



SEVENTH FRAMEWORK  
PROGRAMME  
THEME 7 TRANSPORT



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## Final PROLOGUE Workshop Minutes

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## Project Consortium

1		SWOV Institute for Road Safety Research (project co-ordinator)	NL
2		CERTH/HIT Hellenic Institute of Transport	GR
3		KFV Kuratorium für Verkehrssicherheit	A
4		Loughborough University	UK
5		Or Yarok	ISR
6		Nederlandse Organisatie voor Toegepast Natuurwetenschappelijk Onderzoek - TNO	NL
7		TØI Institute of Transport Economics	NO
8		Test and Training International Planning and Service GmbH	A
9		Universitat de València	ES

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### **Aims of the final workshop**

The final workshop of PROLOGUE was held on 22 June 2011 in Vienna and focused on the potential of naturalistic driving as a tool for all sorts of road transport research related to road safety, the environment and traffic management, based on experiences in PROLOGUE, as well as experiences in a comprehensive selection of related Naturalistic Driving activities and Field Operational Tests inside and outside Europe.

### **Welcome and agenda**

Martin **WINKELBAUER** as moderator of the workshop opened the workshop at 10:00, welcomed the 61 participants (Appendix 1) and introduced the presenters, who gave introductory speeches.

Rob **EENINK**, the project coordinator of PROLOGUE, delivered opening remarks and gave a brief overview of the workshop programme.

Klaus **ROSINO**, research director of KFV, presented the Austrian Road Safety Board and emphasised that KFV has a long tradition of research using instrumented vehicles. First initiatives already have been raised in the 1980s to add hard facts to an observation by 'Wiener Fahrprobe'. Using the experiences from the PROLOGUE small-scale field trials, KFV has launched several research activities using the ND methodology e.g. site-based observations, 100-car-study Austria, driveEkustik and more.

All presentations can be downloaded at: <http://www.prologue-eu.eu/prologue/final-workshop/>.

10:00	Rob Eenink	Welcome Notice
10:05	Klaus Rosino	Welcome Notice
10:10	Rob Eenink	Introduction of PROLOGUE
10:30	Tsippy Lotan	PROLOGUE's small scale field trials & A multi-layer spatial system of road safety data
10:55	Fridulv Sagberg	Recommendations large-scale naturalistic driving study
11:20	Moderator: Martin Winkelbauer	Discussion
11:30	Coffee break	
11:45	Ken Campbell	The US SHRP2 trial, state of affairs
12:00	Niels Bos	DaCoTA: monitoring SPIs and exposure
12:15	Arnaud Bonnard	INTERACTION with in-vehicle systems

12:30	Cornelia Nussbaumer	ND initiatives in Austria
12:45	Niccolo Baldanzini	Naturalistic Riding: 2 BE SAFE
13:00	Moderator: Martin Winkelbauer	Discussion
13:15	Lunch	
14:15	András Csepinszky	The FOT-net platform
14:30	Mohamed Benmimoun	EuroFOT
14:45	Andrew Morris	Telefot
15:00	Moderator: Martin Winkelbauer	Discussion
15:15	Coffee break	
15:30	Trent Victor	The car industry
15:45	Marika Hoedemaeker	The environmental branch
16:00	Adriaan Heino	The insurance branch
16:15	Moderator: Martin Winkelbauer	Discussion
16:25	Rob Eenink	Wrap Up
16:30	END	

### Overview of PROLOGUE's findings and conclusions

Subsequent to these welcoming speeches Rob **EENINK** gave a speech on what naturalistic driving is about and how to realise such large-scale observations. Furthermore, he presented the aims and the outline (partners & project organisation) of the project and emphasised the added value of ND for traditional research methods, different research areas and potential user groups, e.g. automotive industry, enforcement, insurers, fleet owners, police, and many more.

Eenink pointed out that technologies improved the last decade and software now can deal with huge databases.

Tsippy **LOTAN**, chief scientist at Or Yarak, gave an overview of the five PROLOGUE trials (all reports are finished and available at the PROLOGUE website).

The Israel trial was structured in 4 small sub-trials (all used the same technology - GreenBox & mobileye). The first one compares the recording of both systems (braking, accelerating etc.) in order to see if there are differences. The second trial focused on young drivers (aggressive driving and where those events happen). The third trial dealt

with new experienced drivers and finally, the fourth trial investigated if peer behaviour could have an effect on the driving style.

The Austrian trial focused on video based feedback for learner and novice drivers. Two groups of learner drivers (6 each) completed a simulated test drive, where one group received training with an in-car video-aided feedback system, whereas the other group received standard driving education without the system. Subsequently, driving data was collected up to two months after the driving test.

The Dutch field trial dealt with in-vehicle and site-based observations with focus on vulnerable road users. The video was trigger-based and only recorded at a predefined intersection and at extreme events (hard breaking and speeding).

In the Spanish trial a highly instrumented car was used for research that allowed an in-depth analysis of certain manoeuvres. Two of the main findings were that 1) lots of conflicts are missed if you apply a strong threshold and 2) video analysis is essential for the identification and suitable assessment of incidents while driving.

The Greek trial tackled the question if forward collision and lane deviation warning systems have an effect on driving behaviour.

Finally, Lotan demonstrated the prototype of a "multi layer spatial system". This system map-matches various kinds of information from different sources. This information is displayed within numerous layers, e.g. injury accidents, speed limits, speeding events and other specific manoeuvres detected with the data acquisition system used in the naturalistic study. The system has already proved to be beneficial in identifying correlations between different circumstances, conditions and driver behaviour.

Fridulv **SAGBERG**, senior researcher at the Norwegian Institute for Transport Economics, presented recommendations for a large-scale naturalistic driving study, which reflects the work of Task 4.1 within PROLOGUE. He pointed out that there are two different strategies and the choice of strategy has implications for the study design: Either there is a large database for subsequent analyses of post-hoc research questions or the study focuses on a limited number of predefined research questions. Sagberg emphasised that a combination of these strategies is recommended in order to define a large-scale study.

He pointed out that research topics and questions mainly concern road safety. Additional areas are environmental effects and traffic management issues. In this regard he presented a matrix of research topics that could be used for further studies.

Sagberg underlined that detailed information to participants is very important (background for signing Informed Consent Form) and incentives for participants are essential, too (monetary compensation per time unit plus bonus at the end of the trial). Furthermore, ethical, legal and privacy protection issues have to be considered, e.g. drivers must be fully informed about what is recorded and must have the right to resign from the study at any time, and to demand the deletion of data; passengers must not be identifiable from videos, etc.

Finally, cost considerations for different study scales were presented.

## Discussion

John **CHATTERTON-ROSS** commented on the attempt to link peer groups with driving behaviour. He was fascinated by the chart that showed the links between the people. That never has been researched before.

Trent **VICTOR** asked why not going for a large-scale study with a representative sample. He thinks that the vision should be a representative sample (truly large-scale even if there are implicit restrictions).

Rob **EENINK** agreed and pointed out that a representative sample would of course be of added value but may fail in case of a low budget. Private partners are needed and maybe they get interested in the following large-scale study which would be great.

Adriaan **HEINO** added that the focus is preliminary on safety but in his opinion financially one could gain more in eco-driving and fuel consumption. More emphasis should be put on that.

Rob **EENINK** agreed again and stated that eco-driving is not an issue in SHRP2, but it is in the draft call for a European large-scale study. However, this draft project description puts more attention to road safety. A problem is that people who pay for the development of these types of measurements that would improve things are not necessarily the people that gain profit from it. That's a sort of a market problem. So first of all you would need public financing.

Ken **CAMPBELL** relates to Trent Victors question. Of course everybody would like to have a study that would address all issues of interest. But he thinks that if the notion is that the next study will not be that big one could alternatively focus on methodological issues like continued versus triggered recording or automatic video-analysis. Because we still don't know what's better. If you have more generally accepted or validated answer to that maybe then it is possible to answer questions more quickly (towards a more efficient design).

Fridolv **SAGBERG** pointed out that a lot of methodological questions require very large samples. The ideal of course would be a very large-scale study but it's not realistic in short-term.

### Other European and overseas ND experiences

Ken **CAMPBELL**, SHRP2 chief programme officer for safety, gave an overview on the status of this USA large-scale study. He pointed out that at the beginning of SHRP2 in 2002 it lasted a day to equip a car, today the installation takes about four hours. So, technical problems can be solved. Other issues like contracting or review boarding issues are more difficult to handle because these processes take a long time.

In SHRP2 thoughts have been given to the definition of research questions but they were downsized during the project. Therefore, he emphasised that a study design is essential.

Currently, 513 systems are installed. The recruiting of test persons turned out to be very difficult. Campbell explained that a web-based real time system has been installed. All persons interested to take part in the project get necessary information there and can apply for participation via a button. Finally, Campbell stated that the next challenge will concern the implementation of data analysis issues.

Niels **BOS** from SWOV presented the project DaCoTA. After a brief presentation of ERSO (European Road Safety Observatory) and a few basic facts on the project in general (partners, organisation and structure) he explained the tasks of WP6 that deals with Naturalistic Driving. The aim of WP6 is to collect more and better data in order to get better comparability and better analysis. Moreover, Bos stated that DaCoTA shares information with PROLOGUE but he highlighted that though there are lot of similarities, there are also fundamental differences to PROLOGUE in objective, sample size, technology and duration. In DaCoTa's two pilot studies the same devices are used as in the PROLOGUE pilot studies (p-drive in Austria and Greenbox & Mobileye in Israel). In DaCoTA, a continuity of data gathering with focus on safety performance indicators (SPIs) and mobility is aspired. Summarizing, ERSO would need large sample sizes but limited amount of data per vehicle equipped to satisfy the need to provide a number of SPIs.

Arnaud **BONNARD** from IFSTTAR reported on the project INTERACTION that focuses on driver interactions with in-vehicle technologies (IVT). The project will result in recommendations for the refinement of IVT design, the strengthening of public awareness of IVT users, the increase of benefits of IVT in road safety and many others. Bonnard underlined that the project aims at implementing a comprehensive research approach (combination of ND and experimental observation) as well as performing a cross-country comparison by applying the same research methodologies in each country.

Four IVT were selected (cruise control, speed limiter, navigation system and cell phone) and eight participating countries (Austria, Czech Republic, Finland, France, the Netherlands, Portugal, Spain and the United Kingdom) are collecting data at the moment. The trial will be finished in April 2012. Main aim of the project is to develop an open solution of data acquisition system that can be easily adapted to other naturalistic observations.

Cornelia **NUSSBAUMER** from KfV gave an overview about current KfV naturalistic driving activities starting with the project drivEkustik. The purpose of this project is 1) to compare driving behaviour between users of e-cars and cars with combustion engine and 2) to analyse behaviour and potential conflicts with vulnerable road users. Thereto, cars will be equipped with the p-drive system. Another R&D project deals with site-based observation, analysis of critical situations and driving behaviour before pedestrian crossings in general, e.g. speed or willingness to stop. Finally, the current status of the '100 car study Austria' was presented. The focus in this project is 1) on road user behaviour of novice and elderly drivers, 2) on road user behaviour in normal conditions, near misses and crashes and 3) on information about underreported accident causes as distraction, inattention and fatigue.

Niccolo **BALDANZINI**, professor at the University of Florence, gave insight on naturalistic riding in general and the 2 BE SAFE project in detail. 2 BE SAFE is a cooperative research project on behaviour and safety of riders of powered two wheelers (PTWs) using various research methods - among which four naturalistic riding pilot studies. Objectives of the project are 1) to design and test a data collection with focus on critical events for rider safety, e.g. near-misses) and 2) to perform a preliminary data analysis to support the design of a large-scale study. Baldanzini stated that different PTW usage patterns of the participating countries had to be taken into account. Therefore, the decision was made to focus on the most relevant PTW type and scenario for each country. Data is recorded continuously and is downloaded manually each week; personal data is stored separately from the acquired data. Additionally, each participant had to sign an informed consent form according to EC Directives.

Finally, Baldanzini gave an overview on what results are expected, e.g. a study design to collect data in safety critical events was positively tested and a full set of procedures and tools is available for the implementation of a large-scale study. He emphasised the importance of travel diaries for event detection and proposed to consider local seasonal factors, which may reduce the efficiency of data. However, a pan-European naturalistic riding study would provide an important source of data for the development of safety devices and better training programmes.

## Discussion

Nicole **VAN NES** had a question on the DAS equipment of SHRP2. She wanted to know if it's necessary to retrieve all the data manually or if it would be possible to retrieve data like speed or GPS wireless, too.

Ken **CAMPBELL** stated that it's only possible to get small data packages over the wireless connection. There are at least three different data packages you are able to request. One is just the automated "health check" where the system sends you key-information once a week. The second concerns collision notification. So, the system hopefully is identifying collisions and you can connect with those data. The problem is if the vehicle is not turned on it can't send a communication. Lastly, location information (GPS) can be sent wirelessly as well. But that's it. Otherwise, the researchers have to go to the vehicle and take the hard drive out.

Robert **KÖLBL** asked how the selection of drivers is done because usually you are interested in certain incidents and he wanted to know if certain driver criteria are established in this regard. A second question concerned the SHRP2 data analysis and whether there is a common analysis method for all participating institutes or if all partners analyse their data separately.

Ken **CAMPBELL** explained that in SHRP2 the recruiting of test persons is done with random lists of phone numbers. And there is no effort to get high risk drivers. However, even if there are no restrictions on the driver the screening process is long and takes a lot of steps to get through.

Niccolo **BALDANZINI** pointed out that in the 2 BE SAFE study test persons between 25 to 45 years of age participated because this age group is more prone to fatal PTW accident risk. In 2 BE SAFE a single data base was created. So, all the collected data is aggregated there in order to have joint data analysis. However, the results will not be representative due to the limited number of events.

Trent **VICTOR** commented on the coordination of data acquisition systems (DAS) because it seems that everyone wants cheaper systems and there could be a lot of money gained by co-operations of standardisation. Such discussion should take place in further ND studies as well.

Arnaud **BONNARD** asked to consider that it's difficult to install one system in different cars and different countries.

## **Field Operational Tests (FOTs) in Europe**

András **CSEPINSZKY** represented ERTICO and presented the FOT-Net platform, which is a support action funded by the European Commission to network FOT activities at national, European and international levels. FOT-Net activities deal with different applications like advanced driver assistance systems (ADAS), Nomadic Devices, Co-operative Systems or ND studies and bridge to FESTA methodology outputs. Csepinszky pointed out that FOTs are often multi-stakeholder activities with their own expectations. Therefore, the main consumers of FOTs are policy makers - so that they can establish the right policy framework for a further deployment of these systems - and business leaders - in order to make informed decisions on their market introduction. Csepinszky reported that there is an active exchange of information and participation in activities between the community (automotive industry, public authorities, road operators, research centres etc.) and the FOT networking platform. He stated that seminars are organised twice a year and a final open workshop will be held on 8-9 September 2011 in Gothenburg. Finally, Csepinszky underlined that there is an opportunity to learn from numerous FOTs testing different types of applications in Europe, North America and Asia-Pacific but there is a need for coordination of all the available information.

Mohamed **BENMIMOUN** from RWTH Aachen reported the latest news on EuroFOT. Studies show that the number of vehicles per inhabitant, which has grown from around 400 vehicles per 1000 inhabitants in 1995 to 480 in 2005 within the EU25, caused

higher traffic density and the use of passenger cars grew by around 18% between 1995 and 2004. This increased traffic complexity results in higher accident risks. Therefore, the EuroFOT project aims to investigate impacts of ADAS and to encourage the deployment of these within a large-scale FOT. The analysis focuses inter alia on safety, traffic efficiency, environment, driver behaviour and usability. A further cost-benefit analysis will be based on results from this impact assessment.

Benmimoun explained that five vehicle management centres (VMC) that can be seen as the overall management entity are coordinating a fleet of approximately 1000 vehicles across Europe. There are four VMCs in the EuroFOT project: French VMC, German VMC, Italian VMC and Swedish VMC.

Finally, Benmimoun pointed out that more than 1100 drivers are participating in the field trial. The piloting phase including a data management test is completed now and the data collection and processing of data is almost completed as well. Data analysis (testing of hypotheses) will start in summer 2011 and final results will be available by the end of March 2012.

Andrew **MORRIS**, reader in vehicle safety at Loughborough University, spoke about the TeleFOT project, which focuses on nomadic devices and their functions and services. Different systems are tested, e.g. traffic and travel information systems, speed limit information, personalised navigation devices, green driving advisory systems etc.

TeleFOT is co-ordinated by VTT (Finland) and the operational area is subdivided into three test 'communities' (Northern, Central and Southern Europe). Test sites are in Finland, Sweden, UK, Germany, France, Italy, Spain and Greece.

Morris pointed out that different types of evaluation have to be considered, e.g. analysis of detailed FOT data, simulations or bench-marking and consumer testing.

He stated that for large-scale FOTs a collection of both, quantitative and qualitative data is important. All vehicles should be equipped with data loggers that collect 'commonly specified data' (quantitative data). Furthermore, questionnaires or travel diaries are essential in order to gather data that explains any effects seen (qualitative data). Morris underlined that the Loughborough vehicle was purchased and modified specifically for TeleFOT – a process that has taken nearly a year. Moreover, he explained that with the FaceLab equipment it is possible to see the glance behaviour of the driver, in particular of there are differences between the status "with" or "without" a device, e.g. in challenging situations.

## Discussion

Adriaan **HEINO** recommended including research on how drivers control the steering wheel.

Ruth **WELSH** explained that there is already an investigation on this topic. The wheel position is recorded via video. Afterwards there will be a trigger-based video analysis.

Walter **HAGLEITNER** asked Andrew Morris how many heavily triggered instrumented cars are used in the study and what kind of data is received from other sources.

Andrew **MORRIS** explained about the minimum amount of data that has to be delivered by each test site.

Robert **KÖLBL** was interested standards for collection processes.

Mohamed **BENMIMOUN** replied that there is no standardisation process, yet. At the moment there is no possibility to harmonize all the different data loggers. It is still a very challenging task to find an optimum procedure.

Ken **CAMPBELL** mentioned that, to his opinion, it would be efficient to share data with other studies.

Mohamed **BENMIMOUN** replied that data sharing depends on the owner of the data, e.g. it is most unlikely that vehicle manufacturers will share their data with other projects.

Ken **CAMPBELL** and Andrew **MORRIS** pointed out that data of their projects will be available as long as the data is anonymised and privacy agreements have been given.

## The users

Trent **VIKTOR** from Volvo Technology discussed the car industry's interest. First of all, a 'safety circle' was presented that showed the vision of a methodology for preventive safety. However, the main goal has to be to record pre-crash and normal behaviour in different driving situations. Therefore, Viktor emphasised that video is exceptionally important. He underlined that the car industry is much interested to apply ND findings in new products (active prevention systems) in order to improve safe behaviour and fuel efficient behaviour. Priority research topics in this regard are fatigue & inattention, to understand crash causation mechanisms, EcoDriving and safe HMI - usage. He pointed out that the ND vision should be to aim at a representative sample of pre-crashes and baselines of driving that enables post-hoc analysis. Most of the vehicles are already equipped with a large number of relevant sensors and there will be even more in future vehicles. It should be considered to use these sources.

Subsequently, Viktor presented SAFER, its structure and the progress. 14 Partners are involved and SAFER profits from synergetic effects of ND sources like SHRP2, UMTRI and Japan.

Two of the conclusions are that 1) pre-crash analysis with video is very important – if possible triggered, if the hit rate is good enough and 2) if continuous data is collected post-hoc studies for many purposes are possible. However, a representative ND database should be envisioned.

Marika **HOEDEMAEKER** from TNO gave insight to the environmental aspects of ND. Emissions and fuel consumptions of a vehicle are determined by technical aspects (engine, after treatment, mass & aerodynamics), traffic conditions (road type, speed and the level of congestion) and the driver behaviour (driving style and use of accessories). Hoedemaeker showed figures of different emission limits over the last 30 years. Measures on fuel consumption usually are based on standardised 'driving cycles' (e.g. NEDEC – New European Driving Cycle). In this regard, ND can provide input as ND databases could be used for the development of more accurate driving cycles on basis of real word data (the cycles currently used for type approval do not sufficiently reflect real life car use at the moment). Furthermore, she pointed out that the driving style has influence on fuel consumption and an even stronger influence on emissions. Moreover, the average emissions on different road types depend on maximum speed and the level of congestion, e.g. both stop and go and highway speeding lead to high emissions. Hoedemaeker underlined that there is a strong interaction between effects on traffic flow and environment. So, ND can help to design effective intervention tools. Furthermore, ND results could be used for emission factor modelling. However, including environmental aspects in an ND study would require different parameters such as speed, time, location information and fuel consumption. Hoedemaeker concluded that important research questions from an environmental perspective would concern the driving style and shift gear behaviour, the use of accessories and various measures of behavioural aspects.

Adriaan **HEINO** from Achmea Insurance Company provided information on the interests of the insurance industry concerning the ND methodology. He reported that accident prevention and traffic safety is a big issue for the insurance companies. The ultimate objective is to offer tailored solutions for everyone. Heino stated that insurance companies usually have a lot of data. Analysis of those data revealed that most accidents occur just after leaving or before arriving. Thus, further exploration of the role of driver distraction in traffic crashes would be very interesting. Furthermore, the use and the influence of ADAS are of great interest. ND data would be very useful for analysing real-life driving behaviour. Heino concluded that there is lack of reliable scientific evidence of the effects of modern safety devices in real-life settings. Lots of devices are offered in respect to accident prevention but little is known about what people really do if they are given that equipment. Naturalistic driving studies could give answers to this question.

## Discussion

Walter **HAGLEITNER** referred to Adriaan Heino's presentation and reported that there are already answers to this question to some extent. An accident reduction of up to 40% would be possible with certain driver assistance systems. He pointed out that a truck manufacturer equipped 500 trucks with ADAS; another 500 trucks had no devices installed. Result of this study was that those truck drivers with ADAS had 50% less accidents and a cost reduction by up to 90%.

Adriaan **HEINO** agreed and added that the safety culture in general is the first thing that should be tackled.

Sylvia **SHRUBSALL** wanted to know in what case control groups are useful and a second question related to a possible correlation of risky driving behaviour and the trust in in-vehicle information systems.

Adriaan **HEINO** answered that each experiment should include a control group.

Walter **HAGLEITNER** is of the opinion that it is not the case that people compensate the effects of such systems. It is rather the other way round.

Marika **HOEDEMAEKER** added that there was an experiment related to environmental friendly driving that involved an extra control group. One group was given a feedback device without any explanations; a second group was given this device and a comprehensive training on eco-driving. The third group received this training but no feedback device. Even though there were differences in the results, this experiment showed that you can already gain something without a device.

Robert **KÖLBL** asked about comparison between manual and automatic gear-shift.

Marika **HOEDEMAEKER** stated that these cars are completely different but they did not collect figures within the research action mentioned before.

## Wrap up

Rob **EENINK** gave a brief wrap-up of the workshop. He thanked all participants for the fruitful discussions and hoped that everybody enjoyed the workshop.

## Closure

Martin **WINKELBAUER** closed the workshop at 16:30.

**Conclusions:**

- a. There is strongest interest in the new research methodology. Compared to other events of this kind, a total of 65 registrations with participants from 16 countries including USA and Canada can be considered a success. Moreover, 95% (i.e. 61) of the registered people showing up is quite uncommon for events without registration fee and another indication for commitment to the topic.
- b. There was a lively discussion, which could have been continued for much longer (and was continued during the breaks and for more than two hours after the event). Feedback clearly indicated that there is high interest in the new methodology.
- c. The core behind most of the messages received during the discussion: Research on the field of road safety is still vital. For a lot of the questions asked, researchers do not have the data available to execute this kind of research. In particular, it is exposure data and data on driving behaviour that is not available to a reasonable extent.
- d. Beyond the interest for ND in the research world, it seemed that the potential customers, e.g. the insurance industry, expect researchers to apply and exploit ND in order to answer questions, which they have so far not been able to answer.
- e. Differences and common aspects of FOTs and ND were discussed. Synergies should be used, e.g. in terms of data recording equipment and data analysis.
- f. Researchers are in favour of a real large-scale naturalistic study. It was considered that a study carried out based on a budget of around 10 million Euros can only be considered as a first step, and, for example, requiring a graduated instrumentation with a larger number of cars equipped with a basic data acquisition system and smaller sub-samples with additional instrumentation.
- g. A large-scale study not using harmonised equipment might be a strong challenge in terms of data comparability.
- h. Benefits beyond road safety are important and should be given sufficient attention in the design of a large-scale study.
- i. Data accessibility is an important issue; naturalistic research will to a wide extent be carried on the basis on post-hoc studies using existing data.
- j. PROLOGUE has succeeded in collecting a very broad background for the design of a large-scale study and prepared clear recommendations; nevertheless, given the tension between the demands by scientists and available resources, there are still many decisions to take, in particular in terms of sample size and type of data to be collected by each vehicle device.

In summary, the feedback received was very positive, and the workshop was perceived as good networking event.

**Appendix 1: List of participants of the Final PROLOGUE Workshop,  
22 June 2011, Vienna**

<b>Name</b>	<b>Organisation</b>
Michael ALEKSA	ÖFPZ Arsenal, AIT Mobility
Niccolò BALDANZINI	University of Florence
Mohamed BENMIMOUN	Institut für Kraftfahrzeuge, RWTH Aachen University
Arnaud BONNARD	IFSTTAR
Niels BOS	SWOV
Cees BOUTENS	Manager Strategy and Public Affairs of RAI
Peter BURNS	Transport Canada
Kenneth CAMPBELL	TRB (SHRP2)
Joao CARDOSO	LNEC
John CHATTERTON-ROSS	FIM
Andras CSEPINSZKY	ERTICO-ITS Europe
Stijn DANIELS	Hasselt University (IMOB)
Rob EENINK	SWOV
Anita EICHHORN	Kuratorium für Verkehrssicherheit
Friedrich EPPEL	ÖAMTC
Heinz FELBERMAYR	Stadtpolizeikommando Linz/VR
Michael GATSCHA	Test & Training International
Tina GEHLERT	GDV
Christhard GELAU	Bundesanstalt fuer Strassenwesen (BASt)
Einat GRIMBERG	Or Yarok
Claudia GRUBER	Test & Training International

Walter HAGLEITNER	ADAS_Management Consulting
Mohammad Mahdi HAJIZAMANI	CESUR, Instituto Superior Tecnico
Shalom HAKKERT	Ran Naor Foundation for road safety research
Adriaan HEINO	Achmea
Marika HOEDEMAEKER	TNO
Robert KÖLBL	Kuratorium für Verkehrssicherheit
Tsippy LOTAN	OR YAROK
Dimitris MARGARITIS	CERTH-HIT
Andrew MORRIS	Loughborough University
Steffen NIEMANN	Swiss Council for Accident prevention
Cornelia NUSSBAUMER	Kuratorium für Verkehrssicherheit
Andrew PARKES	TRL
Tibor PETZOLDT	TU Chemnitz, Germany
Monika PILGERSTORFER	Kuratorium für Verkehrssicherheit
Klaus ROSINO	Kuratorium für Verkehrssicherheit
Martin RUDIGIER	Virtual Vehicle Research and Test Center
Fridulv SAGBERG	Institute of Transport Economics
Peter SALEH	Austrian Institute of Technology AIT
Johann SCHADWASSER	BPD St.Pölten
Friedrich SCHMIDHUBER	Traffic Police
Eike SCHMIDT	BASt
Florian SCHNEIDER	Kuratorium für Verkehrssicherheit
Peter SCHWAIGHOFER	Kuratorium für Verkehrssicherheit
Silvia SHRUBSALL	CESUR, Instituto Superior Tecnico

David SHINAR	Ben Gurion University of the Negev
Bahareh TAVALLAEE	CESUR, Instituto Superior Tecnico
Anita TONTSCH	INTRAS. Universitat de Valencia
Truls VAA	Institute of Transport Economics
Pedro VALERO-MORA	UVEG
Ellen VAN DER HIJDEN	SWOV
Richard VAN DER HORST	TNO
Nicole VAN NES	SWOV
Ingrid VAN SCHAGEN	SWOV
Hengar VEGA	Fundación CIDAUT
Trent VICTOR	Volvo Technology
Fred WEGMAN	SWOV
Peter WEISS	Steiermärkische Landesregierung
Ruth WELSH	Loughborough University
Martin WINKELBAUER	Kuratorium für Verkehrssicherheit
Ales ZAORAL	CDV