ITU
SYMPOSIUM ON

THE FUTURE NETWORKED CAR

KEY OUTCOMES OF THE FUTURE NETWORKED CAR 2014

UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE

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Advances in 'automated driving' were in focus at the ITU symposium on the Future Networked Car within the Geneva International Motor Show, 5-6 March 2014.

The international symposium brought together representatives of the automotive and information and communication technology (ICT) industries, governments and their regulators, motor sport and international automobile associations to discuss the future of ICTs' integration in vehicles.
The symposium's agenda featured expert insight into motor sport's role as an incubator for innovation and the implications of fast-maturing automated driving technologies for the future of mobility, road safety, standards development and international road regulation.

The event engaged high-profile industry leaders in two live-streamed 'high-level dialogues' on the morning of the second press day of the Motor Show. The first discussed new potential to improve global road safety by leveraging cross-sector partnerships and the convergence ICT and automotive technology. The second debated the possibilities enacted by leaps forward in automated driving technologies, asking panelists what more could be done to channel innovation in this arena towards the realization of its full potential.

A technical programme followed, gathering experts in intelligent transport systems (ITS) to discuss automated driving within a larger ecosystem of connected vehicles, road users and roadside infrastructure; the role of smart phones and other devices in the car; and means of incorporating connected technologies in vehicles without exacerbating driver distraction.

1 ROAD SAFETY, INNOVATION AND EDUCATION

Global road safety statistics present figures of staggering magnitude. More than 1.2 million people die on the world's roads each year and 20 to 50 million are injured. Particularly alarming are the high casualty rates observed among vulnerable road users, young adults and people in low- and middle-income countries. A holistic approach is required to "bend the curve" on global road safety, a goal only achievable by harnessing the power of multi-sector, multi-disciplinary partnerships and collaboration.
ITS and automated driving have the potential to enact major improvements in road safety, if supported by appropriate legal and regulatory frameworks. Automated driving technologies and their rollout should be human-centric, accompanied by road safety impact assessment, comprehensive information and education campaigns.

"No one sector can bend the curve on road safety on its own"

Scott Ratzan,
Anheuser-Bush InBev

2 THE TRANSITION TO AUTOMATED DRIVING

ITS and automated driving are fast moving towards widespread commercialization and market acceptance. High levels of automation – the penultimate step to fully automated driving – are expected on the road by 2020 and hold great promise to improve road safety, reduce congestion and emissions and increase the accessibility of personal mobility to the elderly and persons with disabilities. Automated driving can only achieve its potential within a broader ITS ecosystem integrating automation technologies with vehicle-to-vehicle (V2V) and vehicle-to-infrastructure (V2I) communications. Critical policy and regulatory issues still to be addressed include traffic rules, e.g., mixing or separating traffic with different levels of automation; the insurance implications and the liability of the driver, infrastructure manager and vehicle manufacturer; the different type of challenges in cities versus on motorways; the design of human-machine interfaces so to ensure safe driver interaction with automation systems, especially in relation to the transfer of control between driver and vehicle.

"We are on the cusp of a true revolution in personal transportation. Combining the will of the vehicle and ICT industries we can create a paradigm shift as profound as that brought about by the introduction of mobile telephony"

Hamadoun I. Touré,
Secretary-General, ITU

3 AUTOMATED EMERGENCY CALLS FOR ROAD ACCIDENTS

Automated in-vehicle emergency call systems such as the pan-European 'eCall' are widely recognized as an essential innovation to reduce emergency response times and save lives. International technical standards and technology-neutral, harmonized regulatory frameworks will facilitate the rapid and widespread adoption of emergency call systems that connect vehicles, roadside infrastructure and emergency services. The intelligibility and quality of information transmitted from accident scenes are areas in need of further investigation and standardization.

"Connected cars are revolutionizing our daily mobility by providing safer, cleaner and smarter ways to travel. With car sales rising rapidly in emerging markets, and road fatalities also expected to rise, our goal should be to ensure that more cars worldwide can benefit from advanced technologies"

Jean Todt,
President, FIA

4 SECURITY FOR CONNECTED CARS

As the connectivity of vehicles increases, so does their vulnerability to hacking and malicious attacks. Security breaches risk jeopardizing property, personal data and physical safety. The security challenges relevant to connected cars include a wide range of issues spanning safety, security and privacy, giving rise to a business problem to which technical solutions only provide part of the solution. Security is critical for today's connected cars and even more so for tomorrow's 'autonomous' car, and much work remains in this arena given the many security shortfalls observed in the connected cars of today.

"Fully automated driving offers several advantages to drivers, road systems and the environment. To realize such benefits, it will be first necessary to address issues including software reliability, legal frameworks and cybersecurity"

Malcolm Johnson, *Director,*
ITU Standardization Bureau

5 STANDARDS AND REGULATION

Automated driving is a complex, rapidly advancing field at the intersection of automotive and communications technologies with far-reaching implications for the future of standardization and regulation in support of ITS. In view of the accelerating consumer acceptance and adoption of vehicle automation technologies, it is essential that standards and regulation keep pace with innovation. Standards can reduce costs for all and help manufacturers, regulators and consumers to make more informed decisions. To ensure harmonized approaches towards telecom and transport norms and standards, ITU has partnered with the UNECE serviced Inland Transport Committee, a United Nations body responsible for the international regulatory frameworks that govern the inland modes of transport.

"Standardization will reduce the cost for our industry by billions"

Johan de Nysschen, *President,*
Infiniti Motor Company

THE FUTURE NETWORKED CAR

"Regulators are responsible for creating a conducive environment for innovation."

Eva Molnar, *Director,* UNECE Transport Division

"ITU, as a UN agency, does a good job of doing honest standards."

T. Russell Shields, *Chair,* Ygomi

More information on the FNC symposium including videos, pictures and a full programme of events that enables access to speakers' presentations can be found at http://itu.int/en/fnc/2014/

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Save the date ! The ITU Symposium on the Future Networked Car returns in **2015.**