

# EU-US Standards Harmonization Task Group Report: Stakeholder Engagement and Comment Resolution

Document HTG1&3-2

EU-US ITS Task Force  
Standards Harmonization Working Group  
Harmonization Task Groups 1 & 3

November 12, 2012

Publication # FHWA-JPO-13-074



U.S. Department of Transportation



Produced by the Implementing Arrangement between the European Commission and the U.S. Department of Transportation in the field of research on Information and Communications Technologies for transportation

U.S. Department of Transportation

Research and Innovative Technology Administration (RITA)

## **Notice**

This document is disseminated under the sponsorship of the Department of Transportation in the interest of information exchange. The United States Government assumes no liability for its contents or use thereof. The U.S. Government is not endorsing any manufacturers, products, or services cited herein and any trade name that may appear in the work has been included only because it is essential to the contents of the work.

## Technical Report Documentation Page

<b>1. Report No.</b> <b>FHWA-JPO-13-074</b>	<b>2. Government Accession No.</b>	<b>3. Recipient's Catalog No.</b>	
<b>4. Title and Subtitle</b> EU-US Standards Harmonization Task Group Report: Stakeholder Engagement and Comment Resolution (Document HTG1&3-2)		<b>5. Report Date</b> November 12, 2012	
		<b>6. Performing Organization Code</b>	
<b>7. Author(s)</b> Scott Cadzow, Paul Eichbrecht, Knut Evensen, Hans-Joachim Fischer, Emilio Davila-Gonzalez, Wolfgang Hoefs, Frank Kargl, Eric Koenders, Ola Martin Lykkja, John Moring, Richard Roy, Steve Shladover, Steve Sill, Takaaki Sugiura, Siebe Turksma, William Whyte		<b>8. Performing Organization Report No.</b>	
<b>9. Performing Organization Name And Address</b> ITS Joint Program Office, Research and Innovative Technology Administration, U.S. Department of Transportation, 1200 New Jersey Avenue, SE, Washington, DC 20590		<b>10. Work Unit No. (TRAIS)</b>	
		<b>11. Contract or Grant No.</b>	
<b>12. Sponsoring Agency Name and Address</b>		<b>13. Type of Report and Period Covered</b>	
		<b>14. Sponsoring Agency Code</b>	
<b>15. Supplementary Notes</b>			
<b>16. Abstract</b> Harmonization Task Groups 1 and 3 (HTG1 and 3) were established by the EU-US International Standards Harmonization Working Group to attempt to harmonize standards (including ISO, CEN, ETSI, IEEE) on security (HTG1) and communications protocols (HTG3) to promote cooperative ITS interoperability. This document provides a consolidated view of the comments received from a cross-section of experts invited to review the initial package of drafts of the HTG1 and 3 reports, as well as the resolution actions taken by HTG1 and 3 in response to those comments. These reports include the Overview document that defines the background and context for the joint work and the framework for the other reports, plus three reports each from HTG1 and HTG3, which identify (1) the current status of the standards, including gaps and potential interoperability problems; (2) interoperability test specifications; and (3) potential feedback to the Standards Development Organizations, with recommendations for how to overcome the interoperability challenges.			
<b>17. Key Words</b> Harmonization Task Group (HTG), standards, harmonization, vehicle, 5.9 GHz, communications, security stakeholder, comment, resolution		<b>18. Distribution Statement</b>	
<b>19. Security Classif. (of this report)</b>	<b>20. Security Classif. (of this page)</b>	<b>21. No. of Pages</b> 21	<b>22. Price</b>

## **Background**

A key part of the project execution structure for HTG1 and 3 was bringing together key experts from both the US and EU who, in addition to bringing their technical expertise, are also able, to a large extent, to represent the interests of major stakeholder groups. This small group of experts would then be able to more efficiently come to consensus on key issues and quickly converge on workable recommended solutions to harmonization challenges. Thanks to participation by appropriate subject matter experts, expert judgment could be substituted for rigorous and resource intensive alternatives analyses and permit rapid convergence on viable solutions to complex technical challenges.

## Stakeholder Engagement

To a large extent, it was possible to arrange for participation of an appropriate cross section of experts likely able to effectively represent the interests of the Standards Development Organizations (SDO), vehicle and infrastructure suppliers, and governmental interests. An exception was that the European automotive manufacturer community did not accept an invitation to actively participate in HTG1 and 3. This likely partially explains the relatively large number of comments provided by this community on the final drafts.

The schedule of the program of work was constrained by external considerations such that the entire program of work was required to be completed in approximately six months, a schedule which necessitated both a small number of draft releases (two) for comment and short comment periods. Initial drafts of HTG1 and 3 work products were circulated to a small selected group of external experts for preliminary review. These comments were reviewed and addressed via a combination of formal and informal processes inside the HTG1 and 3 working groups and informed development of the final drafts. Final drafts were circulated to a broader group of stakeholders via email with a request that these drafts be shared with other interested parties. The transmittal email and list of recipients is included in Appendix B. Due to the short overall schedule for the work effort, it was only possible to allow two weeks for comments.

## Comments Received

Comments were received on behalf of consortia representing both US and EU vehicle manufacturers, including the Crash Avoidance Metrics Partnership (CAMP) and the Vehicle Infrastructure Integration Consortium (VIIC) in the US and the Car2Car Communication Consortium (C2C-CC) in the EU.

Various types of comments were received; these were categorized into seven general areas and addressed in different ways depending on the nature of the comment.

### 1.1 Administrative Process

Administrative process comments were related to the execution of the HTG1 and 3 work effort.

The primary comment expressed dissatisfaction regarding the timeframes available to comment on the documents by stakeholders, including some who did not take advantage of the opportunity to participate directly in the work, but this was unavoidable because of the short deadline for completion of the HTG work.

### 1.2 Project Scope

Comments were received which either suggested that that scope of the HTG1 and 3 efforts should be expanded or reduced or that actions be taken which are outside of the scope of HTG1 and 3 jurisdiction. The primary scope issues that were raised:

#### 1.2.1 HTG1 and 3 extended beyond standardization to recommendations for system architecture, design and implementation and the design of in-vehicle systems

This misperception arose based on sections of the Overview document (HTG1&3-1, Overview of Harmonization Task Groups) that described candidate architectures for cooperative system implementation. These sections have been completely revised to note that these are no more than examples to frame the discussion about standards harmonization issues, and explicit statements have been added to disclaim any interest in specifying in-vehicle designs.

#### 1.2.2 HTG1 and 3 should limit its consideration to harmonization of the minimum set of standards needed for day-one deployment of cooperative ITS

The HTG1 and HTG3 task is wider than the minimum set of standards for day one deployment, as explained in the original definition of long-term goals in Annex B.

#### 1.2.3 Some of the stakeholders are interested in having further modifications made to the HTG documents subsequent to the September harmonization WG meeting in Oslo.

This is outside the remit of the HTGs since our work concluded at the end of the group's fifth meeting (20-24 August 2012). Further modifications were made during this week based on the commenters' inputs we received, leading to the final versions of the documents.

### 1.3 Clarification Required

Comments were received which indicated that the commenter had misunderstood the intent of particular portions of the drafts. In these cases, the misunderstanding indicated that additional efforts were required to clarify the text to reduce/eliminate the risk of such misunderstandings in the future. In other cases, commenters indicated that specific portions of text were insufficiently clear. In both cases, these comments were addressed by revising document text in order to increase clarity. For example, text was revised to clarify that HTG1 and 3 were not seeking to recommend any specific designs or internal architectures for in-vehicle electronic systems.

#### 1.3.1 Clarifications were needed about the alternative system architectures defined in Figures 4 and 5 of the Overview document (HTG1&3-1, Overview of Harmonization Task Groups).

The descriptions of these figures were changed extensively to clarify that they are examples of conceptual architectures rather than wiring diagrams, and do not prescribe implementations that vehicle manufacturers would need to follow. Indeed, the in-vehicle implementations could be very different from each other, while still abiding by the same set of harmonized standards.

#### 1.3.2 The ITS station concept was seen to be Euro-centric by U.S. reviewers and needed to be explained in more general terms.

The ITS station description was modified to show its character as a description of a general entity in a cooperative ITS environment, without regard to specific implementations or designs. It was also clarified that these are not being standardized internally, but the standards address the interactions among ITS stations so that they can be interoperable.

#### 1.3.3 The European and U.S. reviewers had different opinions about whether the safety and efficiency applications should be integrated or separated in the conceptual system architecture.

This model tries to balance the needs and perspective from U.S. stakeholders and European stakeholders. There are certain differences in approach based on spectrum availability and the resulting channel allocation, which results in a combined safety/efficiency channel in Europe, while these are separated in the U.S. It is also important to note that the integration of the functions at the ITS station does not add latency, in response to the concerns expressed by a U.S. reviewer who was interested in only the crash-imminent safety applications.

#### 1.3.4 The definitions of interoperability levels and the target degrees of harmonization in the Overview document (HTG1&3-1, Overview of Harmonization Task Groups) were not clearly understood and not carried through consistently in the other documents.

HTG1 and 3 documents provide recommendations on how to improve the harmonization level, but the decision on what level is possible is a political/commercial decision, given technology constraints. The general advice is to aim for the highest possible level of interoperability.

### **1.3.5 The testing documents and recommendation to SDO documents are not consistent in their approaches to harmonization.**

This is an artifact of the different time scales addressed by these documents. The testing documents address how to support more than one protocol because these are aimed at near-term testing, when multiple protocols may be present. The feedback to SDOs is aimed at longer term harmonization, which is likely to require replacement of some protocols.

### **1.3.6 In general these topics seem to be focused on a preference for particular standards and the reasoning for the suggestions is not clear.**

Because of the time and resource constraints under which HTG1 and 3 were operating, it was not feasible to provide the detailed reasoning behind the suggestions that were proposed, but we recognize that it would have been preferable to do so if we had sufficient resources.

## **1.4 Follow-Up Requests**

In some cases, commenters requested further action by HTG1 and 3 in particular areas of interest. There was particular interest among the stakeholders in further discussions about the scope of standards harmonization efforts, which will be addressed through outreach workshops planned for Europe late in 2012 and in the U.S. in early 2013.

One commenter offered the following suggestions:

*I think it will ease the further discussion a lot if the documentation could be extended in a way that for every recommendation there exists also a:*

- *List of options (if there are any).*
- *A rationale for the specific recommendations (i.e., pros / cons, why does this seem to be the best way/compromise among all options, and how it supports which goal of our harmonization efforts, such as a link to the objectives of the background doc)*
- *A prioritization showing the importance towards deployment, i.e., how critical is the harmonization of this issue with respect to how US / EU /JP stakeholders plan the deployment (day one deployment, extendibility, etc.) This is most important, from my perspective. I would suggest the following metrics:*
  - *1: Show-Stopper Day-1 (i.e., if not harmonized, day one system as specified by respective ITS stakeholders cannot be deployed in any of the markets).*
  - *2: Show-Stopper Future extendibility (i.e., if not harmonized, the envisaged day-1 installations of the stakeholders cannot be evolved (in any region) in future).*
  - *3: Deployment Costs / Risks (i.e., if not (further) harmonized, costs for development and deployment of day-1 systems are significantly increased, compromising testing, validation, etc., but system can still be installed).*

- 4: *Operational Costs / Risks (i.e., if not (further) harmonized, costs for life-cycle management and maintenance are significantly increased).*
- 5: *Future extendibility and flexibility (i.e., if not harmonized, the systems might not optimally evolve in future in all regions).*

*The second point will very much help to facilitate and ease the discussions, while the latter should be seen as an order to discuss the topics. I would assume that we address any potential show-stoppers first. In this context, we have to focus on issues that are related to the international/cross-market deployment. I think that some major topics that are similar for the markets or are of a more general nature (e.g., all issues about open platforms) should be discussed in a broader context.*

These are good comments and HTG1 and 3 would have adopted them if the time and resource constraints permitted them to do so.

## 1.5 Policy Issues

In some cases commenters raised questions regarding policy recommendations implied by HTG1 and 3 where the commenter disagreed with those recommendations.

### 1.5.1 **The recommendations of HTG1 and 3 were seen to be biased against some SDOs and in favor of other SDOs.**

Since comments along these lines were received from both sides of the Atlantic, this is a general indication that the HTG1 and 3 recommendations were probably reasonably balanced. The most controversial area seemed to involve GeoNetworking, which HTG1 and 3 addressed in a stand-alone document that was not circulated for prior review, but is part of its final package of deliverables. In this case, one SDO is heading in the direction of mandating GeoNetworking protocols that are unacceptable to the other SDOs, which would make harmonization impossible from the start.

### 1.5.2 **Some reviewers thought that security issues that HTG1 identified as being in need of standards harmonization had already been harmonized.**

This issue appears to be referring to agreements between CAMP and C2C-CC regarding security, but those agreements are happening outside the open consensus-based standardization process. These need to be brought into the formal standards process to achieve secure systems that can grow flexibly.

### 1.5.3 **The required level of interoperability needs to be discussed among all the stakeholders prior to the development of a list of feedback recommendations.**

Annex B of the Overview document (HTG1&3-1, Overview of Harmonization Task Groups), establishing the HTGs in the first place, is explicit on the HTG harmonization task and the concept of levels of harmonization. The relationship between levels of harmonization and level of interoperability is complicated and cannot be distilled into a simple linear relationship. The required level of interoperability is a policy and commercial decision that needs to be decided at a higher level than the

HTGs, and is outside the scope of the HTG1 and 3 work, but it should be discussed now that this work is complete and can provide useful input to that discussion.

## 1.6 Editorial

Editorial comments were addressed via revisions to the documents when appropriate.

### **1.6.1 A summary should be provided of the high- and possibly medium-priority actions that are being recommended so that the reader can find that information easily.**

This will be addressed in the final versions of the HTG1-3, Feedback to Standards Development Organizations—Security and HTG3-3, Feedback to Standards Development Organizations - Communications documents..

### **1.6.2 The recommendations directed to SDOs should be separated from those that are more policy oriented and outside the scope of SDO authority.**

This will be addressed in the final versions of the HTG1-3, Feedback to Standards Development Organizations—Security and HTG3-3, Feedback to Standards Development Organizations - Communications documents.

## 1.7 Technical

Numerous comments of a technical nature were received. The specific comments and the HTG 1 and 3 working groups' responses are included in Appendix A. Where appropriate, revisions were made to the HTG 1 and 3 documents.

## **Appendix A: Specific Responses to Selected Individual Comments**

Inconsistencies throughout the suite of communication documents. For example, feedback to SDOs [4] discusses at certain places replacement of protocols to reach harmonization whereas the testing document [3] states that more than one protocol should be supported in different parts of the protocol stack (much in the same way as the Internet works). Still, the same question: On what level is the harmonization work conducted? Overall justifications and the rationale behind assumptions and prioritization of harmonization tasks are missing.

*It is necessary to add text in doc [3] to make clear what is meant, and what is the relation to doc [4].*

### **Comments to HTG3-1, Status of ITS Communications Standards**

**The selection of interoperability topics appears arbitrary; for many of them a justification is not given or a reason to be an interoperability topic is not seen.**

*This comment is too general in order to be managed completely. We expected more precise comments, e.g., what is missing? Which justifications are not given?*

**HTG3-GE-01: For interoperability the implementation of the concept of bounded secured managed domain (BSMD) is not needed, i.e., it should not be described here.**

*HTG3 also took a long-term view on improvements and on harmonization issues (interoperability, portability, sustainability) in general.*

**HTG3-GE-02: The concept of logical channels is not needed for interoperability. Safety channels (5.9 GHz) are dedicated channels.**

**Logical safety channels are mapped onto physical channels according to regional regulation. The issue is portability, not interoperability, as stated in the document.**

**HTG3-GE-03: Registries for ITS-G5A safety messages (CAM/DEN/BSM) are not needed. The identifiers are already fixed in the corresponding standards.**

*Comments not applicable. Identifiers for the messages developed at ETSI (or at other SDOs) are not subject of registration. Message set identifiers will be subject of registration for interoperability and/or portability issues. Note that a well-known port number for the ETSI safety message set is needed, and will have to be used in the BTP.*

**HTG3-GE-05: MIB - Not an interoperability topic.**

*Basically MIBs are not an interoperability topic, but at least MIBs are a harmonization issue. In case of remote station management, MIBs may become an interoperability issue. Resolved by renaming the sub-clause.*

**HTG3-GE-06: Releases - Not an interoperability topic. In case it is, the fact that ETSI TC ITS has defined a release process is missing.**

*Releases are a mechanism for asserting interoperability of implementations. HTG3 is happy to insert a reference to the document from ETSI which specifies the release process. We requested this information from ETSI TC ITS, but there was no reply. ETSI in no way can define a "whole release process for ITS." There is a need for a cross-SDO release approach. We are aware of a new WI at ISO to develop a cross-SDO release approach.*

**HTG3-GE-07: Testing – Test specifications for ETSI base standards are not listed (DENM, GeoNetworking, BTP, IPv6 over GeoNetworking).**

*By intention only a few examples of existing test suites are presented, including test suites for ETSI base standards.*

**HTG3-GE-07: Testing – Listed points for incompleteness are not clear: Which test standards are missing?**

*Text was improved to clarify the issue.*

**HTG3-GE-07: Testing – Furthermore, the necessity for integration of test suites from various SDOs into the (i.e., a single) ETSI test platform is not seen.**

*The test suites for all base standards relevant for a specific implementation should beneficially be in the same test platform. Text was improved.*

**HTG3-AL-05: The statement “Local DCC mechanism may improve performance of ITS but do not cause interoperability problems” is wrong. Stations without DCC may cause harmful interference to other stations.**

*The comment mixes interoperability with performance issues.*

**HTG3-AL-05: Latest specifications regarding DCC in draft ETSI TS 102 724 are not taken into account.**

*TS 102 724 is a draft of WG4 with the title "Intelligent Transport Systems (ITS); Harmonized Channel Specifications for Intelligent Transport Systems operating in the 5 GHz frequency band." The introduction of the latest draft (v0.0.26) claims that the document provides the basis for DCC protocols (i.e., the document does not specify DCC protocols. Please detail your question such that we understand it fully).*

**HTG3-AL-07: Fragmentation at the MAC layer is not prohibited explicitly in the draft version of EN 302 663. Therefore, not an interoperability issue anymore.**

*ES 202 663 does.  
Section removed.*

**HTG3-NT-01: In ETSI TC ITS, the need for a networking functionality for ad hoc communication (incl multi-hop) is recognized. The description questions this.**

*Multi-hop communications is not questioned.*

**HTG3-NT-01: The ETSI GeoNetworking standards have been successfully developed in various R&D projects (FleetNet, NoW, GeoNet, PRE-DRIVE), applied in many others (e.g., SAFESPOT) and is currently assessed in FOTs, such as (DRIVE\_C2X, SCOR@F, SIMTD). ETSI GeoNetworking is mature.**

*Until there is publicly available information that verifies GeoNetworking works at all, it cannot be claimed that it is mature. See also document HTG1&3-3, Observations on GeoNetworking.*

**HTG3-NT-01: The Note 4.21.4 is incorrect. The overhead is negligible.**

*See document HTG1&3-3, Observations on GeoNetworking.*

**The suggested Facility-layer GeoNetworking functionality suggested by ISO results in duplicated standards for the same functionality. Therefore ISO NWI 16444 (see ref. 1 in [1]) is obsolete.**

*ISO 16444 aims on providing a complementary functionality to GeoNetworking; it is not obsolete but fills a gap.*

**HTG3-NT-02: Transport protocols – The description is misleading and rather follows the ISO concept.**

*It is correct, that the ITS station architecture is based on the ISO-OSI model. The comment does not explain why and how the description is misleading. HTG3 improved the text.*

**HTG3-NT-02: Transport protocols – ETSI TC ITS has developed a simple (UDP like) transport protocol BTP that provides minimal functionality and protocol overhead.**

*This is not a comment but information which was already available at HTG3.*

**HTG3-NT-03: Identification of Endpoints - Endpoints are related to transport protocols and therefore need to be defined as such.**

*In WAVE, endpoints are identified by PSID rather than by a port number of a transport protocol. It is correct that the way of identifying an endpoint in the ITS station architecture is dedicated to the transport protocol.*

**HTG3-NT-03: Identification of Endpoints - Well-known port numbers for TCP and UDP are registered through IANA.**

*This is not a comment but information which was already available at HTG3. BTP using port numbers from IANA would be acceptable. However there are port numbers at IANA for UDP and TCP, but not for BTP. Likely IANA, as an Internet-related registration authority, is not interested to work on ITS port numbers.*

**HTG3-NT-03: Identification of Endpoints - BTP port numbers by ETSI TC ITS, etc. The need for a global registry of endpoints is not seen.**

*ETSI is not a port number registration authority; however, ETSI can assign port numbers for BTP, which HTG3 believes to be less acceptable on a global basis than using the service from a registration authority.*

**HTG3-NT-03: Identification of Endpoints - The need for a global registry of endpoints is not seen.**

*There is a work item at CEN under M/453 to prepare for an ITS registration authority for port numbers. This work item is developed in PT1601 funded by the EC.*

**HTG3-NT-04: IPv6 support “with a minimum set of IPv6 features” – this is unclear; why only a minimum set?**

*Text was improved. Issue clarified.*

**HTG3-NT-05: Maximum PDU size – The maximum PDU/SDU size is restricted by the underlying access technology (i.e., the Maximum Transmission Unit MTU of 802.11/ITS-G5). This is not considered in the description. The interoperability issue that arises from the Max PDU size is unclear.**

*Comment accepted. HTG3-NT-05 deleted.*

**HTG3-FL-01: Facility layer functions and services – This topic should rather be moved to another HTG document that is related to facilities?**

*HTG3 is responsible for communications, which includes protocols in the ITS-S facilities layer (OSI layers 5, 6, 7).*

**HTG3-FL-02: Facility-layer API: No comment.**

**HTG3-M-01: Service advertisement - Service advertisements are not necessary for harmonizing safety applications.**

*The scope of HTG3 is not limited to safety applications. The ETSI version of FSAP is clearly marked as not approved yet.*

**HTG3-M-01: Service advertisement - Please consider draft ETSI TS 102 724.**

*Reference to draft ETSI TS 102 724 is not understood.*

**HTG3-M-01: Service advertisement - ETSI did not adopt the ISO approach for the service protocol.**

*The ETSI version of FSAP is clearly marked as not approved yet.*

**HTG3-M-01: Service advertisement - In the ETSI context, the service advertisement – if needed – can also be sent via the GeoNetworking protocol.**

*This is not a comment but information which was already available at HTG3.*

**HTG3-ME-02: SAM and CTX: CTX is a specific feature of the ISO protocol FSAP. Topic can be merged with HTG3-M-01.**

*Comment understood. HTG3 decided to go for a hierarchical presentation.*

**HTG3-ME-03: NW&T layer protocols for service advertisements: If Service announcement messages are needed, they should be sent over ETSI GeoNetworking.**

*Nothing prohibits usage of GeoNetworking for this purpose. However usage of GeoNetworking in general cannot be mandatory.*

**HTG3-ME-04: Delivery mechanism for service advertisement – Topic can be merged with HTG3-ME-03.**

*Comment understood. HTG3 decided to go for a hierarchical presentation.*

**HTG3-ME-06: Application identifiers – The need for AIDs is questioned.**

*The need for global registration of ITS-AIDs/PSIDs is well recognized, also at ETSI. See ETSI TS 102 860 V1.1.1(2011-05), "Intelligent Transport Systems (ITS); Classification and management of ITS application objects" and Draft ETSI TS 102 965, "Intelligent Transport Systems (ITS); Application Object Identifier (ITS-AID); Registration list". Text improved.*

**HTG3-ME-07: Router advertisements – Add that IPv6 router advertisements can be transmitted via IPv6 and GeoNetworking.**

*The issue is not concerning general IPv6 router advertisements. General IPv6 router advertisement is not prohibited.*

**HTG3-ME-08: Session support in service advertisement - The combination of service advertisement and session support is a specific ISO feature.**

*This is not a comment.*

**HTG3-ME-08: Session support in service advertisement - It is unclear why this is needed.**

*Obviously there is a need for session support as given in examples (EFC). Session establishment based on IP technology is not concerned here. The issue only concerns general features of service advertisement. Text improved.*

**HTG3-ME-08: Session support in service advertisement - Two nodes can establish session using other (well-known or to be defined) protocols.**

*This is not a comment, but just information of a possible feature in communications.*

**HTG3-ME-08: Session support in service advertisement - Topic can be merged with HTG3-M-01.**

*HTG3 decided to go for a hierarchical presentation.*

**HTG3-ME-09: TX power indication - ETSI is in the process to define mechanisms for Decentralized Congestion Control (DCC) in GeoNetworking for ITS-G5. One considered mechanism is Transmit Power Control (TPC) that utilizes transmit power indication.**

*This is not a comment but information which was already available at HTG3.*

**HTG3-ME-09: TX power indication - In fact, proprietary (i.e., not standardized) mechanisms have already been implemented and studied in FOTs (such as DRIVE).**

*Interesting information. Proprietary issues are outside the scope of HTG3.*

**HTG3-ME-10: SAM/WSA message repetition rate. Implications for the ETSI standards unclear.**

*A repetition rate of SAM/WSA is an operational parameter which may be requested by an application. Impact on which ETSI standards?*

**HTG3-ME-11: Location of service provider antenna. Implications for the ETSI standards unclear.**

*Detailed explanation may be provided by IEEE 1609 group who introduced this optional feature in WAVE. Impact on which ETSI standards?*

**HTG3-ME-12: Different formats of station identifiers: Differences recognized.**

*OK, but what is the intended usage of station identifiers? This information would help HTG3 to further work on this issue.*

**HTG3-ME-13: Delivery of generic management data: Differences recognized; purpose unclear.**

*Detailed explanation may be provided by IEEE 1609 group who introduced this optional feature in WAVE.*

## **Comments to HTG 3-3, Feedback to Standards Development Organizations - Communications**

The assignment of priorities to the interoperability topics is not comprehensible. In particular, it cannot be understood why the following four interoperability topics have high priority:

- HTG3-GE-03: Registries.
- HTG3-GE-07: Testing.
- HTG3-AL-01: Physical channels.
- HTG3-AL-02: Mapping of logical channels onto physical channels.

*The new Summary section 2.3 now includes the rationale for each high priority assignment.*

**Discussion mainly summarizes ISO viewpoint.**

*The document represents the HTG's best effort to present a balanced coverage of CEN, ETSI, IEEE, and ISO status and objectives, accepting inputs from participants in each of these organizations. We regret if we missed any viewpoints.*

**Actions are not agreed.**

*True, these are actions suggested by the work in HTG3. The title of sections 4.x.3 has been changed to "Suggested Actions" to reflect this.*

## **Appendix B: Email Transmittal of Final Drafts for Comment**

**From:** [Sill, Steve \(FHWA\)](#)  
**To:** [see list of recipients](#)  
**Subject:** Info.: EU-US Harmonization Task Group (HTG) 1 & 3 Final Draft for Review/Comment  
**Date:** Wednesday, August 22, 2012 4:09:38 AM  
**Attachments:** [HTG 1-3 05Aug12 ExtReviewDocs.zip](#)

---

**From:** Sill, Steve (FHWA)  
**Sent:** Monday, August 06, 2012 2:42 PM  
**To:** <selected recipients>  
**Subject:** Info.: EU-US Harmonization Task Group (HTG) 1 & 3 Final Draft for Review/Comment

Greetings Everyone,

As you may be aware, the European Commission (EC) and the US Department of Transportation (US DOT) have been engaged in efforts jointly make an initial cooperative attempt under the joint EU-US intergovernmental agreement to achieve harmonization of security and communication protocols between the US and Europe in support of connected vehicle technologies under the auspices of Harmonization Task Groups (HTG) 1 and 3.

The final draft work products of this first jointly sponsored and jointly led work programs of the European Union (EU) - US DOT International Standards Harmonization Working Group formed as part of the 2010 agreement on joint ITS research between the US DOT and the EC are now available for review/comment and are attached in the zipped archive. These documents describe a candidate approach toward harmonization of the ITS communications and security standards that have been developed by IEEE, ETSI, ISO and CEN. There are seven documents included in this package, beginning with the Background Document that explains the reasoning behind this effort and defines the context for the other documents. There are three documents each from HTG1 and 3, which identify (1) the current status of the standards, including gaps and potential interoperability problems; (2) interoperability test specifications; and (3) potential feedback to the SDOs, with recommendations for how to overcome the interoperability challenges. The documents from HTG1 address security issues and those from HTG3 address communication issues.

We are interested in obtaining your review and feedback on these documents before they are finalized, especially regarding any inaccuracies or omissions. We would encourage you to share these documents with your colleagues interested in ITS communications standards, especially within the SDOs that are active in this field, and ask them to review and comment as well.

The final meeting of HTG1 and 3 will be held the week of August 20, so we do need to receive your feedback by August 20. Ideally, this should be in a stand-alone document from each reviewer (individual or organizational), but if there are specific editorial suggestions we can also work with copies of our documents that have been annotated using the Track Changes feature of Microsoft Word. Review comments should be sent to Knut Evensen ([Knut.Evensen@q-free.com](mailto:Knut.Evensen@q-free.com)) and Steve Shladover ([steve@path.berkeley.edu](mailto:steve@path.berkeley.edu)).

Thanks and Best Regards,

Wolfgang Höfs and Steve Sill

## Recipients of Transmittal of Final Documents for Comment:

Yousuke Akatsu, Nissan Motor Co., Ltd.

Scott Andrews, Cogenia

Markus Bauer, BMW

Thomas Benz, PTV

Richard Bishop, Bishop Consulting

Eva Boethius, European Commission DG-CONNECT

Richard Bossom, E-Frame CEN-ISO

Fausto Caneschi, Consultant

Brian Cronin, ITS Joint Program Office, USDOT

Emilio Davila-Gonzalez, European Commission DG-CONNECT

Francois Fischer, ERTICO

David Fitzpatrick, Booz Allen and Hamilton

Edward Fok, Federal Highway Administration, USDOT

John Harding, NHTSA, USDOT

Søren Hess, Car-2-Car Communication Consortium

Wolfgang Hoefs, European Commission

Akio Hosaka, Highway Industry Development Organization (HIDO), Japan

Michael Howarth, Intelligent Devices

Juhani Jaaskelainen, European Commission DG-CONNECT

John Kenney, Toyota InfoTechnology Center

Timothy.Klein, USDOT

Paul Kompfner, ERTICO

Tom Kurihara, IEEE

Jane Lappin, Volpe National Transportation Systems Center, USDOT

Lan Lin, Hitachi Europe

Emiliano Lopez, U.S. DOT

Ben McKeever, Federal Highway Administration, USDOT

Chris Monk, NHTSA, USDOT

Satoru Nakajo, Mitsubishi Research

Masafumi Nakayama, Japan Society of Automotive Engineers (JSAE)

Talsashi Nishio, MLIT

Yosuhiko Okamura, MLIT

Marcia Pincus, ITS Joint Program Office, USDOT

Ray Resendes, NHTSA, USDOT

Gary Ritter, Volpe National Transportation Systems Center, USDOT

Joerg (Nu) Rosenbohm, ITS America

Shelley Row, ITS Joint Program Office, USDOT

Koichi Sakai, NILIM

Masashi Satomura, Honda Motor Company, Japan

Hans-Joachim Schade, TSE Consult

Tom Schaffnit, VII Consortium

Mike Schagrin, ITS Joint Program Office, USDOT

Andreas Schalk, IPTE/ CEN-ISO

Dick Schnacke, Transcore

Dieter Seeberger, DaimlerBenz

Gerard Segarra, Renault

Mike Shulman, Ford Motor Company

Susan Spencer, Transport Canada

Steve Sprouffske, Kapsch Technocomm

Pawel Stelmaszczyk, European Commission

Markus Strassberger, BMW

Shoichi Suzuki, NILIM

Dale Thompson, ITS Joint Program Office, USDOT

Ryoichi Watanabe, MLIT Research Fellow at FHWA

Vann Wilbur, VII Consortium

MaryAnne Wroten, Ford Motor Company

U.S. Department of Transportation  
ITS Joint Program Office-HOIT  
1200 New Jersey Avenue, SE  
Washington, DC 20590

Toll-Free "Help Line" 866-367-7487  
[www.its.dot.gov](http://www.its.dot.gov)

**FHWA-JPO-13-074**



U.S. Department of Transportation