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| Asia-Pacific Telecommunity Member Administrations |
| Draft NEW RESOLUTION [APT-VC] - PROMOTING AND STRENGTHENING STANDARDIZATION ACTIVITIES FOR VEHICULAR COMMUNICATIONS |
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| **Abstract:** | This document contains the proposal for addition of a new ITU-T Resolution APT-VC “Promoting and strengthening the standardization activities for vehicular communications”, which is necessary to strengthen standardization activities and collaboration among all stakeholders to address the mobility challenges of the future. |
| **Contact:** | Mr. Masanori Kondo Secretary GeneralAsia-Pacific Telecommunity | E-mail: aptwtsa@apt.int  |

Introduction

In recent years, vehicular communications such as vehicle to everything (V2X) and intelligent transport systems (ITS) have become increasingly important in developing connected and automated vehicles (CAV), which help prevent crashes, reduce congestion, and improve traffic efficiency.

Vehicular communications such as V2X and ITS play a crucial role in meeting the Sustainable Development Goals (SDGs) of the United Nations, for example, SDG3 aims to reduce road deaths and serious injuries. These technologies also drive infrastructure upgrades, transforming city infrastructures and accelerating the growth of the digital economy.

Many organizations have been engaged in the standardization and promotion of vehicular communications such as V2X and ITS for a couple of decades, but no technology has emerged to meet the needs of the mobility.

The United Nations Economic Commission for Europe (UNECE) established the Task Force on Vehicular Communications to identify the potential role of its World Forum for Harmonization of Vehicle Regulations (WP.29) in enhancing sustainability, improving safety, and supporting automated driving.

The ITU-R has researched radiocommunication and spectrum requirement for V2X/ITS applications.

Several ITU-T study groups are engaged on different aspects of vehicular communication such as V2X and ITS.

The ITU fosters coordination among various standards development organizations through the Collaboration on ITS Communication Standards (CITS), which has established the Expert Group on Communications Technology for Automated Driving.

Given all above, it is necessary to strengthen standardization activities and collaboration among all stakeholders to address the mobility challenges of the future. This new ITU-T Resolution will serve this purpose.

Proposal

APT Member Administrations propose to add a new Resolution on “Promoting and Strengthening Standardization Activities for Vehicular Communications”.

ADD APT/37A45/1

DRAFT NEW RESOLUTION [APT-VC] (New Delhi, 2024)

Promoting and Strengthening Standardization Activities for Vehicular Communications

(New Delhi, 2024)

The World Telecommunication Standardization Assembly (New Delhi, 2024),

recalling

*a)* Resolution 70/1 of the United Nations General Assembly (UNGA) on Transforming our world: the 2030 Agenda for Sustainable Development;

*b)* Resolution [74/299](https://documents-dds-ny.un.org/doc/UNDOC/GEN/N20/226/30/PDF/N2022630.pdf?OpenElement) of UNGA on improving Global Road Safety with a target to reduce road deaths and serious injuries by 50 percent by the end of 2030;

*c)* The relevant United Nations (UN) Sustainable Development Goals (SDGs), particularly SDG3 on substantially reducing the number of global deaths and injuries from road traffic accidents, SDG7 on improving the global rate of energy efficiency, SDG11 on providing access to safe, affordable, accessible and sustainable transport systems for all;

*d)* Resolution 37 (Rev. Kigali, 2022) of the World Telecommunication Development Conference on Bridging the Digital Divide,

*considering*

*a)* that supporting vehicular communications such as vehicle to everything (V2X) and intelligent transport systems (ITS) will enhance road safety, improve traffic efficiency and reduce carbon emissions, as well as enabling infrastructure upgrades to accelerate the development of the digital economy, which will also promote the digital transformation of developing countries;

*b)* the rapid development of connected and automated vehicles (CAV), and the fact that many organizations are engaged in the standardization of vehicular communications such as V2X and ITS;

*c)* that United Nations Economic Commission for Europe (UNECE) World Forum for Harmonization of Vehicle Regulations (WP.29) established the Task Force on Vehicular Communications (TF VC) to identify the potential role of WP.29 in vehicular communications area, especially in improving sustainability, enhancing safety, supporting automated driving, and other related aspects;

*d)* that the development of CAV and V2X/ITS involves different stakeholders and industries, including automotive, transportation, telecommunications/ICT, electronics and energy sectors, which require coordination;

*e)* that the development of CAV and V2X/ITS affects many fields and in-depth cooperation on relevant aspects may be necessary among relevant countries, regions, and international entities to achieve maximum benefits from related applications,

*noting*

*a)* that ITU-T study groups initiated studies on V2X/ITS aspects of identification, quality of service for speech and audio, vehicle emergency calls, vehicular multimedia and infotainment systems, security (such as over the air secure software updates) and Internet of Things related applications;

*b)* that previous ITU-T focus groups studied vehicular multimedia (FG-VM) and AI for autonomous and assisted driving (FG-AI4AD);

c*)* that the Collaboration on ITS Communication Standards (CITS) is a recognized international open platform that maintains a global online free database of ITS standards and provides a venue to exchange information and coordinate international standardization on ITS between national, regional and international standardization organizations;

*d)* that the CITS established the Expert Group on Communications Technology for Automated Driving (EG ComAD), which aims to facilitate the deployment of safe and reliable automated driving systems through advanced communications technology;

*e)* that ITU-T, in collaboration with UNECE, jointly organizes the Future Networked Car Symposium, which has become a key forum for discussing and examining the latest advances in vehicle connectivity, automated mobility and the role of AI in the transport sector,

*noting further*

*a)* that the ITU Radiocommunication Sector (ITU-R), and in particular Study Group 5, is responsible for the radiocommunications aspects, spectrum requirements, and technical and operational characteristics in order to achieve the harmonization of the radio spectrum for vehicular communications such as V2X, ITS, automotive radar and CAV;

*b)* that ITU Telecommunication Development Sector (ITU-D) Study Group 2 focuses on digital transformation, especially Question 1/2, aiming to study problems in promoting smart sustainable cities and communities, sharing experiences on improving connectivity and underlying infrastructures to support the smart societies and smart transportation,

*recognizing*

*a)* that the ITU-T should play a leading role within the ICT field in developing standards for vehicular communications such as V2X and ITS;

*b)* that a coordinated telecommunication/ICT standard framework for vehicular communications such as V2X and ITS is needed, centred around ITU;

*c)* that a multi-stakeholder approach is essential to enable the standardization and deployment of vehicular communications such as V2X and ITS and that the collaboration and partnership of ITU and UNECE should be leveraged for this purpose,

*resolves*

1 to support the coordination function of the CITS to foster international telecommunications standards on vehicular communications such as V2X and ITS, including automated driving, while considering the needs of various regions and Member States;

2 to collaborate with other standards development organizations (SDOs), UNECE and other stakeholders, such as industry forums, associations and company alliances, as well as relevant ITU-T and ITU-R study groups, on vehicular communications such as V2X and ITS, including automated driving;

3 to organize, evaluate, and assess application scenarios and case studies of vehicular communications such as V2X and ITS, and share with related stakeholders,

*instructs the Director of the Telecommunication Standardization Bureau*

1 to provide necessary assistance in utilizing all available resources within the allocated budget to promote high-quality standardization work in a timely manner, maintaining related promotional webpages to enhance communication with the automotive and telecommunication/ICT industries, and to encourage their participation in ITU-T’s standardization activities related to vehicular communications such as V2X and ITS, including automated driving;

2 to leverage the partnership with UNECE through the Future Networked Car Symposium and related events, and to support the meetings of the CITS to enable collaboration with other SDOs, industry forums and other relevant organizations and initiatives to promote development of international telecommunication/ICT standards and other deliverables to achieve interoperability of vehicular communications such as V2X and ITS, including automated driving,

*instructs the Director of the Telecommunication Standardization Bureau in cooperation with the Director of the Telecommunication Development Bureau*

1 to support Member States in implementing applications and deployments of vehicular communications such as V2X and ITS, including automated driving;

2 to support Member States, especially developing countries[[1]](#footnote-1), in organizing forums, seminars, and workshops on vehicular communications such as V2X and ITS, including automated driving, to promote innovation, development, and growth of technology and solutions;

3 to assist developing countries in implementing vehicular communications such as V2X and ITS, including automated driving, through ITU-T Recommendations, technical reports, and guidelines,

 *instructs study groups of the ITU Telecommunication Standardization Sector*

1 Study Group 2 to foster standardization activities related to numbering, naming, addressing, and identification (NNAI) issues related to vehicular communications such as V2X and ITS, including automated driving;

2 Study Group 12 to foster standardization activities of QoS and quality of experience related to vehicular communications such as V2X and ITS, including automated driving;

3 Study Group C to develop ITU-T Recommendations aimed at implementing vehicular communications such as V2X and ITS, including automated driving, covering requirements, use cases, functional architecture, interfaces, standards roadmaps, etc., taking into account the study outcomes of the CITS/EG-ComAD as well as the outcome of ITU-R Study Group 5 on spectrum requirements;

4 Study Group 17 to foster standardization activities related to security for vehicular communications such as V2X and ITS, including automated driving; covering comprehensive security solutions, security mechanisms, etc.;

5 Study Group 20 to leverage the deployment of Internet of Things applications to contribute to a more connected, sustainable, and safer transportation,

*invites Member States, Sector Members, Associates and Academia*

1 to submit contributions and actively participate in the research of vehicular communications such as V2X and ITS, including automated driving, conducted by ITU-T;

2 to make overall plans, exchange use cases and share best practices, to promote the ecosystem of the vehicular communications such as V2X and ITS, including automated driving, and facilitate social development and economic growth to achieve the SDGs;

3 to organize forums, seminars, and workshops related to vehicular communications such as V2X and ITS, to promote and support innovation, research, development, and growth of technologies and solutions;

4 to take necessary measures to promote and implement the standardization of vehicular communications such as V2X and ITS.

1. Which includes least developed countries, small island developing countries, landlocked developing countries, and countries with economies in transition. [↑](#footnote-ref-1)