

Exposure to Secondary Tasks in Germany: Results from Naturalistic Driving Data

Barbara Metz¹, Andreas Landau¹, Mariana Just²
(1)Würzburger Institut für Verkehrswissenschaften (WIVW) GmbH
(2)BMW Group

contact:

Dr.Barbara Metz
WIVW GmbH
Robert-Bosch-Straße 4
97209 Veitshöchheim
Germany
Tel: +49 931 78009102
metz@wivw.de

Especially in the US, data from naturalistic driving studies (NDS) are used to assess the frequency of secondary task interaction in everyday driving. In most published NDS, secondary task interaction is measured based on video analysis.

The presented results are derived from data collected in an FOT on navigation systems in the euroFOT project. For a subsample of 47 drivers, secondary task interaction is analysed with two approaches: CAN-data is used to measure secondary tasks that are related to the vehicle and therefore can be assessed with objective data (e.g. hands-free telephoning). For that analysis, the full data set (about 380 000 km) can be used. For a selected number of drives, video analysis is conducted to get information about the frequency of other secondary tasks like eating or drinking. This data set contains more than 250 hours of driving time (about 20 000 km). Taking both approaches together, results show that in drives with a passenger present, drives engage in secondary tasks in about 40% of total driving time. Of those 40%, 35% are related to interacting with the passenger, the remaining 5% to other secondary tasks. In drives without a passenger in the car, drivers engage about 25% of driving time with secondary tasks. Of those, the highest proportion (10%) is hands-free telephoning. Secondary tasks related to the vehicle (e.g. inputs via central controller or buttons on the steering wheel) occur during 2.6% of driving time.

The results provide information about the frequency of secondary tasks in daily driving for a German sample. Through combining two different measurement approaches, results refer to a variety of different types of secondary tasks and at the same time are based on a large body of driving data.

Non-paper presentation