse technical test results, in order to evaluate the performances and the functionality of the system. Finally, information about a possible exploitation plan (that is, products and spin-offs) should also be given.
Meccanismo di finanziamento

CSC - Cost-sharing contracts

Coordinatore

CENTRO RICERCHE FIAT SOCIETA CONSORTILE PER AZIONI

Indirizzo
Strada Torino 50
10043 Orbassano (To)

Partecipanti (12)

CENTRO STUDI SUI SISTEMI DI TRASPORTO SPA

Indirizzo
Corso Re Umberto 30
10128 Torino

CONTI TEMIC MICROELECTRONIC GMBH

Indirizzo
Sieboldstrasse 19
90411 Nuernberg

DR. ING. H.C. FUER PORSCHE AKTIENGESELLSCHAFT

Indirizzo
Porschestraße
70435 Stuttgart

EICAS AUTOMAZIONE SPA

Indirizzo
Via Vincenzo Vela, 27
Torino

Sito web
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</tr>
<tr>
<td>SAAB BOFORS DYNAMICS AB</td>
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<td>691 80 Karlskoga</td>
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