A pilot study for the determination of accident moderating conditions as an addition to situational accident causation factors.

Pund, B.¹, Jänsch, M.², Otte, D.², Johannsen, H.²

¹ TÜV Technische Überwachung Hessen GmbH

² Accident Research Unit, Medizinische Hochschule Hannover

Abstract

For the avoidance of traffic accidents by means of advanced driver assistance systems the knowledge of failures and deficiencies a few seconds before the crash is of increasing importance. This information e.g. is collected in the German accident survey GIDAS by an interview derived from the ACAS methodology. However to display the whole range of accident causation factors additional information is needed on enduring factors of the system components "human", "infrastructure" and "machine". On the strategic level these accident moderating factors include long term influences such as medical preconditions or a general higher risk taking behavior as well as influences on the immediate conflict level such as an aggressive response to a perceived previous traffic conflict.

This study was conducted to examine the feasibility of collecting such causation information in the scope of an in-depth accident investigation like GIDAS. Due to the comprehensive amount of information necessary to estimate the moderationg factors the collection of the information is distributed to different methods. 5 cases of real world crashes have been investigated where information was collected on-scene and retrospective by interviews. The identified moderating factors of the accidents and the method for collecting the information are displayed.