

TECHNICAL NOTE

How to find out the future need for driver support systems? An empirical method to find out critical incidents while car use in qualitative research

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subm. 18th April 2005

approv. after rev. 21st July 2005

Abstract

An empirical method to explore the need for driver support systems in qualitative research is reported. The method bases on the critical incidents technique: Not the trip in general, but special incidents while driving define the subjective assessment of a whole trip by the driver. Attractive driver support systems should deal with those critical incidents. By various methods (in-depths-interview, self-observation, observation) those critical incidents have been gathered. In addition focus group concepts for driver support systems were developed in order to assess the critical incidents been gathered before. The method describes a very intensive work with the test persons. Therefore the sample is not very extensive. Consequently the criteria described in the report – how to select the sample of test persons - are very important for the quality of the results.

Keywords – Driver support system, qualitative research, critical incident

1. Introduction

A study about drivers needs for additional driver support systems in car is reported. The study was designed by the authors, Robert Bosch GmbH, Corporate Research and Development, in collaboration with MTO-Institute in Tübingen, Germany. The study took place from 2002 in September till 2003 in March. The focus of this report is on the methodical design of this qualitative research.

1.1 The value of driver support systems

In Germany, the number of deadly injured people in traffic accidents decreased from over 21.000 in 1970 to about 6.600 in 2003 [5] – although cars became much faster since then and the general sum of road traffic in Germany increased. Besides improvements for example in ambulance services one main reason goes back to the improvement of the cars themselves. In fact, during the last three decades, cars became more and more comfortable and safe. On the one hand, these improvements base on new general principles of construction concerning the chassis and body of the car. On the other hand more and more additional systems were integrated into cars which should support the driver to drive comfortable and safe. These systems are often called driver support systems.