Intelligent Transportation Systems
U.S. Department of Transportation

ES10: The Role of International Standards in Intelligent Transportation Systems

Shelley Row
Director, ITS Joint Program Office
Research and Innovative Technology Administration
U.S. Department of Transportation

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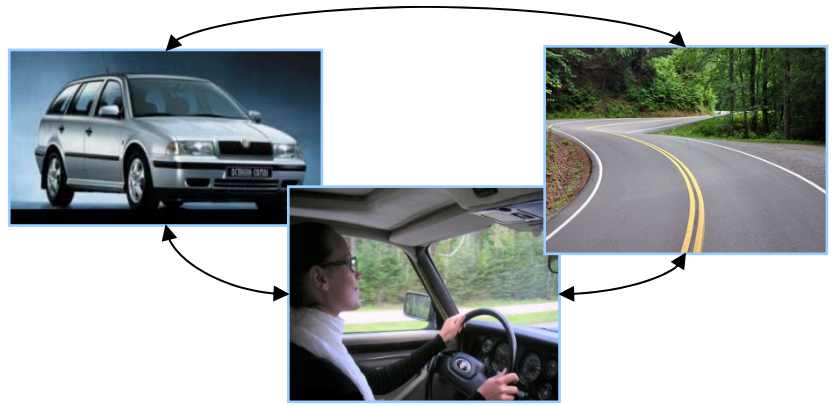
Background

- Global evolution of ITS technologies toward a connected future
  - Enable vehicle to vehicle and vehicle to infrastructure communications
  - Enhanced safety
    - Timely hazard and crash avoidance warnings
  - Enhanced mobility
    - Complete and accurate traveler information to support mode choice and routing decisions
    - Complete information to permit transformational transportation management capability
- Vehicle industry is global
  - Products currently differentiated to meet market regulatory requirements at substantial cost

Why International Involvement Now?

VEHICLE CONNECTIVITY

- A new paradigm for ITS: Connectivity
- Safety technologies in all vehicles
- Multi-modal solutions
  - Seamless Service for
    - System management
    - Travel information
    - Pricing
- Global market



Why International Harmonization?

- Mutually beneficial
  - Reduce costs to industry and consumers
    - Hardware and/or software development cost spread over larger user base -> reduced unit cost
    - Minimize differences between vehicles manufactured for different markets
  - Speed deployment of connected technologies
    - More people working toward common goals
    - Leverage expertise across borders
  - Encourage innovation
- ► Overall public benefit

Major International Standards Organizations

- International Organization of Standardization (ISO) Technical Committee (TC)
  - TC 204 Intelligent Transportation Systems
  - TC 22 Road Vehicles
- European Telecommunications Standards Institute (ETSI)
  - TC ITS
- International Telecommunication Union (ITU)
  - ITU-R radio spectrum
  - ITU-T telecommunications
- European Committee for Standardization (CEN) TC 278 Road Transport and Traffic Telematics
- Asia-Pacific Economic Cooperation Transportation Working Group (TPTWG)

JPO's International Involvement Today

- Limited, but informed
- American Public Transportation Association
  - ISO TC 204 Working Group 8 Rapporteur
- Technical input to IEEE 802.11p and 1609 and SAE J2735 standards – Dedicated Short Range Communications
  - International liaison reports provided at working group meetings
  - Broad International WG participation – EU/Korea/Japan

Looking Towards the Future…..

- Envision a world where vehicles and infrastructure communicate seamlessly with one another using widely available, common and affordable technologies to where safety and efficiency are maximized
- Standardization and harmonization are essential to achieve this vision

Harmonization

- Connectivity overlaps both NHTSA and ITS-JPO responsibilities
- Benefits of international harmonization especially of connectivity-related standards

NHTSA & JPO Partnership

We will cooperate on standards development around the vehicle platform and support international harmonization of these standards

Next Steps

- JPO Strategic Plan currently being developed
  - Broad stakeholder input
- ITS Standards Strategic plan being developed concurrently with JPO plan
  - Broad stakeholder input including NHTSA
- Strategic Plans will inform future standardization and harmonization activities
- Near-term actions to sustain progress and expand knowledge

ITS Standards Cross-cut JPO Goals

Safety

Goal: Transformative safety through vehicle and infrastructure connectivity.

Mobility

Goal: Realize "next generation" electronic payment systems that support transformational system performance.

Mobility

Goal: Capture complete, real-time information on all roads and all modes to support transformational system performance.

Environment

Goal: Enable environmental management through vehicle and infrastructure connectivity.

Mobility

Goal: Achieve transformational transportation management and system performance through applications of vehicle and infrastructure connectivity.

Policy

Goal: Establish an institutional foundation for deployment of safety, mobility, and environmental applications based on vehicle and infrastructure connectivity.

Next Steps (cont'd)

- EU-JPO connected vehicle workshop and session at ITS World Congress in Stockholm, Sept. 2009

- JPO ITS Standards Program to formally participate in:
  - ISO TC204 Technical Advisory Group meetings (U.S.)
  - Next TC 204 Working Group 16 CALM (Communications Access for Land Mobiles) meeting in Washington, D.C., June 2009
  - ISO TC204 in Barcelona, Spain, Sept. 2009
  - Additional ISO events as appropriate

Next Steps (cont'd)

- JPO providing financial support to ISO TC204
  - ITS America/JPO task to fund 1/3 cost of TAG/WG Secretariat and Administrator
  - Fund limited travel for experts to WG meetings
  - Continue to fund WG8 (Transit) Rapporteur
- Experts from IEEE 802.11p/1609 WG to liaison to ETSI/ISO WG meetings
- Further JPO-NHTSA coordination
  - Develop and implement action plans
- **Lessons learned from near-term activities and strategic plans will inform expanded future harmonization and standardization efforts**

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Questions?