



International Harmonization of Cooperative Systems Development

SS28: Cooperative Systems II: Bits, Bytes, and Brakes

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Background

- USDOT and the European Commission Directorate General for Information Society and Media (DGINFSO) entered into a bilateral Implementing Arrangement in January 2009
- Establish a technology roadmap for cooperative safety
- Established collaborative work activities:
 - Applications
 - Assessment Tools
 - Driver Distraction
 - Standards
 - Terminology
- Formal joint meetings:
 - Stockholm, Sweden (October 2009)
 - Washington, DC (Jan 2010)
 - Brussels, Belgium (planned for June 2010)



Applications Working Group

Objectives:

- Identify & define 2 cooperative applications (one V2V, one V2I) for collaboration
- Define technical solutions to common critical technology issues (e.g., security, positioning, communications, facilities)

Accomplishments:

- Preliminary definitions for three V2V and three V2I Applications
- Two applications recommended for further development
 - V2V: Forward Collision Avoidance.
 - V2I: Stop Sign/Signal Violation Warning.
- Recommendation to identify one Environment/Sustainability Application

Next Steps:

- Exchange existing technical information (e.g. Con Ops, Systems Engineering)
- Identify functional and performance requirements for each application
- Identify key technical elements for harmonization of three applications areas
- Define scope of sustainability application



Assessment Tools Working Group

Objectives:

- Establish the foundation to facilitate a common level of analysis capabilities, comparison of Field Operational Tests, and exchange of data and information.

Accomplishments:

- Three coordination areas identified:
 - Assessment Tools: share models, simulation, and analysis tools
 - Field Operational Test Methodology and Design: identify standard practices
 - Data Formats and Parameters: identify key parameters and a common format to support data exchange

Next Steps:

- Identify and characterize different assessment tools
- Identify basic FOT design and common methodology
- Identify common format and parameters to support data exchange



Driver Distraction Working Group

Objectives:

- Establish common definition, metrics
- Provide a platform for collaborations by which to collect/share data

Accomplishments:

- Meeting in Berlin with six leading experts on distraction (3 from US, Europe)
 - Established common definition of “driver distraction”
 - Identified top research needs (e.g., better estimates of risk of distracting tasks, implications for different mode operators)

Next Steps:

- Identify opportunities for collaboration and synergy by compiling a list of relevant activities (the NHTSA Distraction Plan, issued in April 2010, will facilitate these discussions)
- Define methodology in terms of techniques to measure distraction, so that studies can be more comparable



Standards Working Group

Objectives:

- Explore opportunities for harmonizing ITS standards internationally.
 - *Support, wherever possible, global open standards in order to ensure interoperability of cooperative systems worldwide and to preclude the development and adoption of redundant standards.*

Accomplishments:

- Draft Harmonization Opportunity Assessment Plan (HOAP)
 - Track 1: Assessment and Recommendations
 - Track 2: Detailed Agreement for Harmonization Procedures
 - Track 3: Gap/Overlap Analysis for Future Standards

Next Steps:

- Finalizing HOAP
- Exploring Document Sharing



Terminology Task

Objectives:

- Establish common working definition for key terms and concepts

Accomplishments:

- Draft document crafted and vetting through collaborative group

Next Steps:

- Publish Terminology Document on ITS website
- Invite external persons to contribute to Terminology Document



Observations

- We are making process; still in the start up phase
- Different funding models
- Alignment of priorities
- Membership representation on task forces

