# Collaboration on ITS Communication Standards

## 30 November 2016, Detroit, United States

### Meeting report

1. **Introduction**

The meeting of the Collaboration on ITS Communication Standards (“Collaboration”) took place on 30 November 2016 at GM Renaissance Center Detroit, United States.

The meeting was held in conjunction with a [ITU/TIA Vehicle Connectivity Workshop](http://www.tiaonline.org/VehicleConnectivity) on 29 November 2016.

**T. Russell Shields** of Ygomi LLC chaired the meeting.

The intent of the Collaboration is to provide a globally recognized forum for the creation of an internationally accepted, globally harmonized set of ITS communication standards of the highest quality in the most expeditious manner possible to enable the rapid deployment of fully interoperable ITS communication-related products and services in the global marketplace.[[1]](#footnote-1)

1. **Opening of meeting, introductions and adoption of the agenda**

Russ Shields welcomed the 27 participants including 2 remote attendees (the final list of participants is in [Doc 012](https://itu.int/en/ITU-T/extcoop/cits/Documents/Meeting-201611-Detroit/012%20-%20List%20of%20participants.pdf)) and introduced the objectives of the Collaboration (see [website](http://www.itu.int/en/ITU-T/extcoop/cits/)).

He noted that the Collaboration is not a standards-setting, but a standards-facilitating group, exchanging information and promoting the development and adoption of ITS communications standards.

The draft agenda was adopted without changes as in [Doc 001](https://itu.int/en/ITU-T/extcoop/cits/Documents/Meeting-201611-Detroit/001%20-%20Draft%20agenda.docx).

1. **Wrap-up of ITU/TIA Workshop**

Participants expressed positive feedback on the [programme](http://www.tiaonline.org/VehicleConnectivity) and discussions of the workshop held the previous day. **Martin Adolph** (ITU) explained that the Collaboration has established a yearly cycle of three meetings and three workshops: (1) March, during Geneva Motor Show; (2) summer in Asia; (3) fall in the Americas. The workshop was attended by more than 120 participants.

1. **Update on ITS communications standardization activities**

Before the briefings on ITS communications standardization activities in ITU groups, Martin Adolph pointed participants to a [spreadsheet](http://www.itu.int/en/ITU-T/extcoop/cits/Documents/ITS%20work%20items.xlsx) collecting information about all ITS related work items in ITU. Covering the work of ITU-T (Study Groups 12, 13, 16, 17, 20) and ITU-R, the spreadsheet is regularly updated.

**Paul Najarian** (US Department of State) presented an overview of ITS radiocommunication aspects in ITU’s Radiocommunication Sector (ITU-R) ([Doc 004](https://itu.int/en/ITU-T/extcoop/cits/Documents/Meeting-201611-Detroit/004%20-%20ITU-R%20briefing.pptx)). He introduced agenda item 1.12 of the next World Radiocommunication Conference (WRC-19), which has as objective to *consider possible global or regional harmonized frequency bands for the implementation of evolving ITS under existing mobile-service allocations*, and called upon SDOs working in the field of ITS communications to provide input to ITU-R, in particular on

* Any standard/report that provides technical, operational and systems characteristics of ITS in any band;
* Any deployment/projected numbers (i.e., total number of deployed systems, or projections);
* Any benefits studies (i.e. contributions of ITS toward road/vehicle safety, etc.); and
* Identification of other ITS safety-related applications that may benefit from global/regional harmonization.

Finally, he outlined the US preparatory process for WRC-19 and provided contact information.

**Yushi Naito** (former Chair, ITU-T Study Group 16 “Multimedia”) provided an update on SG16’s work with a particular view on the changes in mandate and leadership introduced by the ITU World Telecommunication Standardization Assembly ([Doc 005](http://www.itu.int/en/ITU-T/extcoop/cits/Documents/Meeting-201611-Detroit/005%20-%20ITU-T%20SG16%20briefing.pptx)). He highlighted the work of Question 27 of SG16 on a vehicle gateway platform for telecommunication/ ITS services and applications, and joint discussions held between Question 27/16 and Question 6/17 on vehicle gateway matters.

Yushi also introduced the work on Objective methods for speech and audio evaluation in vehicles conducted by Question 4 of Study Group 12 (see Recommendations ITU-T [P.1100](https://www.itu.int/rec/T-REC-P.1100/en), [P.1110](https://www.itu.int/rec/T-REC-P.1110/en), [P.1130](https://www.itu.int/rec/T-REC-P.1130/en), [P.1140](https://www.itu.int/rec/T-REC-P.1140/en) - Speech communication requirements for emergency calls originating from vehicles).

In his presentation ([Doc 006](http://www.itu.int/en/ITU-T/extcoop/cits/Documents/Meeting-201611-Detroit/006%20-%20ITU-T%20SG17%20briefing.pdf)), **Koji Nakao** (former Vice Chair, ITU-T Study Group 17 “Security”) focused on discussing the progress on Draft Recommendation ITU-T X.1373 “Secure software update capability for ITS communications devices”, which was determined in September 2016, and is now awaiting comments from the membership (TAP consultation process) to be approved by SG17 in its Geneva, 22-30 March 2017 meeting. He gave an outlook on work item X.itssec-2 “Security guidelines for V2X communication systems”.

Participants invited SG17 to take into consideration the [joint ISO/SAE effort to develop technical standards](http://www.iso.org/iso/home/news_index/news_archive/news.htm?refid=Ref2137) for road vehicles and intelligent vehicle systems, including automotive cyber security. Participants also called for SG17 to consider the Threat, Vulnerability and Risk Analysis (TVRA) for ITS communications performed by ETSI TC ITS (see [ETSI TR 102 893 V1.1.1 (2010-03)](http://www.etsi.org/deliver/etsi_tr/102800_102899/102893/01.01.01_60/tr_102893v010101p.pdf)).

**Mitch Tseng** (Chair, TIA TR-48 “Vehicular Telematics”) described TR-48 focus areas ([Doc 007](http://www.itu.int/en/ITU-T/extcoop/cits/Documents/Meeting-201611-Detroit/007%20-%20TIA%20TR48%20briefing.pdf)), which include LTE D2D and V2X for ITS and other vehicular telematics applications; IEEE 1609 (WAVE); ITS (ISO TC204); Service layer M2M/IoT standards (oneM2M); V2P communications based on DSRC. Work is planned in the area of carried-on devices for vehicles, including the definition of a secure interface and the various use cases.

Participants inquired about collaboration between TR-48 and FCC on ITS communications. Mitch responded that for the time being this is limited to information sharing. A question was raised about possible radio constraints in V2P communications. It was responded that this is partly considered and addressed in 3GPP efforts on V2X over LTE. Participants also asked how TR-48 prioritizes its areas of focus. Mitch responded that this is based on contributions submitted by the participants.

**Mitch Tseng** then went on to introduce the recent activities of ISO TC204, and its Working Group 16 in particular ([Doc 008](http://www.itu.int/en/ITU-T/extcoop/cits/Documents/Meeting-201611-Detroit/008%20-%20ISO%20TC204%20WG16%20briefing.pdf)). Focus areas of WG16 include WAVE FAST Harmonization (completed), probe data (privacy and integrity protection), LTE D2D, LTE V2X for ITS, mmWave for ITS, ITS communications for disaster recovery. He noted that security could be a target area for collaboration, but the scope of work would need to be defined, e.g., in the form of a gap and overlap analysis. Responding to a comment on new work items established in WG18, which might overlap with work going on elsewhere, participants noted that these were approved before the ISO/SAE collaboration agreement (see above). Also, many TC204 work items are carried out in parallel with CEN 278, under the [Vienna Agreement](http://www.iso.org/va).

**Dick Schnacke** (Chair, ISO TC204) provided further details on the collaboration between ISO TC22 and TC204, in particular with regard to standardization of the vehicle ITS gateway ([Doc 011](http://www.itu.int/en/ITU-T/extcoop/cits/Documents/Meeting-201611-Detroit/011%20-%20ISO%20TC204%20supplementary%20information.pptx)). He noted that the Partnership Standards Development Organization (PSDO) cooperation agreement between ISO and SAE will apply in two areas, Road Vehicles ([ISO TC22](https://www.iso.org/committee/46706.html)) and Intelligent Transportation Systems ([ISO TC204](https://www.iso.org/committee/54706.html)), and could cover security for wireless as well as wired interfaces. He also described ISO work on the [Extended Vehicle (ExVe)](https://www.iso.org/obp/ui/#iso:std:iso:20077:-1:dis:ed-1:v1:en), *an entity, still in accordance with the specifications of the vehicle manufacturer, that extends beyond the physical boundaries of the road vehicle and consists of; the road vehicle; off-board systems; external interfaces; the data communication between road-vehicle and the off-board systems.*

The meeting briefly reviewed material submitted by **SAE International** ([Doc 009](http://www.itu.int/en/ITU-T/extcoop/cits/Documents/Meeting-201611-Detroit/009%20-%20Status%20of%20the%20SAE%20communication%20standards.docx)). Questions were raised about the scope of interoperability in the SAE infographic.

The meeting briefly highlighted recent ITS communications related achievements in 3GPP, notably the completion of the initial Cellular Vehicle-to-Everything (V2X) standard, for inclusion in Release 14 ([see 3GPP news release](http://www.3gpp.org/news-events/3gpp-news/1798-v2x_r14ietf%20ipwave)).

**Robert Moskowitz**, a participant familiar with the progress of the recently established IETF Working Group on ITS pointed attendees to the [WG website](https://datatracker.ietf.org/wg/its/charter/), its mailing list and [archive](https://datatracker.ietf.org/wg/its/archives/).

1. **Update on World Forum for Harmonization of Vehicle Regulations (WP.29) activities**

**Russ Shields** introduced recent activities related to ITS communications of [UNECE WP.29](http://www.unece.org/trans/main/wp29/introduction.html). WP.29 convenes officially three times per year (March, June, and November) and entrusts informal groups with specific problems that need to be solved urgently or that require special expertise.

ITU has a standing invitation to participate in WP.29 and its working groups, and is promoting the use of international standards in these activities.

He noted that the following working groups under WP.29 are of particular interest to the ITS communications community:

1. Informal Working Group on ITS/Automated Driving (IWG ITS/AD). Reporting to WP.29. The documentation of IWG ITS/AD is available [here](https://www2.unece.org/wiki/pages/viewpage.action?pageId=2523344).
2. UNECE Task Force on cybersecurity and over-the-air issues (CS/OTA). Reporting to IWG ITS/AD. The documentation of CS/OTA is available [here](https://www2.unece.org/wiki/pages/viewpage.action?pageId=40829521).
3. Informal Working Group on Accident Emergency Call Systems (IWG AECS). Reporting to WP.29. The documentation of IWG AECS is available [here](https://www2.unece.org/wiki/pages/viewpage.action?pageId=14319865). [Recommendation ITU-T P.1140](http://itu.int/ITU-T/P.1140), which defines use cases, requirements and associated test methods for speech communication for emergency call communications, is referenced in a draft new regulation on AECS.
4. **Outlook and any other business**

The next Collaboration meeting will take place on 10 March 2017 at ITU in Geneva, Switzerland, succeeding the **ITU/UNECE** [**Symposium on The Future Networked Car**](https://www.itu.int/en/fnc/2017/Pages/default.aspx) **at Geneva Motor Show on 9 March 2017**.

Participants asked about the timeline for future Collaboration activities. The ITU representative explained that the membership was generally satisfied with the progress made and information exchange fostered by the Collaboration on ITS Communication Standards, and that ITU’s Telecommunication Standardization Advisory Group approved a continuation of the activities in the 2017-2020 study period. A participant suggested to consider a gap analysis of standards relating to issues of data privacy, ownership of data as a future work item. Other participants were of the opinion that the work should continue to focus on technical issues.

1. **Close of meeting**

The Chair thanked TIA for hosting the meeting and workshop and expressed appreciation to all participants for their inputs and the fruitful discussions. The meeting closed at 1530 local time.

## List of action items (as of December 2016)

| Meeting | No. | Who | What | Work Item | By when | Status |
| --- | --- | --- | --- | --- | --- | --- |
| Tokyo, July 2016 ([meeting report](http://www.itu.int/en/ITU-T/extcoop/cits/Documents/Meeting-201607-Tokyo/009%20-%20Report.docx)) |
| Tokyo(2016) | 1 | SG16, SG17, TC204/TC22 | Take into consideration W3C activities; exchange relevant information with W3C. | 3 |  | Ongoing |
| Tokyo(2016) | 2 | Koji Nakao / SG17 | Identify IEEE standards of interest to SG17 work on ITS security | 4 | November 2016 | Pending |
| Tokyo(2016) | 3 | Yasubumi Chimura / TTC | Share information on the role of ITS in the event of disasters with TC204 | 7 | November 2016 | Pending |
| Geneva, March 2015 ([meeting report](http://www.itu.int/en/ITU-T/extcoop/cits/Documents/Meeting-201503-Geneva/009%20-%20Meeting%20report.docx)) |
| Geneva(2015) | 2 | Russ Shields, Yushi Naito, ITU/TSB  | Follow work of informal group ITS/AD, synchronize activities with development of F.AUTO-TAX. | 2, 3, 6 |  | Ongoing |

1. Collaboration website, <http://www.itu.int/en/ITU-T/extcoop/cits/> [↑](#footnote-ref-1)