

User friendly terminology for driver assistance systems

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Abstract

ADAS (Advanced Driver Assistance Systems; technology based systems that provide the driver with assistance in the driving task) may help to make the entire driving experience safer and more comfortable for road users. However, the number of different systems and the variations in functionalities is changing and increasing. Misunderstandings between developers' technical terms and users' expectations and assumptions are making the conversation between the providers and the end users ineffective, and there are also differences between authorities'/ administrations' (i.e. policy makers') and users' expectations and preferences. These misunderstandings may lead to safety risks of various kinds and will lead to legal obstacles for implementation and safe use. Therefore, within the ADVISORS project (GRD1-2000-10047), a first draft of a user friendly terminology has been developed which is understandable for all stakeholders, including all types of consumers. In a subsequent study, several types of stakeholders have evaluated a relevant subset of the terminology proposed via a web based questionnaire.

Introduction

Relevance

A wide variety of Advanced Driver Assistance Systems (ADAS) currently exist and many more will become available in the near future. These systems aim to help the driver by providing information, for example about routes, traffic congestion and accidents. Furthermore, some of these systems aim to support the driving task by actively interacting with elements of the driving task, and in some cases in such a way that the system cannot be overruled by the driver. Examples are tactile feedback to the driver via the accelerator pedal or automatic control of the distance to the vehicle in front. Because these systems can provide drivers with real-time information (and are becoming increasingly sophisticated and thus more useful) there is a growing concern that they may interfere with the primary driving task and as a result compromise safety.

Drivers may not be aware of the potential hazards relating to secondary tasks involved in interacting with an ADAS whilst driving. Instructions need to

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