A user-centred approach in developing preventive safety systems

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Many books have been written concerning the importance of user centred product development, but reality is often far from theory. This paper is about a study where the customers and users have the opportunity to review future automotive safety applications and communicate their opinions and demands to the engineers. The product development is a part of PReVENT, an Integrated Project co-funded by the European automotive industry and the European Commission. The goal of the preventive safety applications is to help drivers avoid or mitigate accidents through the use of in-vehicle systems which sense the nature and significance of the danger. Focus group interviews were carried out with truck drivers and owners to collect feedback on functionality, interface and acceptance in order to gather knowledge on how they would like to have it. The results showed an awareness of the need for safety applications and that user acceptance depends on the reliability of the applications and the driver's feeling of control of the vehicle. Next step is a user test of the safety system prototypes to continue the user feedback throughout the product development.

Introduction

Pedestrian-vehicle accidents account for the second largest source of automotive related fatality and injury worldwide (Grubb, 2004). New safety systems with the possibility of reducing the severity of pedestrian accidents are under development, e.g. external airbags and "start inhibit". Sensor technology and the possibility to fuse different sensors will make detection of pedestrians in the close vicinity of the vehicle possible. The goal of the project called APALACI is to develop pre-crash and collision mitigation applications including the development of innovative sensor fusion techniques. APALACI is one of the sub-projects of PReVENT, which is a part of the 6th Frame Work's Integrated Safety Program.

Several systems will be developed in the APALACI project, and this paper will focus on the following systems that involve direct intervention or support to the driver: