# **SAFE SAFE highways of the future** 12, 13, 14 February 2008 Brussels, Belgium

A conference exploring technologies and changes required to enable zero deaths on Europe's roads to become a reality



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testing

"DYNAMICS







The three-day event will unveil, discuss and debate the technologies and approaches that could reduce road deaths to zero. Leading industry experts will present research and new technologies ranging from vehicle safety systems to intelligent road design, encompassing human factors and implementation strategies. The event will look towards the goal of a fully automated highway.

# **TOPICS TO BE COVERED**

# SAFER VEHICLES BY DESIGN

The conference will look at future developments in passive safety and how it can mitigate the consequences of collision particularly with vulnerable road users but it will also encompass the technology of predicting, warning and automatically intervening to avoid collisions. Integrating both passive and active safety is also an approach which warrants serious consideration. In addition the Vehicle Design Challenges Workshop will discuss the competing and often contradictory demands placed on vehicle designers in creating safer vehicles.

# **SAFER ROADS BY DESIGN**

The conference will look at what safety advances might be expected in the design of new roads over the next twenty years. Addressing the improvement of existing roads is, however, far more problematic. Common sense improvements can always be made to re-engineer accident blackspots, to create roadside clear zones, to increase lane widths, to protect cyclists and pedestrians and to improve maintenance. Even simple tasks such as cutting back foliage where it impedes sightlines can assist. The conference will look at the cost effectiveness of these initiatives and also investigate real world improvements.

# AUTOMATED VEHICLES AND HIGHWAY SYSTEMS

Intelligent cooperative systems are the next big challenge in automotive electronics and ITS. These systems, based on V2V and V2I communications, hold the promise of great improvements in the safety of all road users. Intelligent cooperative systems will build and expand on the functionality of the autonomous and standalone invehicle and infrastructure-based systems and offer increased information about the vehicles, their location and the road conditions to the road and infrastructure operators, creating the basis for a safer highway.

# **HUMAN FACTORS**

The human factors stream investigates issues concerning the presentation of available information to the driver as well as new techniques that will positively influence actual driver behaviour. The demand for new safety technology by consumers will rely on their usability and so their design is crucial in creating consumer demand. The conference will investigate the different models for bringing this technology to market.



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# 12, 13, 14 February 2008 – Brussels, Belgium



# OPENING SESSION 09.30-13.00

TUESDAY 12 FEBRUARY 2008

## Moderator

Professor Oliver Carsten, director of the Institute of Transport Safety & Professor of Transport Safety, University of Leeds

### 09.30 - 09.40 Opening Address Samuel Gee, conference director, UKIP Media Events

09.40 - 10.10 KEYNOTE PRESENTATION

# Zero deaths is the most rational long-term safety target



Claes Tingvall, director general, Swedish Road Administration 'Eradication philosophy' makes a lot of sense. It is the type of approach that can lead us further than just intermediate targets or simply trying to make things a bit better every year. Vision Zero should be seen as the management tool for road safety in a modern society. The success and outcomes of this approach in Sweden will be discussed as well as some of the products and innovations that have resulted.

# 10.10 - 10.30 Accident causation issues and evaluating the safety benefits of technologies



Yves Page, deputy director, Laboratoire d'Accidentologie, de Biomécanique et d'études du comportement humain (LAB) PSA Peugeot Citroën - Renault

The general objective of the TRACE project (TRaffic Accident Causation in Europe) is to provide stakeholders, the suppliers, the vehicle industry and the other integrated safety programme participants with a scientific overview of the road accident causation issues in Europe. The idea is to identify, characterise and quantify the nature of risk factors, groups at risk, specific conflict driving situations and accident situations; and to estimate the safety benefits of a selection of technology-based safety functions.

## 10.30 - 10.50 Accident Scene 2020 - trends in a changing accident environment



### Dr Robert Zobel, head of accident research, Volkswagen AG

The future development of vehicle safety will be driven by accident avoidance much more than by injury mitigation. Rating systems of passenger vehicles should take this into account. Regulation, compliance testing and rating systems like the different international NCAP organisations should also take this into account. Accident avoidance is always the better solution. Future development should reflect this widely accepted philosophy. NCAP ratings should make sure that a 'best pick' is really a best pick based primarily on accident avoidance and not just with respect to injury mitigation.

# 10.50 - 11.10 COFFEE BREAK

11.10 - 11.30

# Integrated safety for improved structural crashworthiness



Eric Zimmerman, manager safety and generic development R&D innovation, Faurecia Innenraum Systeme GmbH

Successfully integrating passive safety features such as crashworthiness with active safety techniques can help in the development of pre-crash systems which improve safety. This presentation looks at a practical example of this approach, which was able to dramatically improve structural behaviour in a side crash. This is but one of many concepts which prove that you can successfully integrate passive and active safety systems.



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# 11.30 - 11.50 Creating a safe commercial road transport sector - a challenge for industry as well as society



### Lars-Göran Löwenadler, safety director, Volvo Truck Corporation

The growth in the European road sector has been significant and a transfer to other transport modes is not an option. Different means are required to increase the capacity of the transport system, like allowing for larger vehicle combinations, up to 60 tons GVW. However, fatal accidents or severe injuries must not simply be accepted. This is a huge challenge, which has to be approached by all stakeholders together: road authorities, transport industry, legislators and the road users.

## 11.50 - 12.10 Euro NCAP's achievements and future direction



Professor Adrian Hobbs, BSc, Ceng, FIMechE, European New Car Asssesment Programme (Euro NCAP)

Over the last decade or so, Euro NCAP has provided the greatest incentive to encourage car manufacturers to improve the crash protection of their products. This has contributed to improved car secondary safety being responsible for the greatest reduction in road accident casualties in that period. For the future, there is great potential for Euro NCAP to encourage further improvements in both primary and secondary safety, through the provision of consumer information.

# 12.10 - 13.00 Panel Discussion

Professor Claes Tingvall, Yves Page, Dr Robert Zobel, Professor Adrian Hobbs, Lars-Göran Löwenadler, Eric Zimmerman.

## 13.00 - 14.00 LUNCH



Lunch for delegates will be served in the Salon Grande Place and will provide an excellent opportunity for delegates and speakers to carry on their discussions informally and to network with other delegates.

### NOTES



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# **SESSION 2 14.00-18.00** TUESDAY 12 FEBRUARY 2008

**PreVENT Integrated Project Special Session** 

## Moderator

Professor Oliver Carsten, director of the Institute of Transport Safety & Professor of Transport Safety, University of Leeds

# 14.00 - 15.20



Dr Maxime Flament, head of sector - safety & security, ERTICO ITS Europe The PReVENT Integrated Project envisions the early availability of advanced, next-generation preventive and active safety applications and enabling technologies to achieve accelerated deployment on European roads. PReVENT demonstrates, tests and evaluates preventive safety applications, using advanced sensor, communication and positioning technologies. It facilitates the cooperation of all stakeholders: automotive OEMs, automotive suppliers, research institutes and universities, and public and road authorities. The technologies described in this presentation will underpin the active safety systems of the future for safe speed and following, for lane change assistance and departure warning, for intersection safety and for collision mitigation and the protection of vulnerable road users.

## Creating a cost-effective integrated safety system



Agneta Sjögren, intelligent vehicle technologies, Volvo Technology Corporation To prepare for future cost-effective and usable safety systems there are several issues that need to be addressed. First of all, the number of components. It is essential that the number of sensors and other components is kept low in order to save cost. This means that sensors must be able to support multiple applications, HMI devices should be flexible and the software should be portable between different ECUs. Second, since we are mainly discussing safety systems, reliability is of the highest importance.

## Laser scanners for multiple safety applications



Kay Fürstenburg, research director, IBEO Automobile Sensor GmbH

Future driver assistance systems will provide road users with enhanced comfort and safety. Driven by the vision to further reduce the traffic accident numbers IBEO Automobile Sensor GmbH is developing laser scanners for driver assistance systems. A single laser scanner – as opposed to conventional sensor systems – possesses the capability of supporting numerous applications like ACC Stop & Go, Automatic Emergency Brake, Pre-Crash, Pedestrian Protection or Lane Departure Warning.

## Real-time updating of in-vehicle digital maps



### Kees Wevers, Navteq

In the near future it will become possible to send incremental map updates to in-vehicle systems. The public road authorities implement the changes in safety-relevant road attributes, particularly traffic signs and speed limits, and are the most efficient source of information for in-vehicle digital map providers. The prerequisites for an efficient data chain are adequate data storage and maintenance at authorities, a flexible and robust data exchange infrastructure, and automatic data integration at map providers.

# 15.20 - 15.40 COFFEE BREAK

15.40 - 16.00

### Creating safety through intelligent cooperative systems Paul Kompfner, head of development, ERTICO - ITS Europe The CVIS Project



Intelligent cooperative systems are the next big challenge in automotive electronics and ITS. These systems, based on V2V and V2I communications, hold the promise of great improvements in the safety of all road users. Intelligent cooperative systems will build and expand on the functionality of the autonomous and standalone in-vehicle and infrastructure-based systems and offer increased information about the vehicles, their location and the road conditions to the road and infrastructure operators, creating the basis for a safer highway.



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# 16.00 - 16.20 Future digital mapping technologies for road safety



## Rob van Essen, vice-president, strategic research and development, Tele Atlas

In the past years extensive research and development of in-car safety applications has taken place. One of the sensors considered in these systems is the digital map. Requirements for this sensor are not fulfilled by maps currently available which have been developed for navigation applications. Increased accuracy, content and quality requirements apply. One particularly important aspect of quality is the updating of digital maps. The paper will describe technology and process improvement by which these requirements will be met.

# 16.20 - 16.40 Integrating navigation data and ADAS systems

### Christian Ress, FORD Research/ADASIS

Advanced driver assistance systems (ADAS) such as adaptive cruise control or adaptive light control are of major importance to road safety. ADAS currently uses information generated by sensors. But navigation systems provide the ability to predict the road geometry, with its related attributes, ahead of the vehicle and should obviously benefit ADAS applications and offer new functionalities. This presentation looks at the technological challenges and the safety potential of integrating navigation data and ADAS systems.

## 16.40 - 17.00 WLAN based cooperative system for increased road safety



### Martin Karnitschnig, advanced development, MAGNA STEYR

Magna Steyr is developing a cooperative system for car2infrastructure communication. Data from vehicles is collected, calculated and condensed into key figures and sent to the infrastructure via WLAN. The infrastructure has additional data about road and weather conditions and answers with an individual speed recommendation for the vehicle. To evaluate the system, MSF is running a test track on the highway near Graz with WLAN data transfer, weather measurement and, the scientific reference of the traffic a video monitoring system.

### 17.00 - 17.20



### How accurate 3D road geometry can make vehicles of the future safer Stefan Engels, director, Intermap Technologies GmbH

A revolutionary digital mapping technology now allows contiguous 3D digital surface and terrain data to be collected quickly and efficiently. This accurate 3D map data can enable future predictive map-based ADAS applications, such as adaptive headlights, curve, hill and pass warnings and enhancements to ACC, ESC, lane departure warning systems and other applications, making the highways of the future far safer to navigate.

# 17.20 - 18.00 Panel Discussion

Dr Maxime Flament, Agneta Sjögren, Kay Fürstenberg, Kees Wevers, Paul Kompfner, Rob van Essen, Christian Ress, Martin Karnitschnig, Stefan Engels

# 18:00 – 19:00 Welcome Reception

UKIP Media & Events Welcomes you to Safe Highways of the Future 2008 and invites all attendees to joins us for drinks and canapés.

### NOTES

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# SESSION 3 09.00-13.00

WEDNESDAY 13 FEBRUARY 2008

# Moderator

Dr John C. Bullas, research consultant Highways Asset Management Group, Atkins Highways and Transportation

09.00 - 09.30

# **KEYNOTE PRESENTATION** Getting organised to make roads safe

John Dawson, chairman, European Road Assesment Programme (EuroRAP), chairman, International Road Assessment Programme (IRAP), secretary, FIA Foundation for the Automobile and Society

In the last decade, 2 million Europeans have lost their lives or suffered crippling injury on our roads. Road casualties bleed away 2% of European GDP. Until EuroRAP, there were no internationally recognised standards for governments, consumers or engineers to measure the safety of the roads we use every day. Roads were assumed to be safe if they met the engineering standards of the time when they were built. EuroRAP has now revealed that the way roads are managed falls well short of what can be achieved. Yet investing in safer roads often requires little more than the organisation involved to install road markings and safety fencing. These programmes have some of the highest returns available anywhere in the European economy. In a handful of years, EuroRAP has grown from a 4-country pilot to become a major force for change in over 20 European countries. The programme is now being replicated in every part of the world, supporting the growing political calls that our roads should be made safe.

# 09.30 - 09.50 Reducing casualties in major routes: a case study of success on the Pacific and Princes Highways in New South Wales



### Michael De Roos, manager, safer roads, Roads and Traffic Authority of NSW

The Pacific Highway links Sydney, the capital of New South Wales (NSW) and Queensland's capital, Brisbane, with 700km in NSW. Following a sharp rise in fatalities in 2003, the Roads and Traffic Authority of New South Wales conducted a multi-disciplinary Highway Safety Review. This paper details the review, strategic plan and \$35 million integrated road safety program that reduced fatalities from 55 in 2003 to 25 in 2006, with injuries declining from 617 to 483 in the same period. Similarly, the Princes Highway (430km) Safety Review resulted in a \$30 million safety program which was also successful in reducing fatalities and injuries. Benefit cost ratios for the works are estimated to be up to 11 to 1. The Newell Highway Safety Review in western NSW used the same methodology.

# 09.50 - 10.10 Effective road safety enhancement through road infrastructure assessment and recommendations

### José Miguel Perandones, research engineer, ERF

The 'three safety pillars': human, vehicle, and infrastructure are often addressed and budgeted for separately. This does not allow for the cost efficiency of systems and measures to be compared. RANKERS (RANKing for European Road Safety), pursues the ambitious objective of developing scientifically-researched guidelines enabling optimal decision-making by road authorities in their efforts to promote safer roads and eradicate dangerous road sections. RANKERS is a research project, co-funded by the European Commission, designed to gain new knowledge by performing research and empirical studies of the road's interaction with the driver and his vehicle in order to identify optimal road recommendations and predict their impact on safety.

10.10 - 10.30 Automatic incident video detection: future technology for traffic safety

## Jo Versavel, managing director, Traficon NV



Most major roads suffer from increasing traffic density resulting in more accidents and a larger risk of secondary accidents. Effective incident management depends completely on fast incident detection and verification of incidents. A high detection rate, a short reaction time and a low false alarm rate are the key characteristics required.

# 10.30 - 10.50 COFFEE BREAK















# 10.50 - 11.10 Safer roadside design for the future: lessons from the real world



Claire Naing, senior research officer, Vehicle Safety Research Centre Loughborough University

A large proportion of European road casualties result when a vehicle leaves the main carriageway. Through the use of real-world accident data, the RISER project highlighted the main issues to consider when designing roadsides, including the treatment of hazards such as poles, trees or slopes, the benefits of using 'crash-friendly' systems and the response of drivers to roadside objects. From this, it has been possible to develop guidelines which can aid road designers, road operators and manufacturers of road equipment in improving the safety of roadsides for the future.

## 11.10 - 11.30 Safe design of rural road cross-sections



Andreas Hegewald, highway design safety analysis, German Federal Highway Research Institute (BASt)

When focusing on safe design of rural roads it is important to consider not only major highway systems and trunk roads but also rural roads with a minor traffic importance. This presentation will deal with the appropriate layout of small rural road cross-sections which will help to improve road safety on minor roads.

# 11.30 - 11.50 Stopping more safely and more quickly: the road surfaces of the future



Dr John C. Bullas, research consultant Highways Asset Management Group, Atkins Highways and Transportation

To date, new road surfaces have been designed without any intentional consideration for whether these new designs provide better braking for ABS-equipped vehicles than the older, more traditional materials they are replacing. Recent research suggests that the increasing proportion of our road networks surfaced using modern materials may provide significantly improved emergency braking capability for those driving the ever-increasing proportion of automobiles that are ABS equipped.

# 11.50 - 12.10 New standards for safety management of highway projects



David Boulton, senior manager sustainability and risk practice, Arthur D Little; Ryszard Gorrell, principal safety consultant intelligent safety solutions group, Mouchel Parkman

UK Highways Agency projects have traditionally used a prescriptive approach to demonstrating safety, relying on adherence to detailed standards. However, this approach is becoming less appropriate for the more complex and innovative systems being installed now and in the future. This presentation will describe the work on these new approaches aimed at creating the right level of safety management for a wide range of projects.

12.10 - 13.00 Panel Discussion

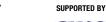
John Dawson, Michael DeRoos, José Miguel Perandones, Jo Versavel, Claire Naing, Andreas Hegewald, Dr John C. Bullas, David Boulton, Ryszard Gorrell

## 13.00 - 14.00 LUNCH

# NOTES

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# **INTELLIGENT ROADS WORKSHOP**



# SESSION 4 14.00-17.30

WEDNESDAY 13 FEBRUARY 2008

# **INTRO Workshop**

With EC funding, the three-year INTRO (Intelligent Roads) project has developed innovative methods to increase the capacity of road infrastructure and maximise the safety and well-being of drivers, passengers, crew and pedestrians. These involved the use and combination of existing technologies as well as combining them with developing technologies in the fields of road surface safety monitoring; traffic and safety monitoring; and intelligent pavement and intelligent vehicles.

# Moderator

Steve Phillips, secretary general, Forum of National Highways Research Laboratories (FEHRL)

# **Panel Members**

Leif Sjögren, project manager of INTRO, VTI Alex Wright, project manager, TRL Transport Research Laboratory Andrew Winder, senior project manger, Egis Mobilité Edward Chung, scientific collaborator, EPFL Ecole Polytechnique Federale de Lausanne Stefan Deix, project manager, arsenal research Xavier Cocu, researcher, BRRC (Belgian Road Research Centre) Karl-Joseph Hohnscheid, FEHRL executive committee member, BASt Luisa Prista, head of unit 'surface transport', European Commission (RTD)

# **DELEGATES MAY ATTEND EITHER WORKSHOP**

The INTRO Workshop is also open to non-delegates as a standalone workshop. A fee is payable by non-delegates.

# **VEHICLE DESIGN CHALLENGES WORKSHOP**



# **SESSION 5 14.00-17.30** WEDNESDAY 13 FEBRUARY 2008

# Achieving vehicle safety improvements in an environment of conflicting requirements

Environmental and safety measures, both regulatory and market based, are putting huge pressures on the industry and governments to achieve order of magnitude improvements for consumers and society as a whole. In the case of safety, for example, measures to improve vehicle and occupant survivability often result in extra weight, which works against CO2 reduction. In the deployment of resources, there is also a conflict: there are not infinite resources to undertake all improvements on all fronts – something has to give. This workshop will explore these issues and discuss the possible approaches that vehicle designers can take towards reconciling these competing challenges.

# Moderator

Professor Oliver Carsten, director of the Institute of Transport Safety & Professor of Transport Safety, University of Leeds

# **Panel Members**

Brian Knibb, Knibb Gormezano and Partners Wolfgang Reinhardt, director, regulatory affairs, European Automobile Manufacturers' Association (ACEA) Jörg Breuer, senior manager, development, active safety, Mercedes Benz Cars Adrian Hobbs, BSc, Ceng, FIMechE, European New Car Asssesment Programme (Euro NCAP) Lars-Göran Löwenadler, safety director, Volvo Truck Corporation















# **SESSION 6 09.00-13.15**

THURSDAY 14 FEBRUARY 2008

## Moderator

Robert Gifford, executive director, Parliamentary Advisory Committee on Transport Safety (PACTS)

# 09.00 - 09.30 KEYNOTE PRESENTATION

Importance of co-funding integrated projects like PReVENT and an overview of where EC research will go after PReVENT



Andre Vits, head of unit ICT for transport, European Commission It is vital that the EU supports research efforts by co-funding research into ICT for transport. Almost 40,000 Europeans lose their lives on the roads every year and human error is responsible for 90% of the 1.7 million accidents. By reducing the opportunity for human error ICT could impact this number significantly. These accidents, deaths and injuries annually cost Europe 2% of its GDP.

09.30 - 09.50 Advancing sustainable safety: road safety in the Netherlands 2005-2020



Fred Wegman, managing director, SWOV Institute for Road Safety Research In 2005 SWOV published a perspective for the coming 15 years, entitled Advancing Sustainable Safety. This presentation will outline issues that will characterise the next 15 years in road safety and how SWOV believes they can be approached.

# 09.50 - 10.10 Estimating the effects of ADAS introduction on safety: effects of scenario and system



# Professor Oliver Carsten, director of the Institute of Transport Safety & Professor of Transport Safety, University of Leeds

This presentation looks at the interplay between system effectiveness and scenarios for system introduction affecting predicted accident savings. Examples of systems such as eCall and SpeedAlert/ISA (Intelligent Speed Adaptation) will be used. A major issue in determining the safety potential of such systems is whether the market can be relied on to deliver high penetration rates or whether there is a need for additional encouragement to fit and use the systems.

## 10.10 - 10.30 Improving the credibility of, and compliance with, speed limits: a real-world approach



### Nicolas Hautière, researcher, Laboratoire Central des Ponts et Chaussées (LCPC)

Drivers learn to anticipate difficulties in a natural way. This behaviour may provide insights into how all drivers should behave, and it may not be always consistent with information as simple as mandatory speed. In the French ANR DIVAS project, the speeds adopted by experienced drivers were used to obtain a nominal speed profile. A composite risk function was then used to compute a customised adaptive speed profile, which takes into account the current state of the road. Compared to purely computational approaches, this hybrid empirical and computational approach may be used to update speed limits and improve their credibility.

# 10.30 - 10.50 COFFEE BREAK

10.50 - 11.10



Yvon Loyaerts, head of division, Conference of European Directors of Roads (CEDR) Clearly there are differences in casualty statistics across the countries of Europe. Some of this may have to do with infrastructure, but some has to do with safety culture. If we are to reduce casualties Europe-wide over 10-20 years, this issue will need to be addressed.







Creating common safety standards on Europe's roads









11.10 - 11.30

Casualty reductions beyond 2010: the challenges ahead Robert Gifford, executive director, Parliamentary Advisory Committee on Transport Safety (PACTS)

> The current targets for casualty reduction in Great Britain come to completion in 2010. This presentation will look at progress to date and highlight the areas where further improvement is needed to deliver further significant reductions. In particular, the need for more comprehensive government involvement, for political leadership and for more partnership working.

Dr Alan Stevens, chief research scientist, Transport Research Laboratory (TRL)

11.30 - 11.50

# User-centred design for driver assistance and cooperative vehicle-highway systems



This presentation will consider how the use of human factors data, principles and methods can be used to help design and evaluate systems that provide driver assistance, and those that require cooperation between the vehicle, the driver and the highway system. By using experience from European projects and specific work in the UK, it will illustrate how a driver-centred approach is currently being used, and how it might be used in the future as systems become partially automated.

### 11.50 - 12.10 A user-centred approach in designing FIAT group semi-automatic parking: Fiat Research Centre experiences



Amon Rambaldini, senior researcher product ergonomics, Fiat Research Centre The user-centred approach was used to design the HMI of the semi-automatic parking system developed by FIAT Group Automobile. The main purpose was, through an iterative process, to identify the best solutions to safely drive the user's interaction. The HMI design focused on interaction logics, labels, icons, integration priority with other vehicle functions with great attention to clarify the switch from the semiautomatic control to the user's control and vice-versa.

### 12.10 - 12.30Sensor data fusion – the basis for powerful driver assistance systems



### Dr Andreas Teuner, chief engineer, Delphi Safety Europe

Intelligent sensing and processing of environmental information enables the realization of forward looking systems to mitigate the impact of and to avoid collisions. This presentation provides an overview of Delphi's global competence in the development and manufacturing capabilities in the area of sensors and driver assistance systems. Based on the current developments the realization of future safety relevant applications using refined sensor data fusion will be discussed.

### 12.30 - 13.15 **Panel Discussion**

Andre Vits, Fred Wegman, Professor Oliver Carsten, Nicolas Hautière, Yvon Loyaerts, Robert Gifford, Dr Alan Stevens, Amon Rambaldini, Dr Andreas Teuner

### NOTES

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# **SPEAKERS**



### **Professor Claes Tingvall Dr Med Sc** Director of traffic safety at the Swedish Road Administration. Chairman of EuroNCAP

Claes Tingvall has held positions related to traffic safety since 1976, and has mainly published in the area of injury epidemiology, vehicle occupant protection and design methods for in-depth analyses of accident data collected in the field. More recently, Claes Tingvall was director of the Monash University Accident Research Centre, Australia, where he currently still holds a professorship. Since 2001, Claes Tingvall has been director of traffic safety in Sweden.



### Yves Page

Deputy director Laboratoire d'Accidentologie, de Biomécanique et d'études du comportement humain (LAB) PSA Peugeot Citroën - Renault

Yves Page has been deputy director of the Laboratory of Accidentologie, Biomechanics and human behaviour studies PSA Peugeot Citroën-RENAULT (LAB) since May 2004. He is responsible for accident research and primary safety, indepth accident investigations and analysis as well as the evaluation of the effectiveness of e-safety systems. He has worked at the Road Safety Department of the French Ministry of Transport and also coordinated the accident analysis at the European Centre for Safety Studies and Risk Analysis (CEESAR). He is a Fellow of the French Society of Statistics (SFdS) and of the Association of Francophone Epidemiologists. He has published about 50 articles and reports about road safety in the last 15 years.



## **Dr Robert Zobel**

Head of accident research, Volkswagen AG

Dr Robert Zobel is head of accident research for Volkwagen AG and has teams working in Germany, the Czech Republic and China. His main topics of interest are biomechanics, advanced driver assistance systems and the structural behaviour of cars in front- and side-impact crashes. He has been at Volkswagen since 1980; prior to that he was assistant professor at the Technical University of Braunschweig.



## Professor Adrian Hobbs, BSc, CEng, FIMechE

### European New Car Assessment Programme (Euro NCAP)

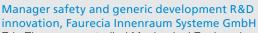
Adrian Hobbs was secretary general of Euro NCAP up to 2007. Prior to this he was chief research scientist of vehicle safety at the Transport Research Laboratory in the UK. He was responsible for initiating the development of EuroNCAP. Adrian was also responsible for the UK programme of Crash Injury Research, which he led for 30 years. This was preceded by 'on-the-spot' research into road accident causation. He has provided advice to the World Bank, the World Health Organisation, the European Commission and Central European and North African countries on the prevention of accidents and injury and on vehicle safety.



### Lars-Göran Löwenadler Safety director, Volvo Truck Corporation

Lars-Goran Lowenadler holds a Masters degree in Engineering Physics from Chalmers University of Technology and joined the Volvo Group 1973. Since 2002 he has been the safety director of Volvo Trucks and is responsible for the strategic planning of safety-related products, as well as supervising the development process and the outcome of safety projects. In 2004 he was personally nominated as one of 12 members of the European Commission's Group of Experts on Accident Investigations in Transport. He is chairing the board of STM (Swedish Industrial Group for Applied Mathematics) and Volvo Trucks Safety Council, and is a member of many groups and networks in the area of road safety.

## **Eric Zimmerman**



Eric Zimmerman studied Mechanical Engineering at the University of Kassel. He has been involved in the development of exterior and interior mirrors and safe door modules and has led a team developing door modules for the Ford Fiesta. Since 2003 he has been involved in the EU-Project APROSYS (Advanced Protection Systems), aiming to develop effective pre-crash safety systems. Since 2005 he has been manager, innovation structures and safety, at Faurecia Interior Systems, Scheuerfeld.



### **Dr Maxime Flament** Head of Sector - Safety & Security, **ERTICO ITS Europe**

Maxime Flament holds a degree in Civil Engineering from Université Libre de Bruxelles and an MSc EE and PhD EE in Digital Communication Systems from Chalmers University of Technology, Gothenburg, Sweden. Maxime joined ERTICO in January 2004 and his areas of expertise are in advanced driver assistance systems, active safety systems, map-based applications, telematics, wireless communication systems and technologies.



# **Paul Kompfner**

ERTICO – ITS, CVIS Project

Paul Kompfner has a BA Physics (and Philosophy), University of California, San Diego, USA and undertook post-graduate research in Astrophysics, University of Oxford, UK. He is a Fellow at The Institution of Highways



and Transportation.

## Kay Furstenberg

Director of research, IBEO Automobile Sensor GmbH

Kay Furstenberg has a degree in electrical engineering from the Technical University Hamburg. He has been involved in the development of algorithms for detection, tracking and classification of objects in the vehicles environment using laser scanners. Since 2004 he has been director of research, IBEO Automobile Sensor GmbH, coordinating the research activities of IBEO and planning the IBEO contribution to European projects.







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# **SPEAKERS**



# **Kees Wevers**

Navteg Kees Wevers holds a Masters degree in Chemistry from the University of Utrecht and a Bachelor degree in Economics from the University of Rotterdam. He has been with NAVTEQ since 1992. He is an expert in digital map databases, their application in navigation systems and other ADAS applications, and in location referencing. He is chair of the Location Referencing Group of the TMC Forum and has extensive experience in EU-funded research projects.



# Agneta Sjögren

Intelligent Vehicle Technologies, Volvo **Technology** Corporation

Agneta Sjögren holds a Master of Science degree in Electrical Engineering from Chalmers University, and started working for Volvo immediately after graduation. Her early focus was on driver assistance systems; developing filters, target trackers and control algorithms. Over the last few years her main responsibility has been as the project manager of INSAFES, a PReVENT subproject including 10 partners with a total of about 350 man-months. More recently she has taken responsibility for coordinating activities in the area of integration and automation within Volvo Technology.



# Stefan Engels

Director, Intermap Technologies, GmbH Stefan Engels brings more than 12 years'

experience as a general manager and international key account manager for PTV AG (formerly MAP&GUIDE GmbH), Motorola, ReBASE International Group, Deutsche Telekom, DaimlerChrysler Services, and UPS Deutschland. Stefan leads the automotive division of INTERMAP Technologies as the director of business development for Europe, Middle East and Africa (EMEA).



## John Dawson

chairman, European Road Assesment Programme (EuroRAP), chairman, International Road Assessment Programme (IRAP), secretary, FIA Foundation for the Automobile and Society

John Dawson is Chairman of EuroRAP, the European Road Assessment Programme, the first regional road assessment programme which he has led since its genesis in 2000. He is also Chairman of iRAP, the International Road Assessment Programme, which was established in 2006 to coordinate Road Assessment Programmes worldwide, and Secretary of the FIA Foundation for the Automobile and Society.



# **Robert Gifford**

### **Executive director Parliamentary Advisory Committee on Transport Safety (PACTS)** Robert Gifford is executive director of the Parliamen-

tary Advisory Council for Transport Safety (PACTS) He is a member of the Ministerial Road Safety Advisory Panel. Since 1997 he has acted as a special adviser on transport safety matters to the House of Commons Transport Select Committee. He sits on the Safety Advisory Board set up by the Rail Safety and Standards Board and on the National Steering Group of t he Driver Offender Retraining Group. He is also an external research adviser for the Department for Transport on road and vehicle safety.

### Michael de Roos Acting manager, safer roads, New South Wales Centre for Road Safety

Michael de Roos started working as a road designer with the Roads and Traffic Authority (RTA) in 1989. Since 1999 Michael has worked in the RTA Corporate Office, where he has conducted research into behavioural and engineering issues and developed policies and strategies that incorporate engineering, enforcement and behavioural programmes. Michael managed the installation of the first fixed digital speed cameras in Australia, reviewed and rewrote the NSW Speed Zoning Guidelines and has developed and implemented a programme that re-engineers local roads so that they are safe for pedestrians. Michael manages and influences road safety outcomes across NSW, through the development, implementation and promotion of the 'safe system' approach to road safety.



### Claire Naing Senior research officer - Vehicle Safety Research

Centre, Loughborough University

Claire Naing has worked on a number of UK government-funded projects investigating vehicle conspicuity and driver vision. Claire has worked on the European-funded RISER project (Road Infrastructure for Safer European Roads), coordinating the development, data input and analysis of an in-depth accident database for single vehicle accidents for the project. Currently Claire is working on the European project TRACE (TRaffic Accident Causation in Europe), and has close links with the UK Department for Transport funded OTS (On The Spot) project, specialising in highways-related research.

# **Dr John Bullas**

Research consultant, Highways Asset Management Group, Atkins Highways and **Transportation** 

John Bullas is a 'forty-something', 'born-again student' who took research for the AA Motoring Trust forwards into a PhD study at the University of Southampton. A graduate geologist and geotechnical engineer, he lives with his computers, cars, cats and wife on the south coast of England.



# Andreas Hegewald

Highway Design Safety Analysis, German Federal Highway Research Institute (BASt)

Andreas Hegewald graduated in 2006 as a Traffic Engineer with special emphasis on traffic planning from the Technical University of Dresden. Since 2006 he has been working as a scientist at the Federal Highway Research Institute (BASt), section V1 Traffic Planning, Highway Design and Safety Analyses.



## 📱 Jo Versavel

Managing director, Traficon n.v.

Jo Versavel started his career as head of R&D at Barco in 1972 (until 1982). During this period, he started a project in cooperation with the University of Louvain. The result was their first CCD camera. This CCD camera was used as a basis for developing the first prototype for traffic video detection in the world. In 1982, he was co-founder of N.V. DEVLONICS. An agreement was made with the University of Louvain to commercialise this traffic video detection prototype. In 1992, he founded TRAFICON N.V.

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# **SPEAKERS**



### **Steve Phillips**

FEHRL secretary general, Brussels Working together on intelligent roads on European level reinforces national efforts in making road traffic safer, greener and smarter. Cooperation with new member states contributes to solving a variety of challenges related to road management and road research.

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# Leif Sjögren

Senior researcher, VTI, Sweden In March 2005, a group of European experts

started a three-year journey to make the road they travelled on more intelligent. This trip became the project called INTRO - Intelligent Roads - a European FP6 project sponsored by the European Commission DG RTD. At the end of the project the group is happy to share their results and experiences.



### Andrew Winder

Senior project manager, Egis Mobilité, France An intelligent road should provide full information to the road operator and traffic/police authorities

on the road surface condition and traffic conditions (speed, density, vehicle classes, pollution levels, traffic rule violations, etc) and provide means for the operator to inform, advise and instruct drivers (traffic control, hazard warnings and traveller information) in a targeted way, without overloading them with non-relevant information.



## Stefan Deix

Project manager, arsenal research, Austria

The "intelligent road" should contribute actively to increase road safety by identifying high-risk section in the road network at an early stage. For example, sudden changes in road conditions (dry/wet/snow) lead to

lower road adherence and therefore to longer stopping distances due to low skid resistance. Especially in combination with blind bends the risk potential increases. To forward these safety relevant changes to the road user as well as the road operator is one of the intelligent road's functions.



## Alex Wright

# Group manager, TRL, United Kingdom

The efficient operation and maintenance of the road network relies on the availability of accurate and up to date information on pavement condition. As traffic levels continue to increase, it has become essential that the acquisition of this information be made with little or no disruption to traffic flow. Work Package 3 of INTRO aims to provide new methods of assessing the condition and deterioration of highway pavements and structures. This includes the in-situ measurement of pavement condition, measuring pavement condition using probe vehicles, and combining these approaches to provide a more complete picture of the condition of the network.

# Martin Karnitschnig

### MAGNA STEYR Fahrzeugtechnik AG & Co KG

After his studies at the University of Applied Science Technikum Wien, he joined Magna Steyr working in Advanced Development. In this role he focused his expertise on traffic safety programs. Since 2005 he has led the highways division.



# **Edward Chung**

Scientific collaborator, EPFL, Switzerland Driver's behaviour is responsible for a majority of

traffic crashes and systems that warm drivers of their risky behaviour would help avoid or prevent crashes. Road crashes are also a main cause of non-recurrent congestions and providing better traffic information would maximise the utilisation of road infrastructure.



# Xavier Cocu

Researcher, FEHRL BRRC, Belgium

Looking into the future always is a challenge. How

our road will be in 30 years depends on many factors. How will our society be within some decades? What do citizens demand from a road and the road authority. What does the vehicle of the future demand from the road? What does the road authority need from the road? The INTRO Vision on Intelligent Roads tries to give an answer to these questions.



## **Dr Andreas Teuner**

chief engineer, Delphi Delco Electronics **Europe GmbH** 

Andreas Teuner has been with Delphi since 1999 and is the head of the engineering department for safety systems in Europe. Prior to his current assignment he worked in several functions in product development and advanced engineering teams on the development of crash sensing, occupant sensing, and driver assistance applications. Before joining Delphi he worked for the Fraunhofer-Society on the design and applications of CMOS based high-speed cameras and range imagers.



### **Yvon Loyaerts**

Head of Division, Conference of European **Directors of Roads (CEDR)** 

Yvon Loyaerts (1952) graduated in civil engineering from the Polytechnic School of the Brussels University (B). He is head of division (inspecteur général des Ponts et Chaussées) at the Walloon Road Directorate where he is in charge of the general road policy of the Walloon Region including traffic management, road safety, pavement assessment and international relations. He is a lecturer for a Master Degree in Transport Management and he is nowadays chairperson of the euroregional traffic management project CENTRICO. He is also member of several international institutions as the World Road Association and the Conference of European Directors of Roads he chaired the Executive Board of in 2003-04.



### José Miguel Perandones Mechancical engineer, CIDAUT

José Miguel Perandones, is a senior researcher engineer withnin the Acccident Analysis and

Human Factors department of CIDAUT. He received his diploma degree in Mechanical Engineering from the University of Valladolid. He has experience in different European research projects like RISER and TRACE, in the field of accident causation and road infrastructure analyses. He has been the technical responsible of the work package that has produced the main results of the RANKERS project, focused on the proposal of recommendations for road infrastructure safety enhancement.

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# SPEAKERS (CONTINUED)



### Rob van Essen

Vice-president, strategic research and development, Tele Atlas

Rob van Essen graduated with a degree in Cartography (Geography) from the State University Utrecht in 1990. Currently he is globally responsible for Tele Atlas strategic research and development, which comprises map research, prototypes of maps and map related functionalities, advanced engineering and standardisation.



### **David Boulton**

Senior manager sustainability and risk practice, Arthur D Little

David Boulton has been working in the field of risk assessment and its application to transport for 13 years. In 1994 he joined ERA Technology as a specialist in risk assessment in the rail sector. As part of this role, he also undertook a number of independent safety assessment roles. In 2001 he joined Arthur D Little. David was heavily involved in the safety work that was carried out in support of the Active Traffic Management (ATM) scheme that is now operating on a section of the M42, and continues to be involved in several other highways-related projects, including the development of safety management procedures for application to Highways Agency projects.

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# **Ryszard Gorell**

### Principal safety consultant Intelligent Safety Solutions Group, Mouchel Parkman Ryszard has been working in road safety for 15 years.

He began his career as a graduate civil engineer, working for WS Atkins in Cardiff. After obtaining an MSc in Transport he joined the Transport Research Laboratory in Crowthorne. During his time at TRL he managed a number of road safety research projects primarily for the Highways Agency and DfT. He joined the Technology Design and Implementation division of Mouchel Parkman in June 2005. He is currently involved in safety work associated with Active Traffic Management (ATM) schemes as well as several other highway schemes.



# **Brian Knibb**

### Chairman and managing director, Knibb Gormezano & Partners (KGP)

Brian is a mechanical engineer and gained his early industrial experience with Perkins Engines in manufacturing development, product and business planning. He spent seven years with A T Kearney European Automotive Group. His experience has included participation in and leading assignments concerned with on- and off-road vehicles, engines, components, materials, technologies and industry supply relationships. Over the last 15 years KGP, under Brian's leadership, has developed a strong position in technology assessment and forecasting in the industry. Clients have included vehicle manufacturers, Tier One suppliers, governments and investors. An area for special scrutiny has been active or eSafety systems. KGP's membership of the eSafety Aware Consortium and several EU working groups has generated a substantial body of knowledge and understanding.



### André Vits Head of Unit ICT for Transport, European Commission

André Vits studied electromechanical engineering and holds a PhD in Applied Sciences from the University of Leuven, where he became a lecturer on Traffic Control and Transport Management. In 1988 he joined the European Commission for the launch of the DRIVE 1 and DRIVE 2 RTD programmes. Since the end of 2001, he has been Head of Unit and in charge of Information and Communication Technologies (ICT) for Transport in Directorate-General Information Society and Media. Current activities focus on intelligent vehicle safety systems, The unit is also responsible for the Intelligent Car Initiative, which is an i2010 flagship project, and the eSafety Initiative.



### Fred Wegman

### Managing director, SWOV Institute for Road Safety Research

Fred Wegman gained an MSc Civil Engineering, traffic engineering from Delft University of Technology inNovember 1972. From 1974-1977 he was a traffic engineer in the Municipality of Amsterdam. In 1977 he joined SWOV Institute for Road Safety Research and since April 1999 has been its managing director. He is involved with many other organisations and is the author and co-author of numerous publications on road safety.

### **Professor Oliver Carsten**

## Director of the Institute of Transport Safety, and Professor of Transport Safety University of Leeds

Professor Carsten graduated from Oxford University and obtained his PhD from the University of Michigan. He worked at the University of Michigan Transportation Research Institute (UMTRI) for 10 years and joined the Institute for Transport Studies in 1987. He has coordinated several European projects, including HOPES, examining the safety impacts of various field trials; VRU-TOO, applying new technologies to improve the safety and mobility of pedestrians; HINT, examining the human implications of new technologies; and HASTE, which studied the effect on driving performance and safety of using in-vehicle information systems. He led the development of the advanced driving simulator at Leeds and directed projects to examine techniques for reducing unsafe driving on rural arterial roads and for investigating the benefits of intelligent speed adaptation (ISA). Work on ISA includes leading the UK External Vehicle Speed Control project and the current ISA-UK project. He has been chair of the DRIVE I safety and behavioural group, was a member of the DRIVE Safety Task Force, is chair of the Road User Behaviour Working Party of the Parliamentary Advisory Council for Transport Safety, has been is a member of several expert groups of the European Transport Safety Council, and is a member of the Programme Management Panel of the UK Foresight Vehicle Programme. He is the author of numerous reports and articles on traffic safety.





### Dr Alan Stevens BSc PhD MBA FIET Chief research scientist, Transport Research Laboratory (TRL)

Alan Stevens is chief scientist and research director, transportation at TRL, the UK Transport Research Laboratory, and has over 20 years' experience of the application of new technology in the transport environment. His main technical interests are route guidance, driver information and assistance systems, road pricing and human-machine interaction (HMI). At TRL he is also involved in recruitment and training, and he teaches part of an MSc course at Surrey University on ITS. Alan is technical director of ITS (UK) and editor-in-chief of the IET journal Intelligent Transport Systems.

# Amon Rambaldini

### Senior researcher, Fiat Research Centre

Amon Rambaldini has a degree in Experimental Psychology and a Masters degree in Assistive Technology. He is the senior researcher in the Fiat Research Centre product ergonomics department. He has been working on cognitive ergonomics in CRF since 2001. In particular, he has contributed to human factors evaluations of vehicle instrumentation and auxiliary controls and has been involved in the evaluation and development of on-board HMI systems adopting a user-centred approach. Moreover, he is involved in defining specific strategies to evaluate workload in a driving context. Since 2004 he has been working in the development and testing of an ADAS prototype, supporting technicians in the definition of HMI specifics.

# Nicolas Hautière

# Laboratoire Central des Ponts et Chaussees (LCPC)

Nicolas Hautière has an MS degree in civil engineering from the National School of State Public Works (ENTPE), Lyon, France and MS and PhD degrees in computer vision from the University Jean Monnet, Saint-Etienne, France. From 2002 to 2005, he was a PhD student at the Vehicle-Infrastructure-Driver Interactions Research Unit (LIVIC), a mixed research unit between INRETS (French National Institute for Transportation and Safety Research) and LCPC (French Public Works Research Laboratory). He was also involved in the French ARCOS project. He is currently involved in the FP6 integrated project SAFESPOT (Cooperative Systems for Road Safety) and is co-leader of the French ANR DIVAS project (Dialogue between the Infrastructure and Vehicle to Improve the Road Safety). He is establishing a partnership with the California PATH in the area of cooperative systems in the framework of the DIVAS America project.



## **Yvon Loyaerts**

# Head of Division, Conference of European Directors of Roads (CEDR)

Yvon Loyaerts (1952) graduated in civil engineering from the Polytechnic School of the Brussels University (B). He is head of division (inspecteur général des Ponts et Chaussées) at the Walloon Road Directorate where he is in charge of the general road policy of the Walloon Region including traffic management, road safety, pavement assessment and international relations. He is a lecturer for a Master Degree in Transport Management and he is nowadays chairperson of the euroregional traffic management project CENTRICO. He is also member of several international institutions as the World Road Association and the Conference of European Directors of Roads he chaired the Executive Board of in 2003-04.



# 12, 13, 14 February 2008 – Brussels, Belgium



# INFORMATION

# THE VENUE



The **Royal Windsor Hotel Grand Palace** is an elegant and sophisticated five-star hotel in the heart of Brussels, just off the world-famous Grand Place and in front of the grand Casino Brussels.

Royal Windsor Hotel Grand Palace 5 Rue Duquesnoy 1000 Brussels, Belgium Tel: +32 2 505 5555 Fax: +32 2 505 5500 Email: resa.royalwindsor@warwickhotels.com Web: www.royalwindsorbrussels.com

# **USEFUL INFORMATION**

Hotel Information: The Royal Windsor Hotel Grand Palace has been appointed as the main hotel for Safe Highways of the Future 2008 and this is where the majority of delegates will be staying. If you wish to choose alternative accommodation, please contact: RESOTEL

Mr Ronny Vanderpooten 6, avenue Van Nieuwenhuyse 1160 Brussels, Belgium Tel: +32 2 777 0158 Fax: +32 2 779 3900 Email: ronny@resotel.be

Brussels: Hosting the headquarters of ERTICO-ITS, the European Commission and multinational corporations, Brussels works hard and plays hard, too. Expect cuttingedge culture and culinary delights. Composed of 19 autonomous districts, Brussels is Europe in miniature, making it the perfect destination for Safe Highways of the Future 2008.

# **CONTACT DETAILS**

UKIP Media & Events Ltd, Abinger House, Church Street, Dorking, Surrey RH4 1DF, UK • Tel:+44 (0)1306 743744 • Fax: +44 (0)1306 877411

- Email: samuelgee@ukintpress.com
- www.safehighwaysofthefuture.com

# TRAVEL

The Royal Windsor Hotel Grand Palace, the venue for Safe Highways of the Future 2008, boasts the best location in the heart of Brussels and is easily accessible by various types of transport. Please see the following directions:

## By Air

Brussels Airport is located just 14 km from the city centre and can be reached directly from over 70 cities around the world. From Brussels Airport the venue is only 25-30 minutes away by either taxi or train. A taxi from the airport to the venue will cost about Euro15-20. Trains run directly from the airport to Brussels Central Station every 20 minutes. The walk from the Central Station to the Royal Windsor Hotel Grand Palace takes about 5 minutes.

# **By Train**

Brussels South Station (Midi/ Zuid) is accessible in 2½ -3 hours by train from major European cities such as London, Paris, Amsterdam and Cologne. From the South Station the venue is only 10-15 minutes away by taxi.

## By Car

Brussels is only 2-3 hours' drive from major European cities like Paris, Amsterdam, Rotterdam and Cologne.

# **VISA REQUIREMENTS**

You can find out if you require a visa to enter Belgium via the Foreign Affairs, Foreign Trade and Development Cooperation website, which is translated into a number of languages. Please visit www.diplomatie.be for further information.

If you do require a visa to enter Belgium, we can provide you with the necessary invitation letter

# **CONFERENCE HOURS**

Tuesday 12 February	10.00hrs - 17.00hrs
Wednesday 13 February	10.00hrs - 17.00hrs
Thursday 14 February	10.00hrs - 13.00hrs

If you do not wish to receive future mailings please visit: www.safehighwaysofthefuture.com/unsubscribe

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