



Question(s):

E-meeting, 9 September 2020

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Draft Report – Meeting of Collaboration on ITS Communication Standards
(9 September 2020, E-meeting)

<http://www.itu.int/go/ITScomms>

1 Introduction

The meeting of the Collaboration on ITS Communication Standards (CITS) took place virtually on 9 September 2020. T. Russell Shields (RoadDB) chaired the meeting supported by Stefano Polidori (ITU/TSB Advisor), Mythili Menon (ITU/TSB Project Officer) and Carolina Lima (ITU/TSB Study Group Assistant).

2 Opening, meeting participants and adoption of the agenda

T. Russell Shields, Chair of CITS, opened the meeting and welcomed the participants. He mentioned that CITS continues to facilitate the development of an internationally accepted, 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. He further appreciated the inclusion of various new SDO to the CITS e-meeting and thanked the representatives for facilitating the exchange of information related to ITS communications standards in their respective organizations. Through the discussions at the CITS meetings, the ITS Communication Standards Database has been regularly updated with relevant standards from various SDOs.

During the meeting, Mr Paul Najarian, representative from United States and liaison officer from ITU-R WP5, expressed appreciation for the evolution of the CITS platform since its inception. He was further pleased to see the submission and presentation of several reports from various key SDOs, which will facilitate the expansion of the ITS online standards DB. Accordingly, CITS was acknowledged as an effective way to foster coordination on this matter.

Fifty (50) participants joined the meeting representing various Standards Development Organizations (SDOs) and other stakeholders.

A total of 35 meeting documents were submitted. This meeting report was posted after the meeting as Doc 34. All related meeting documents were openly accessible on the CITS site [here](#).

The draft agenda as contained in [[Doc 1R5](#)] was adopted.

3 Status of ITS communications work in various SDOs

3.1 [IETF-IPWAVE](#)

[[Doc 16](#)] was submitted and presented by Alex Petrescu.

This presentation underscored the responsibilities of IPWAVE Working Group as a Working Group of the Internet Engineering Task Force (IETF), which delves into V2V and V2I use-cases where IP is well-suited as a networking technology.

It highlighted the main work item on IPV6 over 802.11.OCB. Additionally, it was noted that RFC 8691 was issued in December 2019 after being under development for a year. It was further highlighted that the implementation of RFC 8691 is straightforward and is available as a patch to Linux kernels (some parts fully integrated in mainline).

The presentation also underscored the draft-IETF-IPWAVE-vehicular-networking-12, which aims at:

- identifying gaps and open areas, prioritize for potential upcoming work;
- analysing address auto-configuration, routing, mobility management, DNS, service discovery, security and privacy – for IP networking in vehicular environments;

It was noted that this document may be published as an RFC.

Mr Petrescu highlighted that IETF IPWAVE will probably not meet as usual during November 2020 IETF meeting.

Given the relatively low activity of the Group, Mr Petrescu mentioned that it may be closed. Some potential new activities were identified in terms of use of:

- IP in Urban Air Mobility and ‘flightooning’
- locator-Identifier Separation Protocol (LISP) for mobility in vehicular environments
- wireless battery charging system for electrical vehicles, navigator systems, and infotainment (etc)

3.2 [5GAA](#)

[[Doc 32](#)] submitted and presented by Maxime Flament (*CTO, 5GAA*). It highlights the role of 5GAA in bridging the gap between automotive and telecommunication industries.

The main working groups within 5GAA on this topic are:

- WG1: Use Cases and Technical Requirements
- WG2: System Architecture and Solution Development
- WG3: Evaluation, Testbeds and Pilots
- WG4: Standards and Spectrum
- WG5: Business Models and Go-To-Market Strategies

- WG6: Regulatory and Public Affairs
- WG7: Security and Privacy

Mr Flament presented the new [5GAA 2030 Roadmap for Automotive Connectivity](#) (published on 8 September 2020). This presents the application of communication technologies for automotive connectivity, and the deployment of advanced driving use cases including safe and automated driving.

Through the presented, it was noted that 22 active work items were under development in 5GAA. The topics ranged from high accuracy positioning for C-V2X, distributed antenna systems to impact of privacy regulations on C-V2X.

Additional work items were approved and initiated in May 2020:

- Use cases implementation specification (UCID)
- Misbehaviour detection (MBD4V2X)
- Complex V2X Interactions for 5G-V2X (NRV2X-PH II)
- Software and Hardware Security Requirements and Certification (DevSecReq)
- Data processing in the context of V2X technologies (DPD-V2X)
- Conformance Assessment (CASE)
- Precise Positioning (PPL)

The 16th WG Meeting will take place virtually from 26 October 2020 - 2 November 2020.

3.3 [ETSI TC ITS](#)

[[Doc 25](#)] was submitted and presented by Niels Peter Skov Andersen (*Chair ETSI TC ITS*). The presentation highlighted the main role of ETSI TC ITS in terms of developing and maintaining standards, specifications and other deliverables to support the development and implementation of ITS service provision across the network, for transport networks, vehicles and transport users, including interface aspects and multiple modes of transport and interoperability between systems (excluding ITS application standards, radio matters, and EMC).

ETSI TC ITS Content Release 1, containing a list of features required for deployment of cooperative ITS is being re-worked on to include:

- ETSI ITS-G5 (IEEE 802.11p based)
- LTE-V2X (3GPP Based)

ETSI TR 101 607 Intelligent Transport Systems (ITS); Cooperative ITS (C-ITS); Release 1 has also been updated to reflect current set of Release 1 specifications.

One of the main developments during this quarter is that ETSI has made all ASN.1 code for the ITS deliverables available at [ETSI Forge](#).¹

Ongoing activities within ETSI TC ITS include over 50 work items ranging from topics including vehicular communication, facilities layer function, platooning, public mobile networks in cooperative ITS, communication architecture for multi-channel operation, and spectrum sharing to ITS security.

¹ ETSI Forge is a repository for the download of software created collaboratively by ETSI delegates.

3.4 [Car2Car Communication Consortium](#)

[[Doc 26R1](#)] was submitted and presented by Niels Peter Skov Andersen (*General Manager C2C-CC*). The presentation highlighted the main objective of the consortium.

Through this presentation, Mr Andersen highlighted the role of C2C-CC as a non-profit organization created in 2002 by European vehicle manufacturers.

The mission of C2C-CC was described as follows:

- Support the V2X deployment
- Develop guidelines for a Car2Car communication system
- Develop realistic deployment strategies
- Establish open European standards for a Car2Car communication system
- Push harmonisation of C2C Communication Standards worldwide
- Use of Free of charge European wide exclusive frequency band (5.9 GHz)
- Establish the necessary profiling of standards

The presentation also highlighted the publication of “[Guidance for day 2 and beyond roadmap](#)” and the C2C-CC White Paper: Safety spectrum needs for single short-range V2X communication technology in MHz bandwidth. “[Guidance for day 2 and beyond roadmap](#)” elaborates on the deployment phases (Day 1, Day 2, Day 3...) for dissemination of information and warnings for automated driving, through the inclusion of use cases. The deployment phases have been described as follows:

- Day 1: Awareness driving via status data
- Day 2: Sensing driving via sensor data
- Day 3+: Cooperative driving via intention and coordination data

Ongoing work within C2C-CC, covers various areas:

- Functional areas: collective perception, vulnerable road user, weather information, connected and cooperative automated driving, among others;
- Technical areas: V2X simulation platform, multi-channel operation, reference scenario, position and time improvement, technical functional safety concept;
- Deployment areas: configuration management, misbehaviour detection, release management tailoring, positioning and time compliance assessment, among others.

3.5 [WWRF VIP WG The Connected Car](#)

[[Doc 21](#)] was submitted and presented by Seshadri Mohan (*Chair, WWRF VIP CV WG*). It highlighted the WWRF role and principles of operations in:

- developing future vision of the wireless world
- informing on trends and developments
- enabling and facilitating the translation of the vision into reality
- bringing together a wide range of parties to identify and overcome significant roadblocks to the vision

Some of the main outputs underscored through the presentations include:

- WWRF Outlook 24 - Artificial Intelligence in the Wireless Arena
- WWRF Outlook 25 - Connected vehicles

Additionally, work on the following topics were mentioned to be underway:

- 5G business models
- 5G and the water industry
- Millennial users in a 5G context
- Cybersecurity challenges in the Wireless World
- E-health enabled by 5G and machine learning
- Network slicing
- High speed rail services and 5G
- 6G/Beyond 5G

Furthermore, the scope of WWRF VIP CV WG involves focusing 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. Accordingly, use cases for these industries are also being identified.

The following sessions were organized:

- 9 February 2020: WWRF Connected Vehicle Session organized at International Symposium on 5G and Beyond for Rural Upliftment (including a talk by the VIP CV Chair based on the WWRF Outlook 25: Connected Vehicles White Paper).
- 29 June-1 July 2020: WWRF Meeting 44 held at Aarhus University, Denmark (eight papers presented on a wide ranging set of topics including V2X standards, 5G V2X security, V2X multimedia services, visible light communications, automotive joint sensing and radar communications, detection of driver's physical conditions with the use of biomarkers sensing, urban railway communications with V2X, and data challenges in connected vehicles).

WWRF Outlook 25 will be published as a book chapter by Springer. Second white paper on connected vehicles on 'The Role of AI/Machine Learning in Connected Vehicles' is currently under development.

Future planned events on behalf of WWRF include:

- 14-17 December 2020: Workshop on Connected Vehicles (co-organized with IEEE), India
- February 2021: WWRF45, Kuala Lumpur, Malaysia

3.6 [UNECE WP.29](#)

[\[Doc 30\]](#) was submitted and presented by François Guichard (*UNECE WP.29/GRVA, Secretary*). Through the presentation, the main achievements of UNECE WP.29, in 2020, were highlighted. The presentation provided updates on the status of UN Regulation No. [155] on Cybersecurity and Cybersecurity Management System, and UN Regulation No. [156] covering Software updates and Cybersecurity.

- Adoption of the new UN Regulation on Uniform provisions concerning the approval of vehicles with regard to Automated Lane Keeping Systems (ALKS), currently new UN Regulation No. [155]

- Adoption of new UN Regulation on uniform provisions concerning the approval of software update processes, new UN Regulation No. [156]
The UNECE Roadmap on ITS (adopted in 2012) was requested to be updated for its adoption.

3.7 IEEE VTS Standards

[[Doc 23](#)] was submitted by Tom Kurihara (*Chair, IEEE VTS Standards*). It was not extensively presented due to time constraints. The content of the presentation was duly noted by the participants. The presentation highlighted the scope of VT/HSTM Standards Committee in terms of developing standards on HSTM's electrical systems, safety, reliability and operational maintenance.

Standards under development include:

- P1609.3REV v4 D12, Standard for Wireless Access in Vehicular Environments (WAVE) - Networking Services
- P1609.2.1 D15, Wireless Access in Vehicular Environments (WAVE) - Certificate Management Interfaces for End-Entities
- P1616REV, Motor Vehicle Event Data Recorders (MVEDRs)

Future meetings are planned as follows:

- 22-23 September 2020
- 8-9 October 2020
- 3-4 November 2020

3.8 SAE International

[[Doc 20](#)] was submitted and presented by William (Bill) Gouse, SAE International. The presentation again 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 and Mobility for elderly and persons with disabilities.

Through the presentation, the following documents were highlighted:

- J2735 Message Set Dictionary: This document specifies a message set, and its data frames and data elements specifically for use by applications intended to utilize the 5.9 GHz dedicated short-range communications for wireless access in vehicular environments.
- SAE J2945 suite: These standards establish systems principles for:
 - On-Board System Requirements for V2V Safety Communications”
 - Performance Requirements for V2V Safety Awareness
 - Safety Message Minimum Performance Requirements

Current work is ongoing on the following topics:

- V2X:
 - J2945/4: Road Safety Applications
 - J2945/7: Positioning Enhancements for V2X Systems
 - J2945/8: Cooperative Perception Systems
 - J2945/D: Road User to Road User Courteous Communications

- J3217: Profiles for V2X Based Fee Collection
- J3224: V2X Sensor-Sharing for Cooperative & Automated Driving
- Safety and Human Factors Standards Related to ADAS
 - J3045: Truck & Bus Lane Departure Warning Systems Test Procedure
 - J3048: Driver-Vehicle Interface Considerations for Lane Keeping Assistance System
 - J2988: Guidelines for Speech Input & Audible Output in Driver Vehicle Interface
 - J2400: Human Factors in Forward Collision Warning Systems Operating Characteristics & User Interface

It was underscored that a new committee on SAE Micromobility Devices was established, which will focus on low-speed personal mobility devices and the technology and systems that support them that are not normally subject to the United States Federal Motor Vehicle Safety Standards.

3.9 [TTC WG on Connected Car](#)

[[Doc 13](#)] was submitted and presented by Hideki Yamamoto (*TTC-Telecommunication Technology Committee*). During the CITS meeting on 6 March 2020, it was reported that TTC had planned to publish the English version of Technical Report TR-1068v2, “Current standardization movement and issues before practical use for Over The Air updating in vehicle” version 2. Based on the feedback received from the CITS participants, this document was proposed and approved as a new work item (draft Technical Paper - FSTP.SS-OTA "Standardization survey for over-the-air updating in vehicle") during the ITU-T SG16 e-meeting (22 June - 3 July 2020). The document was submitted via liaison statement to SG17 for comments.

3.10 [ISO/TC 204](#)

[[Doc 12](#)] was submitted by Adrian Guan (*ISO/TC 204 Committee Manager*), who could not join to present the report. The content of his presentation was noted by the participants who were invited to review it at their convenience. This presentation provided an overview of the new appointments within ISO/TC 204 and the liaisons established in 2020.

The 56th ISO/TC 204 Web Plenary is expected to take place from 14-16 October 2020.

3.11 [W3C](#)

[[Doc 28](#)] was presented by Ted Guild (*Champion, W3C Automotive Activity*). Through the presentation, Mr Guild covered the current work conducted by W3C in terms of the following outputs:

Rich in-vehicle application ecosystem

W3C Vehicle Information Service Specification (VISS)

He further highlighted that work on in-vehicle application best practices was currently under development. This would cover aspects including signal read/write access control, polling frequency, IVI/TCU computing resources, outside connectivity, bandwidth and third-party signal handling.

Together with EURESCOM and BMW, W3C is working on the development of VSSo, encasing the following aspects:

- Ontology - human (engineer) and machine readable
- Bringing telematics data to the cloud

- Big Data/Analytics
- Artificial Intelligence
- W3C Web of Things (WoT)

W3C is also working on “Remote Procedure Calls and Service Catalog” together with JLR.

Next W3C TPAC will take place from 12-15 October 2020 and limited observers welcome to attend.

3.12 [CCSA](#)

[[Doc 22](#)] was submitted and presented by Yuming Ge (*Researcher, China Academy of Information and Communication Technology*). The presentation highlighted the main topic-specific standardization underway in CCSA:

- Upper Layer – application and message:
 - High level autonomous driving data interaction content based on vehicle infrastructure cooperation
 - 5G enables remote driving: technical requirements for 5G Communication System
 - Research on 5G based internet of vehicles communication technology
 - Application identity assignment and mapping of internet of LTE based vehicle wireless communication technology
- Wireless:
 - Performance evaluation of V2X network and research of sidelink wireless channel
 - Technical requirements of V2I basic message unicast of LTE-x0002-based vehicular communication
 - Technical requirements of automotive wireless short-range communication system
- Security:
 - Technical requirements for safety certificate management system of LTE based internet of vehicle wireless communication technology
 - Technical Requirements of Vehicle Misbehavior Management for C-V2X
- 5G NR-V2X technology research: This project studies the communication technology requirements and architecture supporting 5G V2X services. It focusses on enhancement application scenarios and requirements analysis of V2X based on 5G. The project also aims to analyse key technology requirements for wireless and core network supporting 5G application scenarios.

During the course of the discussion, it was enquired whether 5G V2X standardization in China is only meant to be implemented in the country or internationally. Following this, it was highlighted that China experts participate in 3GPP and plans to work internationally on that matter through 3GPP.

3.13 [CSAE](#)

[[Doc 17R1](#)] was submitted and presented by Wu Wenqiang (*CSAE Standards Project Manager*). This was an introductory presentation and provided a brief overview of China-SAE. The main specific areas covered by CSAE in the context of ITS include electric, intelligent, connection, sharing and lightweight, the basic common field includes anti-corrosion and aging, reliability, electromagnetic compatibility, test technology and environmental protection. More recently, it has also been developing standards on driving assistance and active safety, security and automated driving.

The presentation highlighted the following achievements from China-SAE:

- 144 standards have been published and 128 standards are under development.
- Development of the “Technical Requirements of Vehicular Communication System based on LTE-V2X Direct Communication”

It was noted that CSAE was attending a CITS meeting for the first time. Their presence and participation were appreciated by the participants.

3.14 [TSDSI](#)

[[Doc 31R1](#)] was submitted and presented by Sharad Arora (*TSDSI Standing Committee on Outreach Member*). Through the presentation, TSDSI was described as an autonomous, membership based SDO for Telecom/ICT products and services in India. Mr Arora mentioned that TSDSI develops standards for access, back-haul, infrastructure systems, solutions and services that strive to meet India specific Telecom/ICT needs, based on research and innovation in India. Additionally, works with global SDOs to adequately reflect Indian requirements in the development of standards.

The presentation also briefly elaborated on the achievements of TSDSI including contributing to the development of:

- TSDSI Technical Report on “Study on Machine to Machine Communication (M2M) Use Cases in Transportation Vertical from Indian Context” (15 Feb 2016)
- TEC Technical Report on “M2M Enablement in Intelligent Transport Systems, V2V / V2I Radio communication and Embedded SIM” (November 2015)
- ITU-T Y.4000-series – Supplement 53 (12/2018), Internet of Things use cases including E-Call and Digital Identity
- AIS-140: Intelligent Transportation Systems (ITS) - Requirements for Public Transport Vehicle Operation

Additionally, some of the ongoing work was highlighted as follows:

- TSDSI study of the requirements for standardization norms for verification of the connected vehicle and its custodian by the Machine to Machine Service Provider (M2M SP)
- TSDSI contribution to the WTSR Recommendation 98 proposing to develop standards for globally unique identifiers for internet of things devices and applications (including V2X sensors)
- TSDSI research in protocols and services in multiple layers of IMT-2020 networks and beyond.
- ITS KPIs derivation to achieve those in future networks are studied

It was noted that TSDSI was attending a CITS meeting for the first time. Their presence was appreciated by the participants.

3.15 **ISO TC241**

[[Doc 19](#)] was submitted but could not be presented in the absence of the proponent. It contains key aspects relating to guidance on safety ethical considerations for autonomous vehicles. Two of the key standards mentioned in the presentation include:

- ISO TC241: Road traffic safety management systems
- ISO/AWI 39003: Road Traffic Safety (RTS) — Guidance on safety ethical considerations for autonomous vehicles

The content of the presentation was noted by the participants, who were invited to view the document.

4 Status of ITS communications work in ITU

4.1 Overview of all ITS work items in ITU

The [spreadsheet](#) (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 updated based on inputs received from constituent Study Groups and other relevant groups.

4.2 ITU-T SG20

[[Doc 24](#)] was presented by Marco Carugi (*Rapporteur Q2/20*). The presentation highlighted the main standardization work carried out by SG20 recently:

- Y.4467 “Minimum set of data structure for automotive emergency response system” (Approved)
- Y.4468 “Minimum set of data transfer protocol for automotive emergency response system” (Approved)
- Y.4471 “Functional architecture of network-based driving assistance for autonomous vehicles” (Determined): Some of the use-cases covered include:
 - High definition map
 - Vehicle and road coordination

Currently, work on Y.ACC-PTS “Accessibility requirements for smart public transportation services” is underway. This draft Recommendation aims to specify accessibility requirements for smart public transportation services and examine accessibility requirements for smart public transportation services for persons with disabilities, persons with age-related disabilities and those with specific needs to utilize the benefits of IoT applications and services. During the course of the discussion, it was noted that the required cooperation with IRG-AVA - Intersector Rapporteur Group Audiovisual Media Accessibility was already sought for the aforementioned work item, though SG16 co-chair of IRG-AVA.

4.3 ITU-T SG16 (Q27/16)

[[Doc 11](#)] was submitted and presented by Hideki Yamamoto (*Vice-chairman, SG16*). The presentation briefly highlighted the activities of the Focus Group on Vehicular Multimedia (FG-VM) and Focus Group on AI for Autonomous and Assisted Driving (FG-AI4AD).

It was underscored during the presentation that the first deliverable from ITU-T FG-VM was approved as Recommendation ITU-T F.749.3 “Use cases and requirements for the vehicular multimedia networks”.

Through the presentation and with regard to the joint work between ITU-T SG16 and ISO TC 22 / SC31, named [Joint Project Team on Vehicular Domain Service \(JVDS\)](#), it was noted that ISO 23139-1 “Road vehicles — Vehicle domain service (VDS) — Part 1: General information and use case definitions” was approved in DIS ballot in ISO.

An update on the existing work items was also provided: F.AUTO-TAX, HSTP-VG-Gap, F.VS-AIMC, H.VDS-UC, H.VDS-APR, H.VDS-NWR, HSTP.VG-Gap, F.VG-AD-Reqs, FSTP.SS-OTA and H.VDS-PHYR.

Based on the discussions during the ITU-T SG16 e-meeting in July 2020, it was agreed to include the new vehicular multimedia work items, coming from FG-VM, under Q27/16 remit. Accordingly, the Terms of Reference of Question 27/16 were reviewed and will be submitted to WTSA-20 for the next study period (2021-2024). SG16 also commenced work on a new ITU-T F.VG-AD-Reqs on information requirements for automated driving, and on a Technical Paper FSTP.SS-OTA with a survey on over-the-air updates, the latter in collaboration with TCC.

4.4 ITU-T [SG17 \(Q13/17\)](#)

[[Doc 15](#)] was submitted and presented by Sang-Woo Lee (*Rapporteur, ITU-T Q13 in SG17*). This presentation underscored the importance of ITU-T SG17 as the lead Study Group on security related matters. It further elaborated on the role of Q13/17 for the development of key Recommendations on security aspects related to ITS including road transport, railway, maritime and air transport.

Through the presentation, it was noted that the following Recommendations had been approved by Q13/17 recently:

- X.1371: Security threats in connected vehicles
- X.1372: Security guidelines for Vehicle-to-Everything(V2X) communication

Additionally, the following Recommendation were consented in September 2020:

- X.1375: Methodologies for intrusion detection system on in-vehicle networks
- X.1376: Security-related misbehaviour detection mechanism for connected vehicles

Other ongoing work items include (among others):

- X.1373Rev: Software update capability for ITS communications devices
- X.fstiscv: Framework of security threat information sharing for connected vehicles
- X.ipscv: Methodologies for intrusion prevention system in connected vehicles
- X.rsu-sec: Security requirements for road-side units in intelligent transportation systems
- X.eivnsec: Security guidelines for Ethernet-based In-Vehicle networks

SUGGESTED ACTION 1:

Following the discussion, it was noted that handling collaborative work on ITS security is important during the next study period. It was suggested that a workshop on security and cybersecurity aspects be organized by SG17 fostering the involvement of CAR to CAR Communication Consortium, ISO TC 204, ETSI TC ITS and UNECE TF on Cybersecurity and OTA issues.

4.5 [ITU-T SG13](#)

[[Doc 14](#)] contains the new proposal relevant for developing countries (Y.Sup-ITS: Deployment of Intelligent Transport System in Developing), which has been agreed by ITU-T SG13. It was presented by Paul Najarian (United States). This document was discussed during the ITU-T SG13 meeting and contains a proposal for the development of new work item (Y.Sup-ITS) that have the potential to help developing countries use future networks (IMT2020 and beyond) to rapidly advance their economies through a comprehensive data infrastructure to support Intelligent Transport Systems for safety, asset

management, congestion control, traffic signal control systems, etc. The proposed new work item will seek to develop technical guidelines for the deployment of a transport data platform for developing countries

SUGGESTED ACTION 2:

Following the presentation from the United States about the new work item in ITU-T SG13 (Y.Sup-ITS: Deployment of Intelligent Transport System in Developing), it is suggested to organize a workshop in collaboration between the ITU and the Inland Transport Committee (ITC). It was also suggested that SG13 could consider outreaching ISO/TC 268 -Sustainable cities and communities since they are discussing transport related in sustainable communities to collaborate on the proposal agreed upon (and as contained in [CITS-202009-Doc 14](#)).

4.6 [ITU-R](#)

The main developments from ITU-R WP5A were presented orally by Mr Paul Najarian (*WP5A liaison officer to CITS, USA*). It was highlighted that during World Radiocommunication Conferences (WRC), the new ITU Recommendation – “Harmonization of frequency bands for evolving Intelligent Transport Systems applications under mobile service allocations” was approved.

The approval of the new Question 261/5 on “Radiocommunication requirements for connected automated vehicles (CAV)” in November 2019 was also noted.

4.7 Focus Group on AI for Autonomous and Assisted Driving ([FG-AI4AD](#))

[\[Doc 27\]](#) was submitted and presented by Bryn Balcombe, FG-AI4AD Chair.

The FG-AI4AD is open to all interested stakeholders and is working on three Technical Reports:

- TR01: “Automated driving safety data protocol – Specification”
- TR02: "Automated driving safety data protocol – Public safety benefits of continual monitoring” ([TRr-I-003](#)) latest draft
- TR03: "Automated driving safety data protocol – Practical demonstrators” ([TRr-I-004](#)) latest draft

Through the presentation, it was highlighted that the FG-AI4AD focuses on the behavioural evaluation of AI responsible for the dynamic driving task, while ISO looks into behavioural safety. The presentation provided key insights into “The Molly Problem”, which will be explored further under the umbrella of FG-AI4AD and pertains to the following ethical conundrum:

“A young girl called Molly is crossing the road alone and is hit by unoccupied self-driving vehicle. There are no eye-witnesses.”

The Molly Problem raises key questions on the reasonable expectations from the self-driving software including (but not limited to) the following:

- bringing vehicle to a safe stop
- recalling information about collision
- alerting emergency services
- detection of Molly by the software

– Mitigating action for avoiding collision

The next meeting of the FG-AI4AD is planned on 16-17 September 2020 with a kick start workshop on "[*AD safety data and metrics - what do we really need?*](#)". Everyone was invited to attend.

4.8 Organizations that did not send a progress report at this meeting

- [CEN TC278](#)
- [ATIS](#)
- ITU-T SG12 ([Q4/12](#))
- [IEEE VTS Standards](#)
- [ISO TC 22](#)
- [ARIB](#)
- [IMDA](#)
- [IEC SEG11](#)
- [TIA](#)
- [TTA](#)
- [FG-VM](#)
- [TIAA](#)

4.9 Incoming Liaison Statements

Eight liaison statements received: [[Doc 4](#)] [[Doc 5](#)] [[Doc 6](#)] [[Doc 7](#)] [[Doc 8](#)] [[Doc 9](#)] [[Doc 10](#)] [[Doc 18](#)].

The main actions relating to the received liaison statements are contained in [[Doc 29](#)]. TSB will update the online standards database with the info provided.

5 ITS Standards Online Repository

Based on the inputs received and presentations delivered 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=Relevance>

6 Next meeting

The scheduling of the next CITS meeting will be conducted keeping WTSA-20 in mind along with the COVID-19 pandemic. The organization of FNC-21 is also to be discussed between ITU and UNECE. More information will be circulated via email list.

7 Closure of the meeting

The Chair, Russ Shields, thanked ITU for remotely hosting the CITS meeting and having supported its organization. The Chair expressed his appreciation for a diverse range of participants from different SDOs and thanked them for their inputs and the fruitful discussions. He also expressed his appreciation to the ITU Staff (Mr Polidori, Ms Menon and Ms Lima) for organizing the CITS meetings and building of the ITS communication standards database. The meeting closed at 1700 hours local Geneva time.