|  |  |  |
| --- | --- | --- |
| Yes ITU logo | INTERNATIONAL TELECOMMUNICATION UNION**TELECOMMUNICATIONSTANDARDIZATION SECTOR**STUDY PERIOD 2017-2020 | **DOC 33**  |
| **Collaboration on Intelligent Transport Systems Communication Standards** |
| **Original: English** |
| **Question(s):** |  | e-meeting, 28 October 2019 |
| **DOCUMENT** |
| **Source:** | Chairman, Collaboration on ITS Communication Standards |
| **Title:** | Draft Report (CITS e- meeting, 28 October 2019) |
| **Purpose:** | Information |
| **Contact:** | T.Russell ShieldsYgomi LLCUnited States | Tel:Fax:Email: trs@ygomi.com |
| Please don’t change the structure of this table, just insert the necessary information. |

**Draft Report – Meeting of Collaboration on ITS Communication Standards**

***(28 October 2019, e-meeting)***

[**http://itu.int/go/ITScomms**](http://itu.int/go/ITScomms)

**1 Introduction**

The meeting of the Collaboration on ITS Communication Standards (CITS) took place on 28 October 2019, in the form of an e-meeting. Russell Shields (Ygomi LLC) chaired the meeting assisted by Stefano Polidori (ITU/TSB Advisor).

**2 Opening, meeting participants and adoption of the agenda**

**T. Russell Shields**, Chair of CITS, opened the meeting and highlighted the pivotal role played by CITS as a standards-facilitating group for exchanging information related to ITS communications standards. He further highlighted that the activities of CITS would foster the creation of 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.

**24** participants joined the meeting representing various Standards Development Organizations (SDOs) and other stakeholders. The list of participants is available and posted as [Doc 32](https://www.itu.int/en/ITU-T/extcoop/cits/Documents/Meeting-20191028-e-meeting/32_%20List_of_participants_281019.pdf). As the meeting was held electronically, there was no on-site participation.

A total of 33 meeting documents were submitted. This meeting report was posted as Doc 33 after the meeting. All related meeting documents were openly accessible on the CITS site [here](https://www.itu.int/en/ITU-T/extcoop/cits/Pages/meeting-documents.aspx?RootFolder=%2Fen%2FITU%2DT%2Fextcoop%2Fcits%2FDocuments%2FMeeting%2D20191028%2De%2Dmeeting&FolderCTID=0x0120008D91490DA7927C4D8A0BB5A73929B07D&View=%7B73BE16B3%2D22C9%2D43D5%2DA9FD%2DD8BC067A87FF%7D).

The draft agenda as contained in [Doc 1R3](https://www.itu.int/en/ITU-T/extcoop/cits/Documents/Meeting-20191028-e-meeting/01R3_Chair_draft_agenda-Emeeting.docx) was adopted.

**3 Status of ITS communications work in various SDOs**

**3.1** [**IETF-IPWAVE**](https://datatracker.ietf.org/wg/ipwave/about/)

[[Doc 17](https://www.itu.int/en/ITU-T/extcoop/cits/Documents/Meeting-20191028-e-meeting/17_IETF-IPWAVE_status.pptx)] was submitted and presented remotely by Alex Petrescu. It provides updates on the IPWAVE Working Group and its main work item: IPv6 over 802.11-OCB. This work item has been demonstrated in commercial OBU systems at Niclabs at Uni of Chile and is currently being edited. Additional work is also being carried out on:

* draft-ietf-ipwave-vehicular-networking-12
* identifying gaps and open areas for future work
* address autoconfiguration, routing, mobility management, DNS, service discovery, security and privacy – for IP networking in vehicular environments
* Other IP-related problems

**3.2** [**CCSA**](http://www.ccsa.org.cn/english/tc.php?tcid=tc10)

[[Doc 21](https://www.itu.int/en/ITU-T/extcoop/cits/Documents/Meeting-20191028-e-meeting/21_Standardization_activities-CCSA_ITU-workshop.pptx)] was submitted by CCSA and presented by Yuming Ge, CAICT. It highlighted the main activities related to the standardization of C-V2X along with the four standards committees:

* National Technical Committee 485 on Communication of Standardization Administration of China (SAC/TC485)
* National Technical Committee 268 on Intelligent Transport Systems of Standardization Administration of China (SAC/TC268)
* National Technical Committee of Auto Standardization：The secretariat is China Automotive Technology & Research Center (SAC/TC114)
* National Technical Committee 576 on Traffic Management of Standardization Administration of China (SAC/TC576)

The core C-V2X related standards (completed) were identified as Application layer, Network layer and Access layer.

The LTE V2X Security Demonstration and Verification Project was carried out in Shanghai (international auto city intelligent network open road test) in October 2019. For this, the following demo scenarios were carried out:

* V2I scene: Speed Limit Warning (SLW), Hazardous Location Warning (HLW), Red Light Violation Warning (RLVW), Green Light Optimal Speed Advise (GLOSA)
* V2V scene: Forward Collision Warning (FCW), Blind Spot Warning (BSW), Abnormal Vehicle Warning (AVW)
* V2P scene: Vulnerable Road User Collision Warning (VRU)
* Attack scene: Untrusted RSU and OBU forges RSI and BSM messages to emulate V2X security

**3.3** [**IEEE 802.11 TGbd**](http://www.ieee802.org/11/Reports/tgbd_update.htm)

[[Doc 13](https://www.itu.int/en/ITU-T/extcoop/cits/Documents/Meeting-20191028-e-meeting/13_IEEE802.11-TGbd_update_for_CITS.pdf)] was submitted by IEEE 802.11 TGbd and presented by Bo Sun. IEEE 802.11 TGbd was formally introduced to CITS in March 2019. Since its formation in December 2018, IEEE 802.11 TGbd has been developing a variety of use cases covering:

* basic safety message (safety, range, backward compatibility, fairness)
* sensor sharing (throughput)
* multi-channel operation (safety channel+other channel)
* infrastructure applications (throughput)
* vehicular positioning & location (LoS and NLoS positioning)
* automated driving assistance (safety, throughput)
* aerial vehicle ITS application (video)
* train to train (high speed)
* vehicle to train (high speed, long range)
* V2V see-through (throughput, low latency)

**3.4** [**TIAA**](http://www.tiaa.org.cn/en/index.aspx)

[[Doc 25](https://www.itu.int/en/ITU-T/extcoop/cits/Documents/Meeting-20191028-e-meeting/25_TIAA_status_report.pptx)] was submitted by TIAA and presented by Yajun Kou, Global Fusion Media Technology. The presentation underscored the changes in the China passenger vehicle market and highlighted the intense competition between players within this field. It was noted that innovations in-vehicle information (IVI) could be utilized to boost sales if needed. The presentation also highlighted that IVI could be leveraged using satellite technologies to deliver new services. Some solutions highlighted were:

1. Convergence Gateway (All-in one solution by GVMedia): This relies on satellite broadcast networks and multi-mode satellite terminals
2. Terminals (All-in one solution by GVMedia): Consists of two types of terminals:
* multi-mode satellite unit, which is integrated with the IVI head-unit as an OEM device
* multi-mode satellite unit, which is implemented as a standalone aftermarket device

These products were showcased in Alashan in October 2019, during which guests were invited to receive a free trial of the satellite-enabled vehicular networks.

**3.5** [**5GAA**](http://5gaa.org/)

[[Doc 18](https://www.itu.int/en/ITU-T/extcoop/cits/Documents/Meeting-20191028-e-meeting/18_5GAA_ITS-status-update.pdf)] was submitted by 5GAA and presented by Johannes Springer, Director general 5GAA. It provides an overview of the role of 5GAA in bringing together the automotive and telecommunication sectors in facilitating the deployment of C-V2X on a global scale. During the presentation, it was highlighted that 5GAA has over 120 members working on various aspects of C-V2X including standards, business policy and regulation.

C-V2X was described as a unified technology platform integrating short-range and long-range cellular network communication. The presentation also provided a link between the timelines of 3GPP and 5GAA on the work pertaining to the standardization of 5G mobile networks in the context of CV2-X. It also highlighted the benefits of C-V2X as a platform which successfully integrates both short-range networkless, direct communications ((LTE-V2X PC5) as well as long-range cellular network communication (LTE-V2X Uu). The presentation also explores how 5G evolution in the context of C-V2X maintains backward compatibility as is observed in use-cases relating to hazard warning, enhanced navigation & infotainment, cooperative automated driving and V2V safety use-case.

An important example was provided for V2N application as an emergency corridor in context of BMW and Bavarian emergency services. This process involves:

1. Transmission of relevant information about emergency corridor
2. Mapping vehicle to navigation system
3. Required emergency service delivered to affected vehicle
4. Providing public with information on any vehicle jams through HMI display

**3.6** [**CEN TC278**](https://www.itsstandards.eu/)

[[Doc 29](https://www.itu.int/en/ITU-T/extcoop/cits/Documents/Meeting-20191028-e-meeting/29_CEN_TC278.pdf)] was submitted by CEN TC278 and presented remotely by Hans-Joachim. The main focus areas of CEN TC278 include (i) automated and connected vehicles, (ii) automated emergency call, (iii) mobility and multimodality and (iv) electronic fee collection. The various completed standards work include:

* CEN/ISO TS 21176: Position, velocity, time service
* CEN/ISO TS 21177: ITS-station security services for secure session establishment and authentication between trusted devices
* CEN/ISO TS 21184: Global Transport Data Management (GTDM) framework, including secure access to sensor and control networks
* CEN/ISO TS 21185: Communication profiles
* CEN/ISO TR 21186: Guidelines on the use of C-ITS standards

Additionally, PT 1605 aims to provide missing technical specifications for urgently needed features applicable in an ITS station conformant with ISO 21217 and guidelines on the use of C-ITS standards

**3.7** [**W3C Automotive WG**](https://www.w3.org/auto/wg/)

[[Doc 31](https://www.itu.int/en/ITU-T/extcoop/cits/Documents/Meeting-20191028-e-meeting/31_W3C-auto-overview.pdf)] was submitted by W3C and presented by Ted Guild. It elaborated on the various standards developed by W3C in the realm of ITS including Service on the vehicle Common data model (JSON) and Granular access control per application. Through the presentation, it was also highlighted that while developing auto standards, W3C focusses on the following:

* Robust application ecosystem
* Vision of future transportation being interoperable
* Reliance of connected vehicles on web services
* Reduction of fragmentation and breaking silos in ITS

**3.8** [**ETSI TC ITS**](https://www.etsi.org/committee/1402-its)

[[Doc 24](https://www.itu.int/en/ITU-T/extcoop/cits/Documents/Meeting-20191028-e-meeting/24_ETSI-TC-ITS_status-report.pptx)] was presented by Niels Peter Skov Andersen, Chair ETSI TC ITS. ETSI TC ITS fosters the development and maintenance of standards, specifications and other deliverables to support the development and implementation of ITS Service provision across the network. It delves into transport networks, vehicles and transport users, including interface aspects and multiple modes of transport and interoperability between systems. Ongoing work includes collective perception service, vehicular communications, vulnerable road user awareness, conformance test specification for cooperative awareness, pre-standardization study on ITS architecture, ITS performance analysis framework, ITS security and ITS facility layer security, among others.

**3.9 [Car2Car Communication Consortium](https://www.car-2-car.org/)**

[[Doc 23](https://www.itu.int/en/ITU-T/extcoop/cits/Documents/Meeting-20191028-e-meeting/23_C2C-CC_status-report.pptx)] was submitted Niels Peter Skov Andersen, General Manager C2C-CC. The objective of Car2Car Communication Consortium encompasses a range of topics including Vehicle2X deployment, guidelines for a Car2Car communication system, realistic deployment strategies, European standards for a Car2Car communication system and harmonisation of C2C Communication Standards. Ongoing work revolves around V2X simulation platform, decentralized congestion control, service management and data aggregation, hybrid communication systems, among others.

**3.10** [**TTC WG on Connected Car**](https://www.ttc.or.jp/e)

[[Doc 26R1](https://www.itu.int/en/ITU-T/extcoop/cits/Documents/Meeting-20191028-e-meeting/26R1_TTC-WGConnectedCar_status-report.docx)] was presented by Hideki Yamamoto. TTC is an incorporated association that contributes to standardization activities in the field of information and communication technology (ICT) by developing and disseminating standards for information and communication networks. Connected car working group (WG) in TTC was established to discuss connected car issues. This report describes the recent activities of Connected car WG, regarding Focus Group Vehicular Multimedia (FG-VM) and vehicle hub (V-HUB).

**3.11** [**WWRF VIP WG The Connected Car**](http://www.wwrf.ch/vip-wg-the-connected-car.html)

[[Doc 15](https://www.itu.int/en/ITU-T/extcoop/cits/Documents/Meeting-20191028-e-meeting/15_WWRF-CVWG-update.pdf)] was presented by Seshadri Mohan, University of Arkansas at Little Rock. This presentation elaborates on leveraging the academic research to develop technologies for connected vehicles that complement developments in standards bodies. The presentation highlighted the three sectors targeted by WWRF including Telecom Industry, Vertical Industries and Academia. It also underscored the main scope of VIP WG as follows:

“The VIP CV WG focuses on research that looks five to ten years ahead in order to meet the requirements of the automotive and transport industries based on the next generation wireless technology. It also is aimed at the identification of use cases for these industries.”

The group includes the participation of several major players (including universities and research organizations) in the domain of V2X, namely China Mobile, Intel, King’s College London, Huawei, Society of Motor Manufacturers & Traders among others. It was noted that the main outputs (including whitepapers and technical proposals) from WWRF VIP WG would eventually be submitted to major SDOs including (but not limited to) ITU and 3GPP.

Recently, at the WWRF meeting in Tokyo, two papers were presented:

* Heterogeneous radio connectivity for the Internet of Vehicles
* Secure Communications in VANET

Furthermore, a whitepaper on Connected Vehicles was published as Outlook 25 in October 2019.

Future meetings of the group will be held in India and Malaysia.

A liaison statement was received from WWRF as contained in [[Doc 12](https://www.itu.int/en/ITU-T/extcoop/cits/Documents/Meeting-20191028-e-meeting/12_LS_reply_WWRF-recent_activities.zip)] The proposed action for the liaison statement was discussed and agreed as per [[Doc 20](https://www.itu.int/en/ITU-T/extcoop/cits/Documents/Meeting-20191028-e-meeting/20_Incoming%20_Liaison-Statements.zip)].

**3.12** [**UNECE TF (CS/OTA)**](https://wiki.unece.org/pages/viewpage.action?pageId=40829521)

[[Doc 16](https://www.itu.int/en/ITU-T/extcoop/cits/Documents/Meeting-20191028-e-meeting/16_Report_on_CS-OTA_status.pptx)] was presented by Darren Handley, Chair CS/OTA, Department for Transport, UK. The presentation highlighted the objective of the group which includes development of regulation for addressing cybersecurity issues and air update issues. The test phase relating to the regulation was carried out during a 7-month period to gather information and agree on how to assess the regulation. At the end of test phase, it was noted that the initial assessment was positive, and the regulations worked well as intended.

The cybersecurity assessment was split into two, namely:

* Cybersecurity management system requirements: focusing on organization structure and process
* Vehicle requirements: focusing on the design of vehicle architecture, risk assessment implementation of mitigation

Further for the software update requirements, the assessment also split:

* Software update management system requirements: focusses on organizational structure and processes
* Vehicle requirements: focusses on requirements for safe execution

The presentation also elaborated on how to assess the regulatory requirements and documentation required:

* Verify the effectiveness/robustness of the Regulation(s)
* Verify that approval authorities/technical services are able to reach the same conclusions based on identical OEM documentation

**3.13** [**IEEE VTS Standards**](https://vtsociety.org/member-resources/standards/)

[[Doc 30](https://www.itu.int/en/ITU-T/extcoop/cits/Documents/Meeting-20191028-e-meeting/30_IEEE%20VTS_Update.pptx)] was submitted by Tom Kurihara. However, it did not need to be presented as it was deemed self-explanatory. The presentation highlighted that IEEE VTS Standards covers work on a variety of topics including automated vehicular systems, artificial intelligence, machine learning, reliability of sensing and decision-making test and verification, including experimental and virtual techniques and Human-vehicular interaction. Current work is being conducted on V2X communication and wireless access in vehicular environment.

The meeting also received a liaison statement as contained in [[Doc 09](https://www.itu.int/en/ITU-T/extcoop/cits/Documents/Meeting-20191028-e-meeting/09_LS_from_IEEE_on_standards-list.zip)]. The proposed action is as contained in [[Doc 20](https://www.itu.int/en/ITU-T/extcoop/cits/Documents/Meeting-20191028-e-meeting/20_Incoming%20_Liaison-Statements.zip)].

**3.14** [**SAE International**](https://www.sae.org/)

[[Doc 22](https://www.itu.int/en/ITU-T/extcoop/cits/Documents/Meeting-20191028-e-meeting/22_SAE_%20Liaison-Report.pdf)] was submitted and presented by Keith Wilson, SAE International. The presentation highlighted the main focus areas related to SAE standards in advanced technology:

* Wireless charging
* Driver-vehicle interface
* Electronics system reliability
* Driving automation system
* Active safety
* Functional safety
* Cooperation Driving Automation
* Shared mobility
* Hybrid vehicle and battery
* Vehicle electronics and cybersecurity
* V2X Communication ITS
* Mobility for elderly and persons with disabilities

The main ADAS standards developed by SAE include:

* J3063 Active Safety System Terms & Definitions
* J3087 Automatic Emergency Braking (AEB) System Performance Testing
* J3088Active Safety System Sensors
* J2399 Adaptive Cruise Control (ACC) Operating Characteristics and User Interface
* J2802Blind Spot Monitoring System Operating Characteristics & User Interface
* J3116Active Safety Pedestrian Test Mannequin Recommendation
* J3157 Active Safety Bicyclist Test Targets
* J3029 Forward Collision Warning & Mitigation Vehicle Test Procedure – T&B
* J3045 Truck & Bus Lane Departure Warning Systems Test Procedure

The presentation also underscored the concept of cooperative driving automation which includes machine-to-machine (M2M) communication to enable cooperation between entities with capable communications technology and is intended to support or enable performance of the Dynamic Driving Task (DDT) for a subject vehicle with driving automation feature(s) engaged, for the purposes of facilitating the safer, more efficient movement of road users.

One of the key deliverable under-development is SAE J3216 Taxonomy and Definitions for Terms Related to Cooperative Driving Automation for On-Road Motor Vehicles in development.

**4 Status of ITS communications work in ITU**

**4.1** [**Overview of all ITS work items in ITU**](http://www.itu.int/en/ITU-T/extcoop/cits/Documents/ITS-work-items.xlsx)

A [spreadsheet](https://staging.itu.int/en/ITU-T/extcoop/cits/Documents/ITS-work-items.xlsx) (freely available online) contains 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 (WP5A), the spreadsheet will be regularly updated based on inputs received from constituent Study Groups and other relevant groups.

**4.2 ITU-T** [**SG12**](https://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/default.aspx) **(**[**Q4/12**](https://www.itu.int/itu-t/workprog/wp_search.aspx?isn_sp=3925&isn_sg=3931&isn_qu=4155&isn_status=-1,1,3,7&details=0&field=acdefghijo)**)**

[[Doc 28](https://www.itu.int/en/ITU-T/extcoop/cits/Documents/Meeting-20191028-e-meeting/28_ITU-T_SG12_Q4_Updates.pptx)] was submitted by ITU-T SG12 and presented by Martin Adolph, ITU-T SG12 Advisor. The progress report provided an update on SG12 activities including the work on objectives for speech and audio evaluation in vehicles:

* In-force ITU-T Recommendations related to communication involving vehicles included:

- [ITU-T P.1100](https://itu.int/ITU-T/P.1100): Narrowband hands-free communication in motor vehicles

- [ITU-T P.1110](https://itu.int/ITU-T/P.1110): Wideband hands-free communication in motor vehicles

- [ITU-T P.1120](https://itu.int/ITU-T/P.1120): Super-wideband and fullband stereo hands-free communication in motor vehicles

- [ITU-T P.1130](https://itu.int/ITU-T/P.1130): Subsystem requirements for automotive speech services

- [ITU-T P.1140](https://itu.int/ITU-T/P.1140): Speech communication requirements for emergency calls originating from vehicles

* Work in progress including the Transmission characteristics for In Car Communication (work item P.ICC) covering system stability, speech intelligibility, speech quality, talker localization accuracy. This is targeted to be complete by the next SG12 meeting in Geneva (26 November - 5 December 2019)

**4.3 ITU-T** [**SG20**](https://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/default.aspx) **(**[**Q1/20**](https://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q1.aspx)**,** [**Q2/20**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q2.aspx)**,** [**Q3/20**](https://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q3.aspx)**,** [**Q4/20**](http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/q4.aspx)**)**

[[Doc 14](https://www.itu.int/en/ITU-T/extcoop/cits/Documents/Meeting-20191028-e-meeting/14_ITU-TSG20-ITS-status-report.pptx)] was submitted by SG20 representatives and presented remotely by Shane He, Rapporteur Q3, ITU-T SG20. It presented three additional ITU-T Recommendations to be included in the ITS communication standards database. This information has also been included in the liaison statements [[Doc 05](https://www.itu.int/en/ITU-T/extcoop/cits/Documents/Meeting-20191028-e-meeting/05_LS_ITU-TSG20-ITS_database.docx)]. The presentation also elaborated on seven ongoing work items which are relevant for ITS related activities and could be included in the database upon finalization.

It was noted that the ITU-T Recommendation given in the liaison statement would be added to the ITS communication standards database.

**4.4 ITU-T** [**SG16**](https://www.itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/default.aspx) **(**[**Q27/16**](http://www.itu.int/ITU-T/workprog/wp_search.aspx?isn_sp=3925&isn_sg=3934&isn_qu=4207&isn_status=-1,1,3,7,2&details=0&field=acdefghijo)**)**

[[Doc 27](https://www.itu.int/en/ITU-T/extcoop/cits/Documents/Meeting-20191028-e-meeting/27_ITU-T_SG16_Updates.pptx)] was presented by Hideki Yamamoto. It highlighted that SG16 established the ITU-T Focus Group on AI for Autonomous and Assisted Driving (FG-AI4AD) (October 2019) and the Joint project team (JPT) with ISO/TC22/SC31/WG8 on Vehicle Domain Services (JVDS). Ongoing work includes taxonomy for ICT-enabled motor vehicle automated driving systems, vehicle gateways, road vehicles and multimedia communication enabled vehicle systems using artificial intelligence.

**4.5 ITU-T** [**SG17**](https://www.itu.int/en/ITU-T/studygroups/2017-2020/17/Pages/default.aspx) **(**[**Q13/17**](https://www.itu.int/itu-t/workprog/wp_search.aspx?isn_sp=3925&isn_sg=3935&isn_qu=6705&isn_status=-1,1,3,7&details=0&field=acdefghijo)**)**

Two liaison statements were sent from ITU-T SG17 as contained in [[Doc 04](https://www.itu.int/en/ITU-T/extcoop/cits/Documents/Meeting-20191028-e-meeting/04_LS_ITU-TSG17_ITS-Security.docx)] [[Doc 11](https://www.itu.int/en/ITU-T/extcoop/cits/Documents/Meeting-20191028-e-meeting/11_LS_Report_SG17%20Miniworkshop_Cybersecurity-Challenges_in_Automated%20Driving.zip)]. These liaison statements were presented and discussed. The appropriate actions for follow-up have been detailed in [[Doc 20](https://www.itu.int/en/ITU-T/extcoop/cits/Documents/Meeting-20191028-e-meeting/20_Incoming%20_Liaison-Statements.zip)]. As a follow-up action for [[Doc 4](https://www.itu.int/en/ITU-T/extcoop/cits/Documents/Meeting-20191028-e-meeting/04_LS_ITU-TSG17_ITS-Security.docx)] it was decided to add the ITU-T Recommendation from SG17 to the ITS communication database. The information given in [Doc 11] was duly noted in terms of the list of representatives from SG17.

**4.6 ITU-T** [**FG-VM**](https://www.itu.int/en/ITU-T/focusgroups/vm/Pages/default.aspx)

[[Doc 19](https://www.itu.int/en/ITU-T/extcoop/cits/Documents/Meeting-20191028-e-meeting/19_ITU-T_FGVM-progress-report.docx)] was submitted by the FG-VM Management team and presented by Yajun Kou, FG-VM/WG2 Chairman. It provides a status report of the progress of the Focus Group Vehicular Multimedia (FG-VM) activities from March-October 2019. Since the last CITS meeting, four FG-VM have been held. The main achievements of the FG-VM since the 3rd meeting in March 2019 are as follows:

* Finalization of the Technical Report on “Use Cases and Requirements for the Vehicular Multimedia Networks” under Working Group 1 during the 6th meeting of FG-VM.
* [Call for proposals (CfP)](https://www.itu.int/en/ITU-T/focusgroups/vm/Documents/FGVM-CallForProposals_v2.pdf) for an internationally agreed VM Architecture was drafted and updated to facilitate contributions to Working Group 2.
* [Working Group 2](https://extranet.itu.int/sites/itu-t/focusgroups/vm/input/FGVM-I-143.pptx?d=w24c0454a03be413d825374f3318aaaad)’s objectives and methodologies were discussed for the future activities of FG-VM.

CITS also received a liaison statement (as contained in [[Doc 06](https://www.itu.int/en/ITU-T/extcoop/cits/Documents/Meeting-20191028-e-meeting/06_LS_reply_FGVM-ITS-database.docx)]) from FG-VM highlighting the preparation of the draft Technical Report on “Use Cases and Requirements for the Vehicular Multimedia System”. It was noted that this draft technical report can be included in the online ITS communication standards database.

**4.7 Incoming Liaison Statements**

CITS received nine liaison statements from various entities and groups [[Doc 04](https://www.itu.int/en/ITU-T/extcoop/cits/Documents/Meeting-20191028-e-meeting/04_LS_ITU-TSG17_ITS-Security.docx)] [[Doc 05](https://www.itu.int/en/ITU-T/extcoop/cits/Documents/Meeting-20191028-e-meeting/05_LS_ITU-TSG20-ITS_database.docx)] [[Doc 06](https://www.itu.int/en/ITU-T/extcoop/cits/Documents/Meeting-20191028-e-meeting/06_LS_reply_FGVM-ITS-database.docx)] [[Doc 07](https://www.itu.int/en/ITU-T/extcoop/cits/Documents/Meeting-20191028-e-meeting/07_LS_ITU-RWP5A_work_ITS_database.docx)] [[Doc 08](https://www.itu.int/en/ITU-T/extcoop/cits/Documents/Meeting-20191028-e-meeting/08_LS_reply_ITU-TSG3.docx)] [[Doc 09](https://www.itu.int/en/ITU-T/extcoop/cits/Documents/Meeting-20191028-e-meeting/09_LS_from_IEEE_on_standards-list.zip)] [[Doc 10](https://staging.itu.int/en/ITU-T/extcoop/cits/Documents/Meeting-20191028-e-meeting/10_LS_reply_from_IEEE_work_on_ITS-database.zip)] [[Doc 11](https://www.itu.int/en/ITU-T/extcoop/cits/Documents/Meeting-20191028-e-meeting/11_LS_Report_SG17%20Miniworkshop_Cybersecurity-Challenges_in_Automated%20Driving.zip)] [[Doc 12](https://www.itu.int/en/ITU-T/extcoop/cits/Documents/Meeting-20191028-e-meeting/12_LS_reply_WWRF-recent_activities.zip)]. The main suggested actions pertaining to each liaison statement were discussed and finalized as contained in [[Doc 20](https://www.itu.int/en/ITU-T/extcoop/cits/Documents/Meeting-20191028-e-meeting/20_Incoming%20_Liaison-Statements.zip)].

**5 ITS Standards Online Repository**

[[Doc 20](https://www.itu.int/en/ITU-T/extcoop/cits/Documents/Meeting-20190308-Geneva/16_TSB_ITS-online-database.docx)] was presented to CITS participants to follow up on the liaison statements received by CITS. Based on the inputs received from the various SDOs, the ITS communication standards database will be updated

<https://www.itu.int/net4/ITU-T/landscape#?topic=0.131&workgroup=1&searchValue=&page=1&sort=Revelance>

**5.1 Next meeting**

The “[Symposium on the Future Networked Car (FNC-2020)](https://www.itu.int/en/fnc/2020/Pages/default.aspx)” is expected to be held in Geneva, Switzerland on 5 March 2020.

Next CITS meetings:

* Planned: 6 March 2019 (co-located with FNC-2020)

**5.2 Closure of the meeting**

The Chair, Russ Shields, thanked the ITU for hosting the collaboration (CITS) meeting ITU for having supported its organization. The Chair expressed his appreciation to all participants who joined and thanked them for their inputs and the fruitful discussions.

The meeting closed at 1600 local Geneva time.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_