

**IMPACT ASSESSMENT OF ADVANCED DRIVER ASSISTANCE
SYSTEMS WITHIN THE LARGE SCALE FIELD TEST “euroFOT”**

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ABSTRACT

The euroFOT project aims to investigate the impacts of advanced driver assistance systems (ADAS) and to encourage their deployment by offering valuable information for the short- and long-term impact of ADAS. Started within the seventh framework programme, the euroFOT project establishes a comprehensive, technical and socio/economic assessment programme for evaluating the impact of ADAS on safety, environment and user-acceptance in real life situations. Altogether, about 1000 vehicles equipped with eight different ADAS technologies will take part in the field operational test (FOT). The vehicles have been produced by a range of manufacturers and will be driven by around 1000 drivers. Altogether five Vehicle Management Centres (VMCs) are coordinating the fleet of vehicles being evaluated in the euroFOT project. At the German1-VMC a fleet of 240 vehicles are managed, which consist of 100 trucks and 140 passenger cars from three different manufacturers. The paper presents the data retrieval process, the definition of the experimental design and the evaluation process, which are the most challenging parts of this project. At ika the data retrieval and storage process for the German1-fleet has been defined and finally developed. All vehicles of the fleet are equipped with data acquisition systems (DAS). By means of a DAS data is being collected directly from the vehicle CAN busses and automatically uploaded to a central server system via an integrated GPRS module. It will be automatically enriched with additional information and stored on a relational database. The estimated amount of data at the German1-VMC adds up to approximately 12 TB, considering a duration time of one year for the field test. The entire process chain for data retrieval is designed to work completely autonomously. This approach ensures that the driver is not involved in the data retrieval process and therefore can fully concentrate on the driving task.

The data analysis will start when the data is available in the database. Based on the data analysis plan of the German1-VMC the data will be analyzed in order to assess the addressed hypotheses with regard to driver behavior, user acceptance and the impacts on safety, environment and traffic efficiency. Furthermore an impact assessment will be conducted to scale up the effects found in the FOT to the EU level and to provide all needed information for the cost-benefit analysis.