



No.0047

Frequency Resource Development Symposium 2025

"Frequency Resource Development Symposium 2025" on the theme of "On the Expanding Applications of Drones" was held in Akasaka, Tokyo on 11 July 2025. The event was co-organized by the Association of Radio Industries and Businesses (ARIB) and the National Institute of Information and Communications Technology (NICT), supported by the Ministry of Internal Affairs and Communications (MIC).

At the symposium, presentations were delivered by experts from various fields on radio spectrum policies, technological developments, and the latest trends in drone operations, aiming to promote the broader use of drones.



◆ Program

Title	Presenter
(Opening address)	Mr. OKANO Naoki Secretary General, ARIB
(Guest address)	Mr. ONAGA Hisashi Director-General of the Radio Department, MIC
Latest Trends in Radio Spectrum Policy: Toward the Expansion of Drone Utilization	Mr. OGAWA Hiroyuki Director of Radio Policy Division, MIC

Current Status and Challenges for Expanding the Use of Drones and Related Systems	Dr. KITAZAWA Shoichi Professor, Graduate School of Engineering, Muroran Institute of Technology
Autonomous Decentralized Cooperative Flight Control and Remote Operation Technologies for Disaster Response and Security Applications	Dr. KAMIMURA Akiya Deputy Director, Intelligent Systems Research Institute, Department of Information and Human Factors, and Group Leader, Field Robotics Research Group, AIST
Initiatives and Future Prospects of a Drone Manufacturer	Mr. SOYA Eiji President & CEO, EAMS Robotics Co., Ltd.
Current Use of Drones and On-Site Challenges	Mr. ISHINO Makoto President & CEO, Mount Libra Inc.
Wireless Communication Technologies Supporting the Safety and Security of Drone Operations	Mr. MATSUDA Takashi Research Manager, Wireless Systems Laboratory, Wireless Networks Research Center, Network Research Institute, NICT

The 31st ITS World Congress 2025 in Atlanta

The 31st ITS World Congress 2025 was held in Atlanta, USA in August 2025, hosted by ITS America.

◆ Overview of the Congress

Date	24 - 28 August 2025
Venue	Georgia World Congress Center
Theme	“Deploying Today, Empowering Tomorrow”
Organizer	ITS America
Participants (Registered)	More than 6,000 participants from 61 countries or regions (2 participants from ARIB)



Georgia World Congress Center

◆ Speech and Sessions related to Japan

At the opening ceremony held on 25 August, following welcome remarks from the organizers and local representatives, panel discussions were held featuring officials

from the Atlanta Department of Transportation and the Georgia Department of Transportation. This was followed by a trilateral panel discussion with representatives from Europe, the United States, and Asia. As a guest speaker representing the Asia-Pacific region, Mr. Hidenobu Kubota, Deputy Director-General of the Logistics and Automobile Department, Road Transport Bureau, Ministry of Land, Infrastructure, Transport and Tourism (MLIT), delivered a speech.

On 24 August, the SIS23 session hosted by the Ministry of Internal Affairs and Communications (MIC) was held under the theme of "Strategy of V2X Communication in Automated Vehicle." The session was moderated by Mr. Takeshi Yamamoto, Chairman of the International Cooperation Special Committee, ITS Info-communications Forum (ITSF). Speakers from ITU-R, governments, companies, and organizations in Japan, the US, and Europe reported on the current status and future outlook of V2X initiatives in their respective regions, followed by a panel discussion. From Japan, Ms. Hitoka Fujii of the New Generation Mobile Communications Systems Promotion Office, Radio Department, Telecommunications Bureau, MIC, introduced MIC's efforts and future goals regarding the use of the 5.9GHz band for V2X communication.

On 26 August, during the SIS43 session titled "V2X / C-ITS for Vehicles & Micromobility," Mr. Hikaru Tsukamoto, Director at Honda R&D Co., Ltd., gave a presentation on Honda's initiatives to prevent motorcycle accidents, the establishment of the Connected Motorcycle Consortium, and joint development efforts with partner companies to launch C-ITS for motorcycles in the European market by 2028.

◆ Exhibitions

At the exhibition venue, various companies and organizations showcased their initiatives. ITS Info-communications Forum (ITSF) participated in the Japan Pavilion, presenting panels that introduced an overview of ITSF, Japan's demonstration experiments, and its efforts to prevent pedestrian and bicycle accidents. A booklet summarizing past achievements was also distributed.

Within the Japan Pavilion, MIC, MLIT, and other exhibitors introduced initiatives related to demonstration experiments on automated driving and V2X on the Shin-Tomei Expressway, highlighting a collaborative approach between public and private sectors. ITS Japan, Toyota Tsusho Corporation, and Toyota Motor Corporation showcased efforts to prevent pedestrian and bicycle accidents using smart poles. Regarding V2X, Toyota and DENSO exhibited various initiatives such as safe driving support, merging assistance, and sharing of driving intentions and sensor detection results using V2X and V2N technologies. At the Honda booth, panels introduced the development of C-ITS devices aimed at preventing motorcycle accidents.

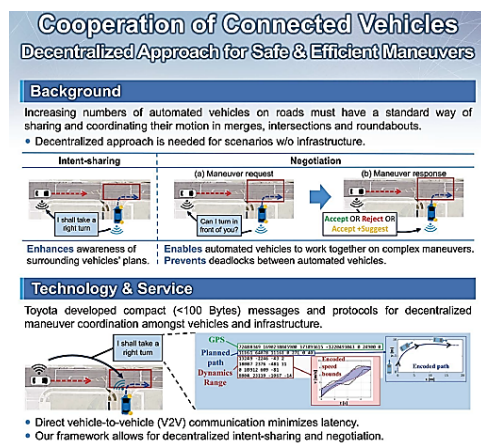
Although the number of actual vehicle exhibits and participating automakers appeared limited this year, Toyota, Honda, and DENSO displayed experimental vehicles. Additionally, systems combining AI-based image recognition at intersections with V2X technology for accident prevention and traffic management were introduced at several booths.



Exhibition of ITSF



Smart Pole (ITS Japan, Toyota)



An Example of Safety Support Initiatives Using V2X Technology (Toyota, DENSO)



Exhibition of the Vehicles (Toyota, Honda, DENSO)

◆ Closing ceremony

On the final day, a closing ceremony was held, where awards were presented for outstanding paper presentations and lecture sessions during the congress. It was also

announced that the next ITS World Congress (the 32nd) will be held in Gangneung, South Korea, from 19 to 23 October 2026.

The 74th IMT Working Group Meeting of CJK

The CJK IMT Working Group facilitates information sharing and discussions among SDOs in China, Korea, and Japan on international IMT standardization activities within ITU-R, APT, 3GPP, and other organizations. It also coordinates joint contributions to ITU-R SG5 WP5D.

1. Meeting Overview

- Schedule: 2–3 September 2025
- Venue/Method: Sapporo, Japan (online participation available)
- Participants : CCSA (24 participants), TTA (15 participants), ARIB (23 participants)

2. Main Results

(1) Information Sharing

Participants shared the outcomes of the 49th WP5D meeting, the 2nd meeting of the APT Preparatory Group for WRC-27 (APG-27), and recent 3GPP activities, and exchanged views on future study topics.

(2) Preparation for WP5D

Progress in each country for the 50th WP5D meeting, scheduled to begin on 7 October, was reviewed. Items requiring further study and specific work plans were identified.

(3) Technical Performance Requirements (TPR) for IMT-2030

Participants reviewed proposed target values for the TPR of IMT-2030 radio interface technologies submitted by three countries. In addition to identifying commonly agreed values, they agreed to continue discussions on the possibility of developing joint contributions for other proposed targets. Furthermore, they discussed the proposal to include the composite requirement—necessary to assess suitability for new use cases such as Extended Reality (XR) in immersive communication scenarios—as an official requirement, and agreed to continue discussions on a potential joint contribution.

(4) Submission Guidelines (Draft Report ITU-R M.[IMT-2030.SUBMISSION])

Regarding the draft new Report ITU-R M.[IMT-2030.SUBMISSION], which outlines the submission process, evaluation criteria, and template for proposals of IMT-2030 radio interface technologies, participants agreed to continue discussions on the possibility of developing joint contributions based on the content of IMT-2020.

(5) WRC-27 Agenda Item 1.7

Participants exchanged views on issues discussed at the 2nd APG-27 meeting, including the protection of stations operating in international waters and airspace, and the approach of addressing the 7125–8400 MHz frequency band by subdividing it into sub-bands. It was agreed to continue discussions on these topics.

(6) **WRC-27 Agenda Item 1.13**

Building on discussions from the previous meeting, participants continued to exchange views on protection measures for terrestrial IMT base stations and user terminals in the context of direct communication between terrestrial IMT terminals and satellites.

3. Next Meeting

The next CJK IMT Working Group Meeting will be held in Busan, Republic of Korea, on 7–8 January 2026.

The 35th Meeting of APT Wireless Group (AWG-35)
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The APT (Asia-Pacific Telecommunity) Wireless Group (AWG) works on harmonizing spectrum usage and standardization to enhance and promote radiocommunication systems in the Asia-Pacific region. The meeting is usually held twice a year and brings together wireless technology experts from across the region. Mr. Le Van Tuan (Vietnam) serves as Chair.

1. Meeting Overview

- Schedule: 8 – 12 September 2025
- Venue/Method: Bangkok, Thailand
(online participation available for the plenary session only)

- Participants:

331 attendees, including representatives from administrations, private organizations, and international organizations in the Asia-Pacific region. The Japanese delegation consisted of 86 members, led by the Ministry of Internal Affairs and Communications (MIC), including 4 from ARIB.



2. Main Results

AWG has four working groups: WG on Harmonization, WG on IMT, WG on Terrestrial, and WG on SAM (Space, Aeronautical, and Maritime), each supported by sub-working groups or task groups addressing key issues for APT Members. The main outcomes related to IMT and ITS are as follows:

➤ **IMT**

(1) **Frequency (SWG-IMT SPEC)**

- ① The APT Report APT/AWG/REP-140: “APT Report on methodology to determine value of IMT spectrum and information on spectrum prices in Asia-Pacific countries” was revised to reflect updated information, including recent auction implementations in Thailand and Viet Nam.

- ② Two input contributions, including one from Japan, were incorporated into the working document for the revision of APT/AWG/REP-136(Rev.1): “APT Report on Trends and Spectrum Developments for IMT Usage in 2025-2030 in the Asia-Pacific Region.” The review was completed, and the report is expected to be finalized at the next meeting (AWG-36).
- ③ A proposal to initiate a new report on harmonized frequency arrangements in the 6425-7125 MHz band was discussed. Due to differing views, it was agreed that the AWG should focus on technical studies. Accordingly, the work plan was revised, and the report title was changed to “Report on Technical Characteristics of IMT Systems in the Frequency Band 6425-7125 MHz.” To clarify its technical nature, the work was transferred to SWG-IMT TECH.

(2) Technology (SWG-IMT TECH)

- ① The draft “APT Report on technical and regulatory aspects of RAN and spectrum sharing in IMT networks among mobile network operators in the Asia-Pacific region” was finalized. The report outlines technical and regulatory considerations for spectrum and RAN sharing among MNOs in the region.
- ② Four input contributions were incorporated into the working document for the draft report on potential use cases and applications of IMT-2030/6G. The review was completed, and the work will continue toward finalization at AWG-37.
- ③ A new work item proposed by Japan, titled “Analysis of Mobile Traffic Trends in IMT Networks,” was agreed upon. This study aims to analyze the current status and future outlook of mobile traffic among APT member countries.
- ④ The third 6G Workshop was held, following the previous session.
 - Presentations were delivered by representatives from the Republic of Korea, GSA, GSMA, and Ericsson. Topics included the activities of Korea’s 6G Forum, standardization efforts by ITU-R and 3GPP, projections for 6G deployment based on the diffusion of previous generations (3G/4G), and expected spectrum requirements.
 - A Q&A session followed, with key discussions on whether NTN frequency bands in 3GPP align with those of terrestrial networks (TN), modulation schemes for 6G, and the business viability of 6G deployment.

➤ ITS

Japan submitted contributions based on studies by the ITS Info-communications Forum (ITSF), for which ARIB serves as secretariat.

- ① Regarding the draft report on millimeter-wave radars/sensors for ITS, Japan proposed enhancements such as additional text in Chapter 7 (Conclusion) and clarification of out-of-vehicle applications in the section on 60 GHz sensors. These updates were reflected in the report, and the document status was upgraded from working document to draft report.
- ② For the report on road-vehicle cooperative systems, Japan proposed improvements including expanded descriptions of automated driving support and refinement of

terminology. These updates were largely accepted, and the document status was also upgraded to draft report.

➤ Others

At this meeting, the second term of Mr. Le Van Tuan as Chair of the APT Wireless Group (AWG) concluded. Mr. Daejung Kim (Republic of Korea) was elected as the new Chair. His first term will run from September 2025 to September 2028.

3. Next Meeting

AWG-36 is scheduled for April 2026 in Brunei Darussalam.

ARIB-DVB Regular Meeting

A regular meeting between ARIB and DVB (Digital Video Broadcasting), the European standardization body for digital TV broadcasting, was held on the occasion of the International Broadcasting Convention (IBC) 2025, the largest broadcasting equipment exhibition in the European region.

The meeting which consists of report of activities from both sides, confirmation of liaison relationships and exchange of views on the latest topics, has been held annually based on the agreement on the mutual exchange of information concluded at the “Japan - EC Postal Regular Consultation” in 1994.

Since the activity updates were scheduled to be shared at the FoBTV TC (Future of Broadcast Television Technical Committee) meeting held on Monday, 15 September during IBC, this meeting primarily focused on information exchange and confirmation of liaison contact persons.

1. Outline of the meeting

- Schedule 13 September 2025
- Venue Amsterdam, The Netherland (RAI Exhibition Center)
- Participants Mr. Remo Vogel (Chair, DVB Project)
 Ms. Emily Dubs (Head of Technology, DVB Project)
 Mr. Ryoichi Nakai (ARIB)
 Ms. Yuko Yamanouchi (ARIB)
 Mr. Toru Imai (NHK Science and Technical Research Laboratories)
 Mr. Masaki Kano (NHK Science and Technical Research Laboratories)

2. Proceedings

NHK provided an overview of recent revisions to the Broadcast Act in Japan, including the designation of internet-based simulcasting as an essential service and changes to the reception fee structure. DVB shared insights into the evolution of the reception fee model in Germany.

In addition, participants exchanged views on issues related to broadcasting prominence.



Exhibition of DVB



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