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Travel Report

TRB 2012 Annual Meeting and Meetings with U.S. DOT RITA, Washington, DC, 22-26 January 2012



The TRB week started already on Sunday 22nd with the Annual Meeting of the US-EC Implementing Arrangement Steering Group with representatives of EC DG INFSO and U.S. DOT RITA. The meeting took stock of the excellent progress made in 2011 in all six working groups, most notably in the harmonisation of standards. The meeting discussed in detail the plans for 2012 under this very successful cooperation, in particular the Joint Showcase at the ITS World Congress in Vienna, Austria, in October 2012.

The TRB ITS Committee's 20th Annual Meeting took place on Monday 23rd, starting with a jubilatory address of Shelley Row, US DOT RITA, to the 20 year old Committee. The meeting then continues planning its activities for its next three years 2012 – 2015, including meetings, workshops and communications. The activities will include a workshop on automation, which will take place in June 2012 in California. And much more...

1. Introduction

TRB is the most important annual conference of the US transport research community. This year's event was the 91st TRB Annual Meeting, attracting more than 10.000 delegates from the US and other regions of the world.

The main objective of this official journey, besides attending the TRB Annual Meeting and its committee meetings and sessions, was the continuation of the international collaboration with U.S. DOT RITA. This included in particular the Steering Group meeting under the 2009 Implementing Arrangement on EU-U.S. cooperation in research in ICT applied to road transport. During the TRB week several working group meetings took place as well. Japan's MLIT participated in these meetings as observer.

The EU delegation to this year's event was composed of colleagues from Vice-President Kallas' Cabinet, RTD, MOVE, INFSO and the JRC.

2. Meetings with U.S. DOT

Background

The Implementing Arrangement between EC DG INFSO and U.S. DOT RITA aims at strengthening the EU-U.S. cooperation in the field of research in ICT applications for road transport. The Implementing Arrangement aims at contributing to the mutual understanding of each other's societal needs, research programmes and results, in order to share results, collaborate on ICT research in technologies and applications, and facilitating the implementation and deployment of the results by International harmonisation of standardisation.

Under the Implementing Arrangement, a Steering Group, Technical Task Force and six Working Groups have been established. The Implementing Arrangement stipulates that the Steering Group meets at least once per year. The Technical Task Force and the Working Groups typically organise two face-to-face meetings per year, with additional discussions between the meetings, e.g. by collaboration tools (like *Projectplace*), e-mail correspondence and telephone conferences.

Both the EU and U.S. also collaborate with MLIT, Japan. U.S. DOT RITA and MLIT signed a Memorandum of Cooperation (MoC) in October 2010, and a MoC between EC DG INFSO and MLIT was signed in June 2011. According to these agreements, MLIT participates as an observer in all bi-lateral EU-U.S. meetings, and reciprocally EC can observe all U.S. DOT – MLIT bilateral meetings.

Steering Group Annual Meeting

The EU-U.S. Cooperation Steering Group met in Washington, DC, on Sunday, January 22nd, 2012. The meeting was chaired by Shelley Row (U.S. DOT RITA Associate Administrator and Director of the Intelligent Transportation Systems Joint Program Office) and Juhani Jääskeläinen (Head of Unit, EC DG INFSO Unit ICT for Transport). Jane Lappin of RITA's VOLPE Center and Wolfgang Höfs of EC DG INFSO Unit ICT for Transport facilitated and organised the meeting. Brian Cronin, Michael Schagrin, and Steve Sill, all of RITA's ITS Joint Program Office, participated also.

Agenda

The agenda of the annual meeting is determined by the terms of the Implementing Arrangement:

- Introduction and opening remarks
- Review of the prior year's meetings and activities
- Assessment of the balance of exchanges
- Review of the current working group status and agreement on next steps
- New items for 2012: Joint Showcase for ITS World Congress 2012
- Plans for 2012 meetings
- Any other business

Introduction and opening remarks

Shelley Row reported that currently all the activities at the US DoT are focused on completing the Safety Pilots in time in view of the NHTSA regulative decision in 2013. The driver clinics are completed, and tests are starting. U.S. DOT continues to support International cooperation and harmonisation of standards including the joint Vienna showcase during the ITS World Congress in Vienna in October 2012. This policy has not changed.

Juhani Jääskeläinen gave a summary of the latest developments in the EU. He mentioned the White Paper on Transport policy with goals for 2020 and 2050, and the current state of deliberations in setting up the next Research and Innovation Framework for 2014-2020, called Horizon 2020.

Regarding International cooperation, he said that besides the EU-US-Japan cooperation dialogues were on-going on cooperation with China, Korea, Russia and Singapore (MOVE). In particular with Korea there was a need for a joint approach. Also, the iMobility Forum International Cooperation working group (ICWG) has now clear goals and is supporting these activities, especially non-governmental.

Reviewing prior year's meetings and activities

The meeting took note of the following report:

- A full set of Working Group meetings was held in January 2011 in Washington, DC, followed by a Steering Group meeting on 27 January 2011. This marked the first meeting to include Car2Car and CAMP representatives as part of the Safety Applications working group and marked a turn in direction for that group towards increased engagement by all regions' OEMs.
- The bilateral Steering Group meeting in Lyon, France, on June 8th, 2011, at the ITS Europe Congress, was followed by the first official trilateral meeting among Japan MLIT, EC INFISO, and U.S. DOT RITA. Shelley Row addressed the Congress stressing the need for standardization. She met with Robert Madelin, Director General of INFISO, and discussed harmonized standards, V2V governance and the statement of principles.

- Brian Cronin worked with DG INFSO's ICT-for-Transport unit as part of an exchange of staff during summer 2011. This exchange will continue with Wolfgang Höfs working in the U.S. DOT ITS Joint Program Office from January through to March, 2012.
- The meeting of vehicle manufacturers from C2C and CAMP, alone and in the company of government representatives, was organised in July in Böblingen near Stuttgart, Germany. This event has led to continuing efforts to explore opportunities for harmonizing in-vehicle safety applications. An attachment from the group's recent meeting in October 2011 is attached to this report.
- Director General Robert Madelin issued letters to CEN and ETSI in October 2011 to emphatically endorse International standards harmonization.
- The Standards Harmonization Working Group is executing the Harmonisation Action plan (HAP), working in three subgroups (called "Harmonisation Task groups").
- Cooperation between EU and US industry, governments and standardisation communities has resulted in a substantially harmonized core safety message set. The revised planned content of the EU Cooperative Awareness Message (CAM) has been harmonized with the content of the US Basic Safety Message (BSM). While the messages are not identical, they are now sufficiently harmonized such that only simple translation is required in order to utilize both messages almost interchangeably. This enables usage of common hardware and software, reducing both cost and complexity. This harmonized content is expected to be incorporated into the final version of the CAM standard currently being completed in the European Telecommunications Standardisation Institute's (ETSI) processes with adoption expected in the near future.
- A full set of Working Group meetings and a Technical Task Force meeting were held between October 17th and 20th, 2011, at the ITS World Congress in Orlando, USA, followed by the 7th International (and jointly organised) Vehicle Communications for Safety and Sustainability (VCSS) workshop.
- The Steering Group met on November 11th, 2011 to consider actions from the Technical Task Force meeting; meeting notes are attached to this report.

New items for 2012: Joint Showcase at ITS World Congress 2012

Regarding the activities for 2012, the meeting focused on discussing the joint activities at the ITS 2012 World Congress in Vienna in October, including the joint EU-US showcase. The Steering Group made the following recommendations and decisions:



Conference:

- Two Executive Sessions will be proposed, one High Level overview with speakers from U.S., Europe and Japan, the second as moderated panel discussions with all Working Group chairs.
- U.S. pointed out that due to travel restrictions it might be difficult for all U.S. co-chairs to travel to Vienna.
- Additionally, a half day event on International Cooperation with third countries will be proposed by the iMobility Forum International Cooperation Working Group (ICWG).
- The ICWG event will focus on national and regional activities, whilst the Conference Executive Sessions focus on the cooperation aspect
- In addition, special and technical sessions can be proposed by the Working Groups.

Plans for 2012 meetings

- OEM – Administrations Meeting in Wolfsburg, Germany, March 13th - 15th:
 - o This meeting is a follow-up of the Böblingen meeting in July 2011 with similar set-up. It will start with OEM to OEM working meetings on the above topics, followed by OEMs and the regulators discussion on policy related issues.
 - o It will develop an Action Plan for the next three to four months to finalize the work before the Vienna ITS Congress. The invited participants will be OEMs from US (CAMP) and Europe (C2C-CC), European Commission and U.S.DOT / NHTSA will participate on March 14th and 15th and Japan representatives from OEMs and MLIT with observer status.
- The Transport Research Arena (TRA) conference will take place from April 23rd to 26th in Athens, Greece, at the International Conference Centre under the theme "Sustainable mobility through innovation". The event will feature high-level speakers from the Commission, and also an exhibition. No special sessions or events on International Cooperation are foreseen.
- The ITS World Congress 2012 "Smarter on the Way" will take place in Vienna from October 23rd to 26th. Besides the Joint Showcase and Executive, Special and Technical Sessions showcasing the EU-US cooperation, there will be also the 8th International Vehicle Communications for safety and Sustainability workshop, most probably on October 27th. Furthermore, meetings of the Steering Group, the Task Force and Working Groups are foreseen at the Congress.

Driver Distraction and HMI Working Group meeting

The EU-U.S. Cooperation Driver Distraction and HMI Working Group met on Monday, January 23rd, 2012. The meeting was chaired by Johan Engström (VOLVO Technology) and Chris Monk (NHTSA). Aiko Hosaka (Highway Industry Development Organisation) participated as observer on behalf of Japan's MLIT. Other participants were Richard Bishop (Bishop Consulting), Wolfgang Höfs (European Commission),



Dan McGehee (University of Iowa) and Marko Tukkanen (Nokia). Andreas Keinath (BMW) and Alan Stevens (TRL) were apologized.

The meeting began with reports from the regions, Chris Monk stating the following for the U.S. side:

- NHTSA HMI guidelines:
 - o The guidelines for visual-manual interaction are still under internal NHTSA review, which has taken longer than expected, but are likely to be published for public consultation soon. The guidelines will be performance-based and based on the existing AAM guidelines.
 - o The next set of guidelines is planned for 2013 and will cover nomadic devices. The initial scoping work has started, including discussion on whether guidelines for ND integration should be included.
 - o The third set of guidelines, which will cover voice interfaces are planned for 2014.
- Connected Vehicles program:
 - o Existing projects are working on warning design, DVI integration and distraction metrics. A set of human factors guidelines for connected vehicles are also under development. These will be harmonised with the NHTSA HMI guidelines
 - o There will also be shift in focus from safety systems to more infotainment-related applications.
 - o The phase 2 of the CWIM project has been initiated. The aim is to develop a methodology for human factors evaluation of crash warning interfaces. There is some controversy regarding this and there is a continuous dialogue with US OEMs

He also reported that a new division focusing on automation has been formed at NHTSA.

On the EU side Wolfgang Höfs reported on the general plans for the next EU framework program, known as Horizon 2020. This will include more holistic projects covering all aspects from research to deployment in a more integrated way than in previous Framework Programmes.

Johan Engström gave a report on some further developments in the European Union and Sweden:

- A new working group on Automation has recently been formed, which will partly focus on human factors issues.
- The HAVE-it project on semi-automated driving was finalised in summer 2011. More information can be found at www.haveit-eu.org.
- The main ongoing human-factors-related project in the EU is interactive (www.interactive-ip.eu), in particular sub-project 3 which deals with information, warning and intervention strategies.
- In Sweden, a rather intense debate on driver distraction has recently started. VTI has published a report focusing on cell-phone-related distraction, which recom-

mended not introducing any ban on cell phones at present. VTI will publish a new report in distraction countermeasures during spring 2012.

Marko Tukkanen also reported on current developments in the Car Connectivity Consortium to define HMI guidelines (based on the existing ESoP, AAM/NHTSA, and JAMA guidelines) as a basis for an application certification procedure for MirrorLink. These guidelines are planned to be released in September 2012.

Hosaka-san reported on recent developments in Japan:

- There is currently a strong focus on the introduction of cooperative systems through large scale FOTs. This includes harmonisation of HMI solutions for cooperative systems.
- MLIT has plans to develop human factors guidelines for active safety functions.
- The current JAMA guidelines were published in 2004, and no further updates are planned for the near future.

The meeting continued with a review of US-EU Task Force's ongoing activities and plans. Wolfgang Höfs informed about the current plans for the EU-US Joint Showcase at the ITS World Congress in Vienna in October 2012.

The Inattention Taxonomy project is, according to the current plan, divided into two phases. It was agreed to finish the project after the completion of Phase 1, unless new funding becomes available. Chris Monk will look into potential funding options.

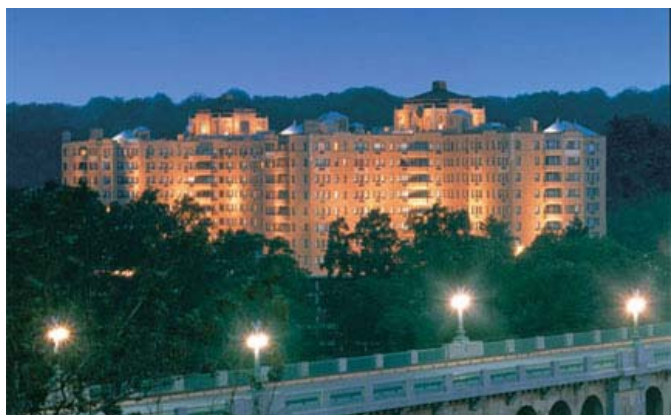
It was also agreed that the Working Group should aim for publishing an adapted version of the Phase 1 report in a peer-reviewed journal.

A potential contribution of the Driver Distraction and HMI Working Group to the EU-US Joint Showcase in Vienna was discussed. It was agreed to develop a working paper during the spring (deadline May 2012) and then aim to present the key ideas on a poster in Vienna. It was also agreed to have the next Working Group meeting in June (date and venue TBD) to discuss the paper and poster in more detail. Johan Engström and Chris Monk will work out a more detailed plan for this and get back to the Working Group.

It was also suggested to submit a proposal for a session in Vienna focusing partly (but not exclusively) on HMI guidelines. It was decided that Johan Engström should check the deadline and contact Alan Stevens regarding this issue.

Sustainability Applications Working Group meeting

The EU-U.S. Cooperation Sustainability Applications Working Group met on Monday, January 23rd, 2012. The meeting was chaired by Martijn de Kievit (TNO) and Marcia Pincus (U.S. DOT RITA ITS JPO). Other participants were Richard Bishop (Bishop Consulting), Wolfgang Höfs (EC), Hans-Joachim Schade (TSE Consulting) and Jaap Vreeswijk (Peek Traffic).



The working group's European co-chair position went from Hans-Joachim Schade to Martijn de Kievit. However, Hans-Joachim Schade will remain an active participant in the "core" Sustainability Applications Working Group, while shifting his major responsibilities to support the Standardisation Harmonization Working Group. Martijn de Kievit joins based on his role in the EcoStand project. Hans-Joachim Schade's important contributions to the Sustainability Applications Working Group were affirmed and appreciated by the group as a whole. Wolfgang Höfs expressed the importance of continuing to strengthen the group with additional effort from both the EU and US side.

Assessment Tools Working Group meeting

The EU-U.S. Cooperation Assessment Tools Working Group met on Tuesday, January 24th, 2012. The meeting was chaired by Thomas Benz (PTV) and John Harding (U.S. DOT NHTSA). Taka Sugiura (Mitsubishi Research Institute) participated as observer on behalf of Japan's MLIT. Other participants were Joe Bared (U.S. DOT FHWA), Richard Bishop (Bishop Consulting), Brian Cronin (U.S. DOT RITA ITS JPO), Knut Evensen (Q-Free), Francois Fischer (ERTICO), Wolfgang Höfs (European Commission), Emily Nodine (U.S. DOT RITA VOLPE Center), Ilja Radusch (Fraunhofer FOKUS), Martijn van Noort (TNO) and Isabel Wilmink (TNO).



The working group members agreed that an FOT is carried out over an extended period of time. How much time is needed should be based on statistical needs and how long a driver has to get used to it or needs to experience certain events several times.

The reasons to perform FOT are identical: Measuring technical performance and user acceptance and impact assessment. After some discussion, the working group arrived at the following harmonized

FOT definition:

"A real world test activity over an extended period of time conducted in real traffic not using professional test drivers and using near production systems. The intent is to get empirical data on impacts, user acceptance, and technical performance, as well as an understanding of unintended consequences."

This definition will be put in the EU-US glossary document, published on the Internet.

Thomas Benz and John Harding will revise the Data Coordination plan (and include a timeline). They will start with a PowerPoint showing the process, then how it can be made happen. The idea is to select about 10 Performance Indicators to work with. The aim is to design a transferable process.

The next conference call is planned for the week of April 16th, 2012 and the next face-to-face meeting will be linked to an event such as the euroFOT final event in Brussels on June 26th – 27th or the DRIVE C2X / FOT-Net events planned for the summer.

Standardisation Harmonisation Group meeting

The EU-U.S. Cooperation Standardisation Harmonisation Working Group met on Thursday, January 26th, 2012. The meeting was chaired by Wolfgang Höfs (European Commission, DG INFSO G.4) and Steve Sill (U.S.DOT RITA ITS JPO). All in all twenty-one standardisation experts from America, Europe and Japan (and four more

remotely calling in from Europe) joined and discussed the next steps in international standardisation harmonisation.

Shelley Row, ITS Joint Program Office's Director at RITA, welcomed the participants and emphasised the importance of this working group for the overall success of the EU-U.S. cooperation on Cooperative Systems' research. She encouraged the group to continue its work with all deliberate speed in a spirit of open communication, collaboration, cooperation, mutual respect, negotiation, and compromise.



Knut Evensen presented Harmonisation Task Groups (HTG) objectives and their Work Item Descriptions (WID). The list of candidate experts to work in these groups was agreed, and the co-chairs were asked to schedule and organise the groups' working meetings. The first will most probably take part in Brussels in the week of 26 March 2012.

One of the key items identified during the discussion was the relationship between the work of the HTGs and the preparations for the Vienna joint showcase. It was agreed that ideally the technical output of the HTGs would be implemented and demonstrated in Vienna. Before the session was closed Jane Lappin informed the participants about the status of planning for the EU-US showcase at ITS Vienna 2012 and the decisions taken by the Steering Group earlier this week. The contributions expected from this group were presented and discussed. Wolfgang Höfs emphasised once more the central role of the standardisation harmonisation for the overall success of the Task Force and its joint showcase in Vienna.



3. TRB ITS Committee 20th Annual Meeting

The ITS Committee met on Monday, January 23rd. The meeting was chaired by Jane Lappin, U.S. DOT RITA's John A. Volpe Center.

As this was the 20th Anniversary meeting of the ITS Committee, the Chair gave the floor to Shelley Row, Director of U.S. DOT RITA's, ITS Joint Program Office who gave the Happy Anniversary address.

Welcome and Happy Anniversary

Shelley Row gave an overview of the activities under the Safety Pilot, aiming at regulatory decision of NHTSA in 2013. U.S. DOT is looking at different financial models for ITS deployment from fully public to fully private. On top of this, exploratory research is starting in two domains, electric vehicles and autonomous vehicles.

Juhani Jääskeläinen, EC DG INFSO said that EU was funding research in both areas, and a very successful workshop had been organised on automation last year, where Steve Schladover (PATH) was also present. He also said that we needed precision if we were talking about automated or autonomous vehicles.

Shelley Row then went on emphasizing the importance of standardisation and international harmonisation and the work under the EU-US cooperation agreement. As a result, common hardware platforms could be used both in the EU and the U.S., and the data elements in the safety messages CAM and BSM were harmonised to the extend necessary to allow interoperability.

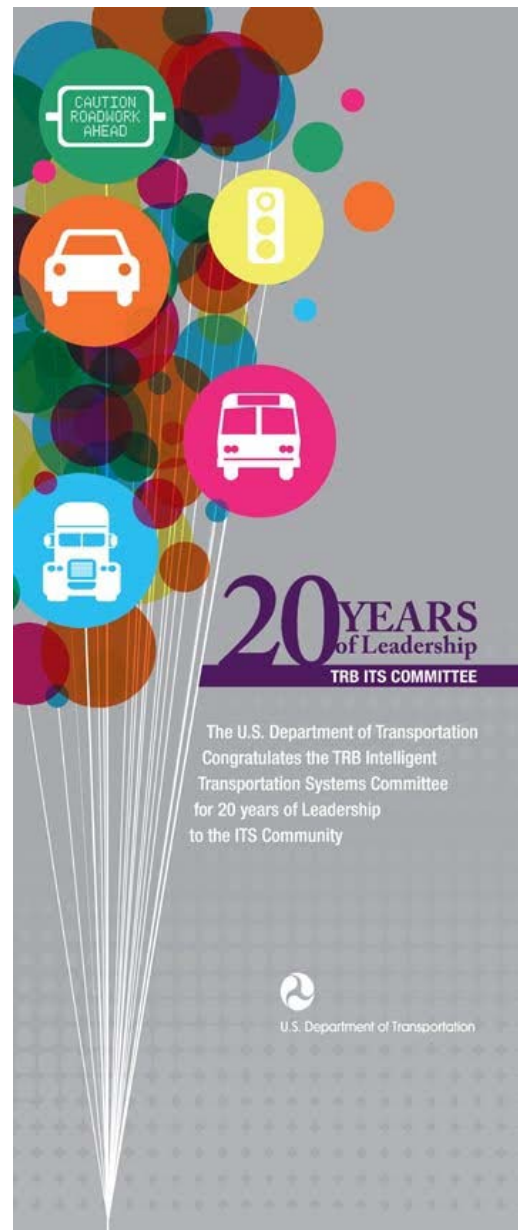
Dan Brand, founding TRB ITS Committee Chair gave a short history overview of the Committee. The chairs following him have been Rick Weiland, Steven Shladover and now Jane Lap-pin.

Triennial Strategic Plan

The Chair introduced this topic. The goal was to identify issues for focus 2012 - 2015, to consider actions in support of issues, to include consideration of joint subcommittees, development of research statements, workshops etc. and to identify volunteers to take leadership of actions. A lively discussion followed, and a number of topics were proposed:

- research on how to introduce connected vehicles to the society
- managed lanes (there will be a managed lanes workshop)
- multi-modal connected traveller
- behavioural aspects and behavioural changes
- role of after-market devices in the introduction of cooperative systems

The Chair will make a proposal on the topics to be taken forward and the people responsible. There will be a mid-year meeting on July 9th – 11th, 2012 at the Beckman Center, Irvine, California.



TRB Initiative: Back to Basics - Fostering and Nurturing a Research Agenda

This is a TRB-wide initiative affecting all Committees. The purpose is to develop an up-to-date database on research need statements. Concerning the ITS Committee AHB 15, those responsible are Mohamed Hadi, Ananda Palanisamy and Barry Pekilis who are all AHB15 Co-Research Coordinators.

Automation Workshop: Steven Shladover introduced the plans for the Automation workshop. It will take place in spring or summer in Beckman Center, Irvine, California. Format is two days, it could be also combined with the ITS Committee mid-year event. Also AHB 3 (Highway Automation) Committee will be invited. The workshop will tackle technology, legal, liability and driver distraction issues. A Working Group was nominated to plan the workshop.

Action: Send the name of the INFISO contact person to Steven Shladover

Other reports

There was a very interesting presentation on SafeRoadMaps (see <http://saferoadmaps.org/>), which is an online map tool for finding out where accidents happen, much like our EuroRAP. It has been a huge success, over 10 million hits, discussions with NHTSA are ongoing and a number of improvements are planned.

Another interesting presentation was about an Android application called CrashOut, which will be in every ambulance in Boise, Idaho. It is connected to a server in the hospital, and can upload images of the accident site and the injured. Similar services have been tested in many locations in Europe, but this might be the first based on Smart phones.

4. ITS Committee Open Meeting

The ITS Committee Open Meeting took place on Wednesday, January 25th. The meeting was chaired by Jane Lappin, U.S. DOT RITA's John A. Volpe Center.

Gregory D. Winfree, Acting Administrator, U.S. DOT Research and Innovative Technologies Administration (RITA), welcomed the audience and expressed his appreciation for the past 20 years of the ITS Committee's contributions to transport research.

Brian J. Cronin, Research Team Leader, RITA ITS Joint Program Office, provided an update of the U.S. DOT ITS program activities for the coming year titled "Connected Vehicle Update: The Year Ahead". He focused on the Safety Pilots and their upcoming results, data collection and analysis and the needed fundamentals for the NHTSA decision on Cooperative Systems in 2013.

James Pol, Program Management and Evaluation Team Leader, RITA ITS Joint Program Office presented "Tracking Our Success: 15 Years of ITS Deployment Tracking". The ITS Deployment Tracking Survey has been administered for more than 15 years and is used to monitor and track the diffusion of different ITS technologies geographically and over time. His presentation quantitatively analysed the factors that influence ITS adoption and deployment, revealed the characteristics of the ITS marketplace and provided insight into market interventions that affect technology adoption.

Amanda Palanisamy of Citizant Inc. introduced the ITS Committee Web Site and Communications to the general public (as done to the ITS Committee members on Monday (see former report section).

Dr. Michael L. Pack, Director, CATT Laboratory, University of Maryland Center for Advanced Transportation Technology gave an overview of a new web-based system that enables States to quickly develop congestion reports, analyse travel time reliability, rank state-wide bottlenecks, and justify major construction projects with just a few clicks of a mouse. This system makes use of merged transportation datasets from both public and private transportation agencies.

Dr. Lee Munnich, Director of the Center for Excellence in Rural Safety (CERS), Humphrey School of Public Affairs, University of Minnesota reported on an interactive web tool for mapping traffic fatalities and causes. SafeRoadMaps.org has generated over 10 million hits since it was launched in 2008 and has become an important tool for raising public awareness of rural safety problems and solutions. CrashHelp, another technology tool developed by CERS, enables emergency responders to collect multimedia data about crash victims on-scene and send directly into emergency rooms, providing hospitals critical data to improve crash outcomes.

Dr. Steven E. Shladover, California PATH Program, University of California Berkeley reported on his recent scan of Cooperative Vehicle-Highway Automation Systems. He summarized the findings from a recent scan of the state of development of cooperative vehicle-highway automation systems in Europe and Japan, showing a significantly higher level of activity and interest in systems that provide partial to complete automation of driving functions than there is currently in the U.S. Major European and Japanese projects were described, and the trends in goals, concepts of operation, sponsorships, and technical aspects were explained and contrasted with the current situation in the U.S. The full report will be published soon.

Jane Lappin, Chair of the TRB ITS Committee, closed the meeting in the late hours of Wednesday night by announcing the major events in transportation research planned for 2012 such as the ITS America meeting in May 2012 and the ITS World Congress in Vienna in October 2012.

European Commission's DG INFSO Unit G.4 ICT for Transport Team in Washington



*Juhani Jääskeläinen
Head of Unit
ICT for Transport*



*Wolfgang Höfs
Head of Sector
ICT for low-carbon Mobility*