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| **Keywords:** | ITS; collaboration; standards; SDOs; connected vehicles; |
| **Abstract:** | The document summarizes ITU-T activities in the field of ITS communications since the last meeting of TSAG in September 2019. |

# Action required

TSAG is invited to note the report.

ITU-T Study Groups with activities related to ITS communications (especially SG2, SG12, SG16, SG17, SG20) are invited to provide regular updates on their ITS work items to the Collaboration on ITS Communication Standards (CITS).

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# 1 Collaboration on ITS Communication Standards (CITS)

A CITS e- meeting was held electronically on 28 October 2019. The meeting of the Collaboration on ITS Communication Standards discussed the various ITS-related standardization activities in the different SDOs, through progress reports submitted for the occasion. The documents of the meeting are available [here](https://www.itu.int/en/ITU-T/extcoop/cits/Pages/meeting-documents.aspx?RootFolder=%2Fen%2FITU-T%2Fextcoop%2Fcits%2FDocuments%2FMeeting-20190308-Geneva&FolderCTID=0x0120008D91490DA7927C4D8A0BB5A73929B07D&View=%7B73BE16B3-22C9-43D5-A9FD-D8BC067A87FF%7D).

As per the discussions during the previous CITS meeting in March 2019, certain SDOs including 3GPP (through 5GAA), submitted relevant ITS standards (prior to the e-meeting) for inclusion in the [online database](https://www.itu.int/net4/ITU-T/landscape#?topic=0.131&workgroup=1&searchValue=&page=1&sort=Revelance) for ITS Communication Standards. The CITS e-meeting held in October 2019 was attended by SDOs including IETF, CCSA, IEEE, TIAA, 5GAA, CEN W3C, ETSI, Car2Car Communication Consortium participated, TTC, WWRF, UNECE, among others. These entities and their related groups provided progress reports to CITS, elaborating on their ITS standardization publications and activities. The relevant inputs from the progress reports will be included in the ITS communication database. CITS will continue to work with the designated expert from each SDOs to populate the database with updates on the standards from the respective SDOs.

CITS continues to provide the link between ITU and the [UNECE World Forum for Harmonization of Vehicle Regulations (WP.29)](http://www.unece.org/trans/main/welcwp29.html). To this end, as done on 26 August 2019, ITU is planning to again host the meeting of the UNECE Task Force on Cybersecurity and Over the Air issues, during the SG17 meeting in March 2020 (candidate date 24-26 March 2020). A joint mini workshop on “Cyber Security Challenges in Automated Driving” is also under discussion. This mini workshop is useful to discuss related topics in both organizations and is targeting delegates of both UNECE WP29 and Q13/17, as well as CITS in general.

ITU delegates interested in participating in UNECE WP.29 activities are invited to consult the meeting schedule at <http://www.unece.org/trans/main/wp29/meetings_events.html> and to contact Mr Stefano Polidori (ITU/TSB) at tsbcits@itu.int for additional information and coordination. CITS will continue reviewing and discussing the progress in WP.29 and coordinate any ITS communications related input.

# 1.1 CITS-related events

# 1.1.1 Concluded meetings and events:

CITS has convened one (e-)meeting since the last TSAG:

* **E-meeting, 28 October 2019:** Collaboration on ITS Communication Standards (CITS) e-meeting

The following related events took place since the last TSAG:

* **Geneva, Switzerland, 12-13 December 2019**: 7th meeting of Focus Group on Vehicular Multimedia
* **London, United Kingdom, 21 January 2020**:Workshop [on Explainable AI (XAI) for Autonomous and Assisted Driving](https://www.itu.int/en/ITU-T/Workshops-and-Seminars/20200121/Pages/default.aspx) , co-organized with Autonomous Drivers Alliance (ADA)
* **London, United Kingdom, 21-22 January 2020**: 1st meeting of Focus Group on AI and Autonomous and Assisted Driving

# 1.1.2 Planned meetings and events:

* **Geneva, Switzerland, 5 March 2020**: [Symposium on the Future Networked Car (FNC-2020)](https://www.itu.int/en/fnc/2020/Pages/default.aspx), co-organized by ITU and UNECE
* **Geneva, Switzerland 6 March 2020**: Collaboration on ITS Communication Standards (CITS) meeting
* **Singapore, 12**-**13 March 2020**: 8th meeting of Focus Group on Vehicular Multimedia
* **Geneva, Switzerland, 24-26 March 2020**: UNECE Task Force on Cybersecurity and Over the Air issues, collocated with a joint mini workshop on “Cyber Security Challenges in Automated Driving” (TBC), during ITU-T Study Group 17 meeting
* **Geneva, Switzerland, 4-5 May 2020**: 2nd meeting of Focus Group on AI for Autonomous and Assisted Driving (followed by the workshop on smart mobility on **6 May 2020**), collocated with the [AI for Global Good Summit](https://aiforgood.itu.int/)
* **Geneva, Switzerland, June 2020**: 9th meeting of Focus Group on Vehicular Multimedia, collocated with Study Group 16 meeting and a workshop on the topic (TBC)
* **Beijing, China, September 2020**: 10th meeting of Focus Group on Vehicular Multimedia, collocated with a workshop on the topic (TBC)
* **China, Q32020**: Collaboration on ITS Communication Standards (CITS) meeting (TBC)
* **China, Q3 2020:** International Forum on Intelligent Transport Systems (TBC)
* **Pittsburgh, Pennsylvania, United States, Q3 2020**: 3rd meeting of Focus Group on AI for Autonomous and Assisted Driving, collocated with a workshop on the topic (TBC)
* **Singapore, December 2020**: 4th meeting of Focus Group on AI for Autonomous and Assisted Driving, collocated with a workshop on the topic (TBC)

**TBD December 2020**: 11th meeting of Focus Group on Vehicular Multimedia- (TBC)Delegates are invited to consult the CITS website for further updates and information: <http://itu.int/go/ITScomms>.

# 2 ITU-T Focus Group on Vehicular Multimedia (FG-VM)

The [ITU-T Focus Group on Vehicular Multimedia (FG-VM)](https://www.itu.int/en/ITU-T/focusgroups/vm/Pages/default.aspx), established by ITU-T Study Group 16 at its meeting in Ljubljana, 9-20 July 2018, analyzes and identifies gaps in the vehicular multimedia standardization landscape and draft technical reports and specifications covering, among others, vehicular multimedia use cases, requirements, applications, interfaces, protocols, architectures and security.

Following the 1st meeting of the ITU-T FG-VM held on 11 October 2018 in Ottawa, Canada, six additional meetings of the FG-VM were convened:

* 2nd FG-VM Meeting, 23-25 January 2019, Tokyo, Japan
* 3rd FG-VM Meeting, 18-19 March 2019, Geneva, Switzerland
* 4th FG-VM Meeting, 16-17 May 2019, e-Meeting
* 5th FG-VM Meeting, 11-12 July 2019, Changchun, China
* 6th FG-VM Meeting, 11-12 September 2019, Budapest, Hungary
* 7th FG-VM Meeting, 12-13 December 2019, Geneva, Switzerland

All the documents of the FG-VM meetings are available [here](https://extranet.itu.int/sites/itu-t/focusgroups/vm/_layouts/15/start.aspx#//sites/itu-t/focusgroups/vm).

The main achievements of the FG-VM since the 1st meeting include:

* The Technical Report on “[Use Cases and Requirements for the Vehicular Multimedia Networks](https://www.itu.int/en/ITU-T/focusgroups/vm/Documents/FGVM-01R1.pdf)” has been finalized under FG-VM/WG1.
* The [Call for proposals for a VM Architecture](https://www.itu.int/en/ITU-T/focusgroups/vm/Documents/FGVM-CallForProposals_v2.pdf) has been published and later updated to invite contributions to the activities of WG2.
* FG-VM/WG2 started developing a draft Technical Report on “Vehicular Multimedia Architecture”, which will be progressed at next meeting planned in Singapore from 12-13 March 2020.

The current management team of the FG-VM includes:

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| **Position** | **Name** | **Organization** |
| FG-VM Chair: | Jun (Harry) Li  | TIAA, People's Republic of China |
| FG-VM Vice-Chair/WG1 Chair:  | Gaëlle Martin-Cocher  | Blackberry, Canada |
| FG-VM Vice-Chair/WG1 Vice-Chair: | Kaname Tokita  | Honda, Japan |
| WG1 Vice-Chair | Lu Yu  | Changan Automobile Co, LTD, China |
| WG1 Vice-Chair | Guo Yansong  | Great Wall Motor Co, LTD, China​ |
| Editor | James Lepp | Blackberry, Canada |
| WG2 Chair | Yajun Kou | Global Fusion Media Technology and Development Co. Ltd, China |
| WG2 Vice-Chair: | Dimitri Konstantas  | University of Geneva, Switzerland |
| WG2 Vice-Chair | Jie Li | China Telecom, China |
| Editor | Srinivasagan Ayyappan | Great Wall Motors, Co, LTD, China |
| * FG-VM Advisor
 | Stefano Polidori | ITU/TSB |

The next FG-VM meeting is planned in Singapore, 12-13 March 2020. See also [section 1.1](#Section11) above and FG-VM webpage:

<https://www.itu.int/en/ITU-T/focusgroups/vm>

# 3 ITU-T Focus Group on AI for Autonomous and Assisted Driving (FG-AI4AD)

The ITU-T Focus Group on AI for Autonomous and Assisted Driving (FG-AI4AD) was established by ITU-T SG16 at its meeting in Geneva, Switzerland, 7-17 October 2019. This Focus Group delves into the behavioural evaluation of the AI responsible for the dynamic driving task of a vehicle, in accordance with the 1949 and 1968 Convention on Road Traffic of the UNECE Global Forum for Road Safety. It aims to facilitate international harmonisation on the definition of a minimal performance threshold for these AD vehicles.

The first meeting of FG-AI4AD was held in London, United Kingdom from 21-22 January 2020.

All the documentation pertaining to FG-AI4AD can be found [here](https://extranet.itu.int/sites/itu-t/focusgroups/ai4ad/_layouts/15/start.aspx#//sites/itu-t/focusgroups/ai4ad).

At its first meeting, FG-AI4AD agreed on the workstreams under which future activities will be carried out:

* 1st Workstream: Outreach through participation, collaborations and public engagement
* 2nd Workstream: Technical specification and demonstration
* 3rd Workstream: Research based guidance & notices

The current management team of the FG-VM includes:

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| --- | --- | --- |
| **Position** | **Name** | **Organization** |
| FG-AI4AD Chair | Bryn Balcombe | ADA Innovation Lab Limited, UK |
| FG-AI4AD Vice-Chair | Yuan Zhang | China Telecom, China |
| * FG-AI4AD Advisor
 | Stefano Polidori | ITU/TSB |

The next FG-AI4AD meeting is planned in Geneva, 4-5 May 2020, during AI for Good Global Summit. See also [section 1.1](#Section11) above and FG-AI4AD webpage:

<https://www.itu.int/en/ITU-T/focusgroups/ai4ad>

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