SWOV ARTICLE
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Large-scale Naturalistic Driving study in Europe launched

In October 2012, the UDRIVE project started. UDRIVE is a large-scale European study into the traffic behaviour of passenger car drivers, truck drivers and motorcyclists. A total of 240 passenger cars, 150 trucks and 80 motorcycles will be followed for the duration of one year. The road user's behaviour in traffic will continuously be registered with several sensors and cameras. This will yield a wealth of data about everyday traffic behaviour as well as about (near) crashes.

SWOV coordinates the UDRIVE project which has a four-year duration and is carried out within the European seventh Framework Programme. The project is co-financed by the European Directorate General Research and Innovation. A total of 19 organisations from 11 countries will participate in the project: knowledge institutes, universities and industrial partners. The Dutch participants are SWOV and Netherlands Organization for Applied Scientific Research TNO.

Naturalistic Driving

Naturalistic Driving (ND) is a research method that has increasingly been used since the beginning of the present millennium. Initially the method was mainly used in the United States, but presently also in, for example, Europe, Japan, Canada and Australia. ND studies observe the natural behaviour of road users during ordinary everyday trips with their own vehicles. To collect the necessary data, the vehicle is equipped with various instruments which in an unobtrusive manner register the vehicle movements (like speed, acceleration/braking, direction), driver behaviour (e.g. eye, head and hand movements), and external conditions (road features, traffic, weather etc.). This yields a large amount of information about the relationship between man, road, vehicle, weather and traffic conditions, not only under ordinary circumstances, but also in (near) crashes.

More than 450 vehicles

UDRIVE makes use of, among others, the results of the European project PROLOGUE which was also coordinated by SWOV. This project investigated the feasibility of a large-scale European ND study, and this resulted in the UDRIVE project. Within the UDRIVE project, a total of 470 vehicles will be followed, each vehicle for a period of one year: 240 passenger cars, 150 trucks and 80 motorcycles. This will be done in several European countries.

Safety and the environment

Without a doubt UDRIVE will yield an enormous amount of data which can be analysed in countless ways. All data will be stored in a central database which is intended to be made available to other organisations at the end of the project. In the course of the UDRIVE projects a number of specific subjects will be tackled, partly subjects in the area of safety (crash causes, distraction, and vulnerable road users), partly subjects related to the environment (driving styles and energy consumption).

Pedestrians, cyclists, motorcyclists

In addition to the overall project coordination, SWOV is mainly involved in studying the subject of vulnerable road users. SWOV is in charge of the analyses concerning this topic. The focus will be on encounters between the participating vehicles on the one hand, and cyclists and pedestrians on the other. These are situations that often lead to serious injury

for cyclist or pedestrian. Because the vehicles are equipped with a number of cameras, the researchers expect to obtain a good picture of how encounters are normally brought to an end and what precedes incidents and (near) crashes. Motorcyclist behaviour will also be analysed. Other than is the case for cyclists and pedestrians, this data is provided directly by equipment that is fitted to the motorcycles. These analyses will focus on speeding behaviour, viewing behaviour and interactions with passenger cars.

Website under construction

The website of the project is presently under construction. The web address, however, is already known: www.udrive.eu. The website will be launched in December and will provide more information about the project and the participants. Those who are interested can indicate that they wish to receive the latest UDRIVE news by email. The results of the UDRIVE project will eventually be published on the website.

The following SWOV publication is available about Naturalistic Driving:
SWOV Fact sheet. 2010. *Naturalistic Driving: observing everyday driving behaviour.*
SWOV, Leidschendam

More information about UDRIVE and Naturalistic Driving is available:
www.udrive.eu
Final report PROLOGUE
Naturalistic Driving video