

Newsletter **ARIB** **SEASON**



No.0023

<< Contents >>

Topics :

- 3GPP 5G Security Workshop
- The 5th Workshop on Connected Vehicles using LTE/5G
- The 25th Meeting of APT Wireless Group (AWG-25) in Tangerang, Indonesia
- Frequency Resource Development Symposium 2019
- ITU-R WP5D the 32nd Meeting in Brazil
- The 5th APT Conference Preparatory Group for WRC-19 (APG-19) meeting in Tokyo
- SET EXPO 2019 in Sao Paulo
- ITU-R SG5 Meeting and WRC-19 Preparation Inter-regional Workshop
- Seminar on Trend in Standardization by oneM2M and 3GPP
- ARIB-DVB Regular Meeting
- The 56th CJK IMT Working Group Meeting in Kyoto

Standards :

- Newly established Standards
- Revised or abolished Standards

Topics

3GPP 5G Security Workshop

"3GPP 5G Security Workshop" was held on 1 July 2019 in Tokyo, aiming to share the studies by 3GPP and other organizations. It has been expected to accelerate activities of Security Study Ad hoc which was established under Strategy & Planning Committee, 5GMF in June 2018.

The working item in each SWG under the Ad hoc was introduced, prior to the lectures from the members of 3GPP SA3 which is SWG in charge of studying securities. Through this Workshop, the latest trends in standardization related to 5G securities were shared and study area of the Ad hoc was affirmed.

◆ Outline

- Title of the Event 3GPP 5G Security Workshop
- Schedule 1 July 2019, 9:30 - 17:30
- Venue Tokyo, Japan (Headquarters of ARIB)
- Host Security Study Ad hoc, Strategy & Planning Committee, 5GMF supported by 3GPP and ARIB
- Participants About 60 (closed for 3GPP SA3 members)

◆ Program

Title	Presenter
(Presentation on 5GMF activities)	Prof. Satoru TEZUKA (Keio Univ.) Mr. Toshiaki TANAKA (KDDI) Mr. Kazuhiko ISHI (NTT DOCOMO) Mr. Takashi KAWANO (Hitachi)
(Welcome Remarks)	Mr. Anand R. Prasad (Rakuten Mobile)
3GPP SA3 Activities Overview	Mr. Noamen Ben Henda (3GPP SA3 Chair)
5G Phase-1 Security Overview	Mr. Alf Zugenmaier (3GPP SA3 Vice Chair)
5G Authentication Framework	Mr. Adrian Escott (3GPP SA3 Vice Chair)
Privacy in 5G	Mr. Anand Palanigounder (Qualcomm Technologies)
Security for Non-3GPP Access	Mr. Andreas Kunz (Lenovo)
LI considerations in 5G era	Mr. Alex Leadbeater (3GPP SA3-LI Chair)
Security Holes in 5G	Mr. Sander de Kievit (Rakuten Mobile)
5G security - a governmental view	Ms. Florence Driscoll (National Cyber Security Centre)
Vertical LAN Security	Mr. Anja Jerichow (Nokia)
Security and Trust in 5G. Need for Platform Integrity	Mr. Alec Brusilovsky



The 5th Workshop on Connected Vehicles using LTE/5G

"The 5th Workshop on Connected Vehicles using LTE/5G" was held on 4 July 2019 in Tokyo. In this workshop which followed the 4th one held in December 2018, the summary of "Issue Survey Report on Advanced ITS and Automated Driving Using Cellular Communications Technologies" developed by the Cellular System Task Group of ITS Info-communications Forum was introduced, and presentations on 5G V2X standardization were made.

◆ Outline of the Workshop

- Title of the Event The 5th Workshop on Connected Vehicles using LTE/5G
- Schedule 4 July 2019, 14:00 - 17:30

- Venue Tokyo, Japan (Headquarters of ARIB)
- Host Co-hosted by the following entities
 - LTE V2X Support Ad hoc of ARIB
 - 5G Connected Vehicle Ad hoc of 5GMF
 - Cellular System Task Group of ITS Info-communications Forum
- Participants About 150 (from Government, Industries related to ITS, Automobile, Telecommunications)

◆ Abstract of the Workshop

1. Explanation about "Issue Survey Report on Advanced ITS and Automated Driving Using Cellular Communications Technologies"

The report features outline of technologies that enables the advancement, use cases, telecommunication architectures, business model and issue to be tackled, aiming to accelerate assessment of effectiveness and settlement of the issues. Mr. Takehiro NAKAMURA, leader of 5G Connected Vehicle Ad hoc, gave introduction to the report, followed by detailed explanation on each topic listed below.

- (1) Abstract
- (2) Wide Area Telecommunication: V2N
- (3) Short Range Telecommunication: V2V, V2I, V2P
- (4) Use cases which depend on telecommunication
- (5) Telecommunication Architecture
- (6) Business Model
- (7) Conclusion

2. Standardization trend in 5G V2X

The advantages of LTE/5G when applied to connected car (V2X) and the progress in study of Cellular-V2X and assignment of frequency band to 5G were explained by Mr. Satoshi NAGATA, leader of LTE V2X Ad hoc.



The 25th Meeting of APT Wireless Group (AWG-25) in Indonesia

The 25th Meeting of APT Wireless Group (AWG-25) was held in July.

◆ About the APT Wireless Group (AWG)

APT (Asia-Pacific Telecommunity) Wireless Group, AWG, studies the harmonization and standardization of the frequency and technical matters of wireless communication systems in the Asia-Pacific region. The meeting has been held usually about twice a year, and the experts of the wireless technology of each country in this region join the meeting. The group is chaired by Dr. Kohei Sato (ARIB), with two vice chair Mr. K. Zhu (China) and LV Tuan (Vietnam).

◆ Outline of the Meeting

- Schedule 1 - 5 July 2019
- Venue Tangerang, Indonesia (ICE BSD City)
- Participants 251 people from administrations, private organizations and international organizations in the Asia-Pacific region
40 people as the Japanese delegation headed by Mr. Hatano of MIC, including 4 from ARIB



◆ Main results

In AWG, three working groups (WG: Frequency, Technology and Service/Application) had been set. In each WG, sub working group or task group had been established for each issue.

The main results of the meeting were as follows.

1. IMT: The 5th generation mobile communication systems, etc.
 - (1) APT report which summarize the current usage of 24.25-86GHz band in each country (related to WRC-19 AI1.13) was completed and decided to be sent to APG19-5 meeting to be held in July 2019.
 - (2) A new agenda item to study possible use of IMT network for the purpose of warning to public at disaster was proposed by Korea and approved.
 - (3) A report on frequency arrangement in 3.3-3.4GHz band was completed.
2. Intelligent Transport Systems (ITS)
 - (1) Working document on Cellular-V2X where start of drafting had been agreed was revised based on the contribution from Japan, China and Korea.

- (2) Working document on ITS using millimeter wave was revised based on the contribution from Japan.
3. Railway wireless system
 - (1) APT report on system deployment and test of RSTT (Railway radiocommunication System between Train and Trackside) was completed.
 - (2) A new agenda item was proposed and agreed on the operational scenario for the system for railway positioning application and the experience of the relevant National Administration.
4. HAPS (High Altitude Platform Station)
 - (1) A new AWG report on technical and operational analysis of HIBS (HAPS as IMT Base Stations) usage in IMT identified frequency bands below 2.7GHz was completed.
5. Others
 - (1) Prior to the expiration of the term of the current chairpersons in September, the AWG chairperson and vice-chairperson were elected for the next period: Mr. Le Van Tuan from Vietnam (current vice-chair) as a chair, Mr. Daejung Kim from Korea (current chair of Tech WG) and Mr. Dr. Khoirul Anwar from Indonesia (current chair of S&A WG) as vice-chair. It was also decided that the retiring chairman Dr. Kohei Sato would become an honorary chairman and be invited to the Steering Committee.

◆ **Future meeting schedule**

The next AWG-26 meeting is planned to be held in March or April 2020, and to be held in Thailand, would there be not for the candidacy for the host.



Frequency Resource Development Symposium 2019

"Frequency Resource Development Symposium 2019" on the theme of "Next-generation wireless technology that expands the possibilities of frequency use in Japan" was held in Tokyo on 5 July 2019. 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).

With the 5th generation mobile communication system (5G), the era of wireless technology being used in every scene is coming. In the 2020s, various new services are expected to appear due to the development of higher frequency and new wireless utilization technologies.

At the symposium, presentations were delivered by the specialists from government, industry and academia, focusing on the next-generation wireless technology that expands the possibilities of frequency use.



◆ Program

Title	Presenter
(Opening address)	Dr. Naoto KADOWAKI Vice President, NICT
(Guest address)	Mr. Yasuo TAWARA Director of Radio Department, MIC
Recent trend in radio policy	Mr. Hideo FUSEDA Director of the Radio Policy Division, MIC
Challenge to undeveloped areas: Terahertz wave application technology	Dr. Iwao HOSAKO Director General, Advanced ICT Research Institute, NICT
Present and Potential of Millimeter-wave communications equipment: Millimeter-wave communications changing from special to broad infrastructure	Ms. Mitsue OBA Senior Analyst, IHS Markit Japan GK
Wireless Power Transmission entering new phase with Microwave beam	Dr. Naoki SHINOHARA Professor, Kyoto University
Trends in Satellite constellation and Satellite 5G technology, and Next-generation satellite communication technology	Dr. Morio TOYOSHIMA Director, Space Communication Laboratory, NICT
(Closing address)	Mr. Fusaki MATSUI Secretary General, ARIB

ITU-R WP5D the 32nd Meeting in Brazil

ITU-R WP5D the 32nd meeting was held in July 2019.

◆ Outline of the meeting

- Schedule 9 –17 July 2019
- Venue Buzios, Brazil
- Participants About 165 people from 31 countries (31 organizations)
18 people as the Japanese delegation headed by Mr. Arimura of MIC, including 3 from ARIB



◆ Main results

- (1) The revision of Recommendation ITU-R M.1036-5 for frequency arrangement of terrestrial IMT was not agreed in some respects, such as the description of IMT deployment in a band not identified for IMT. As a result, it was agreed that the document would be upgraded to "draft revised Recommendation" with square bracket remaining in the title and be sent to SG5.
- (2) Regarding the study of frequency sharing of IMT and radar in 3.3 GHz band (Resolution 223 (WRC-15revised)), Report ITU-R M.[RADAR & IMT SHARING] was revised to a draft new report, and its submission to SG5 was agreed upon.
- (3) A new draft Report ITU-R M.[IMT.EXPERIENCES] on the experience of introducing the terrestrial IMT system in each country was agreed upon with partial review of the description, and it was agreed to be submitted to SG5.
- (4) Revision documents of Question, Opinion and Resolution were completed and approved for report at SG5 meeting.
- (5) This meeting was the final deadline for acceptance of proposal regarding the radio interface for IMT-2020. Seven proposals were submitted from six organizations and four of them by 3GPP, China, Korea were accepted. It was agreed that the remaining three would be accepted if imperfections of content would be amended by 10 September.
- (6) The new document IMT-2020/20 which define procedure to develop IMT-2020 radio interface was completed at this meeting earlier than originally planned.
- (7) In order to complete the new recommendation ITU-R M.[IMT-2020.SPECS] by the end of 2020 in response to the delay in fixing 3GPP Release16 specifications, it was agreed to hold the 36bis meeting in November 2020, aiming at approval at WP5D.

- (8) The workshop on IMT-2020 evaluation to be held at the WP5D 33rd meeting (December 2019) was agreed on the schedule and contents, which were notified to the evaluation organization outside ITU.

The 5th APG-19 meeting in Tokyo

APG-19 (Asia-Pacific Telecommunity Conference Preparatory Group for WRC-19) has responsibility to prepare the APT Common Proposal towards the World Radiocommunication Conference to be held from October to November 2019 (WRC-19). Dr. Kyu-Jin Wee (Korea) serves as a chairman.

The 5th (final) meeting of APG-19 was held in Tokyo.

◆ Outline of the meeting

- Schedule 31 July – 6 August 2019
- Venue Tokyo, Japan
- Participants 529 people from 26 APT member countries and other regions
international organizations in the Asia-Pacific region
120 people as the Japanese delegation headed by Ms. Fukahori
of MIC, including 5 from ARIB

◆ Main results

At this meeting, APT Views and Preliminary APT Common Proposals for each WRC-19 agenda items such as shown below were prepared.

- (1) AI 1.11: To facilitate global or regional harmonized frequency bands to support Railway radiocommunication Systems between Train and Trackside (RSTT) within existing mobile service allocations
- (2) AI 1.12: To consider possible global or regional harmonized frequency bands, to the maximum extent possible, for the implementation of evolving Intelligent Transport Systems (ITS) under existing mobile-service allocations
- (3) AI 1.13: To study identification of frequency bands for the future development of International Mobile Telecommunications (IMT), including possible additional allocations to the mobile service on a primary basis
- (4) AI 1.15: To consider identification of frequency bands for use by administrations for the land-mobile and fixed services applications operating in the frequency range 275-450GHz
- (5) AI 1.16: To consider issues related to wireless access systems, including radio local area networks (WAS/RLAN), in the frequency bands between 5150MHz and 5925MHz

◆ Meeting Schedule

WRC (World Radiocommunication Conference)-19 was held from 28 October to 22 November 2019 at Sharm el-Sheikh, Egypt.

SET EXPO 2019 in Sao Paulo

The SET EXPO 2019, the largest conference and exhibition of broadcasting in Latin America and organized by SET (Sociedade Brasileira de Engenharia de Televisão), was held from 26 through 29 August at the Expo Center Norte in Sao Paulo, Brazil.

During the conference period, there were 56 sessions regarding new technologies on next-generation TV, IP-based systems and services, OTT (Over-The-Top) services offered by Hulu, Netflix, Amazon, etc. There were active discussions and exchange of new viewpoints and opinions at each of the sessions.

At the Opening Ceremony on 27, Mr. Carlos Fini, President of SET, made a keynote speech, and Mr. M.Yoshida, Director-General, Information and Communications Bureau of the Ministry of Internal Affairs and Communications (MIC) of Japan, offered a guest greeting as one of the honorable speakers. In one of the sessions followed, Mr. H.Kimura, Director for Digital Broadcasting Technology of MIC, made a presentation on the latest development status of 4K/8K broadcasting in Japan; and at another session Dr. M.Sugawara, Chairman of Digital Broadcasting Experts Group (DiBEG), presented new possibilities brought by the next-generation TV and Hybridcast.

DiBEG participated in the exhibition at the Japan Pavilion set by MIC to promote ISDB-T toward the broadcasters in Latin America, as one of its missions of international promotion of ISDB-T; and in cooperation with Hitachi Kokusai Electric and Maspro Denkoh, exhibited and demonstrated next-generation of terrestrial digital TV, receiving antenna and STB (Set-Top Box) products.



Opening Ceremony



ARIB/DiBEG Exhibit Area at the Japan Pavilion

On 29 August the 8th Regular Meeting between ARIB/DiBEG and the SBTVD Forum was held. 9 members from Brazil, including Mr. J. Amaral, President of SBTVD Forum, and 7 members from Japan, including Dr. M.Sugawara, Chairman of DiBEG, attended the meeting.

At the meeting the Japanese side introduced the latest status on its next-generation broadcasting technologies, while the Brazilian side explained that they are proceeding with the "DTV Play" enabling the seamless service from broadcasting through internet, and that they are in need of establishing a new market and business models.

Both parties checked the latest development on the ARIB/DiBEG Joint Document revision and updating works since their last meeting in April 2019.

Both parties also exchanged the latest status of study on the operation of the EWBS Superimpose; and confirmed that they are inclined to apply and multiplex the EWBS Superimpose only to the One-seg broadcasting operation. They would continue their exchange of information on the implementation, based on some field trials and further studies.

The Japanese side made a presentation on Ginga/Hybridcast as to the general concept and the service image, showing some demonstration videos. The next-generation Hybridcast is a service that shifts the target focus from TV receivers to smartphones, which attracted strong attention of the Brazilian participants.

They agreed to have the next regular meeting at the opportunity of the NAB Show in Las Vegas, Nevada, U.S.A. in April 2020.



ITU-R SG5 Meeting and WRC-19 Preparation Inter-regional Workshop

ITU-R SG5 the 14th meeting and WRC-19 Preparation Inter-regional Workshop were held in September.

■ The 14th SG5 meeting

◆ Outline of the meeting

- Schedule 2 - 6 September 2019
- Venue Geneva, Switzerland (Headquarters of ITU)
- Participants About 100 people
8 people as the Japanese delegation headed by Mr. Maruhashi of MIC (including 2 from ARIB)

◆ Main results

Deliberations were held on new or revised draft Recommendations / Reports / Questions submitted by working parties (WP) under SG5.

1. Outputs related to WP5A

- (1) A draft revised ITU-R Recommendation M.2084-0, which summarized standards

in wireless telecommunications of ITS from each SDOs was adopted and sent for approval.

- (2) A new Question named "Recommendation requirement for connected automated vehicles" in which requirement for wireless telecommunication of connected cars is to be studied was also adopted and sent to postal ballot for approval.

2. Outputs related to WP5D

- (1) A draft revised ITU-R Recommendation M.2012-3 on the detailed specifications of IMT-Advanced was adopted and sent to postal ballot for approval.
- (2) Regarding a draft revised ITU-R Recommendation M.1036-5 on the IMT frequency arrangement, three subjects such as the description of the use of frequency bands that are not identified for IMT in RR had remained unagreed upon. As a result, it was decided to be submitted to RA-19 for further discussion there.
- (3) A draft new Report ITU-R M.[IMT.EXPERIENCES] that summarized experience of introducing terrestrial IMT under the frequency of 1GHz in each country was amended reflecting concerns expressed by Russia, and was approved.

■ The 3rd WRC-19 Preparation Inter-regional Workshop

◆ Outline of the meeting

- Objectives Sharing progress in the study of each Question for WRC-19 among 6 regional groups
- Schedule 4 - 6 September 2019
- Venue Geneva, Switzerland (Headquarters of ITU)
- Participants About 350 people
11 people as the Japanese delegation headed by Mr. Maruhashi of MIC, including 2 from ARIB

◆ Abstract of the Workshop

Coordinators for each agenda and representatives from 6 regions gathered on the stage for each service such as Mobile, Satellite, Aeronautical and Maritime, and shared information about the proposals to WRC-19 and their background.

Regarding AI 1.13, which discusses the identification of IMT frequencies above 24 GHz, the direction to identify 26GHz and 40GHz as IMT bands on which Japan had begun to study of frequency sharing became clear.

Protection of Earth Exploration Satellite Service (ESS) (passive) and Space Station for Fixed Satellite Service (FSS) are expected to be the main point of discussion.

The view of each regional organization regarding the candidate band on AI 1.13 is shown below.

The view of each regional organization regarding the candidate band on AI 1.13

Frequency(GHz)		APT	ASMG	ATU	CEPT	CITEL	RCC	Japan
A	24.25-27.5	IMT	IMT	IMT	IMT	IMT	IMT (only for LMS)	IMT

B	31.8-33.4	NOC	NOC	NOC	NOC	NOC	NOC	NOC
C	37-40.5	IMT	NOC	IMT	not oppose to IMT	IMT	IMT(R2&R3) NOC(R1)	IMT
D	40.5-42.5	IMT	IMT	IMT	IMT	IMT	IMT (only for LMS)	IMT
E	42.5-43.5	IMT	IMT	IMT	IMT	IMT	NOC	IMT
F	45.5-47	NOC	NOC			NOC	NOC	
G	47-47.2	NOC	NOC	NOC	NOC	NOC	NOC	NOC
H	47.2-50.2		NOC	IMT	NOC	IMT(-48.2) NOC(48.2-)	NOC	
I	50.4-52.6		NOC	IMT	NOC		NOC	
J	66-71	IMT	IMT	IMT	IMT	NOC	NOC	IMT
K	71-76		NOC	NOC	NOC	NOC	NOC	NOC
L	81-86		NOC	NOC	NOC	NOC	NOC	NOC

* NOC: No Change to RR

APT: Asia-Pacific Telecommunity, ASMG: Arab Spectrum Management Group,

ATU: African Telecommunications Union,

CEPT: European Conference of Postal and Telecommunications Administrations,

CITEL: Inter-American Telecommunication Commission,

RCC: Regional Commonwealth in the field of Communications

Seminar on Trend in Standardization by oneM2M and 3GPP

A seminar explaining the latest standardization trends at oneM2M and 3GPP was held jointly by ARIB and TTC in September.

◆ Outline of the Seminar

- Title of the Event ARIB / TTC Joint Seminar
 “The world of IoT and Smart Cities supported by oneM2M /
 3GPP - Trend in Standardization by oneM2M Release3 / 3GPP
 Release15”
- Schedule 9 September 2019, 13:30 - 17:40
- Venue Tokyo, Japan (Headquarters of TTC)
- Host ARIB, TTC
- Participants About 110

◆ Background

OneM2M, a common service platform for IoT, released the latest specification Release3, in which “3GPP interworking” was the main function. The 3GPP and oneM2M hope that seamless cooperation between the specifications from both sides accelerate realization of IoT and Smart city.

◆ Program

Title	Presenter
Part One	
Moderator: Mr. Kozo SAKAE (NTT DOCOMO)	
(Opening remarks)	Mr. Ikuo YAMASAKI NTT
oneM2M Overview and Release3 -Importance of IoT common service platform-	Mr. Norikazu YAMAZAKI KDDI
3GPP interworking -Realization of IoT by evolving mobile network-	Mr. Kenichi YAMAMOTO KDDI
OCF, LWM2M interworking -To realize smart home-	Mr. Yasufumi YOSHIKAWA NEC
Application to automobiles and use cases -Toward the realization of connected cars-	Mr. Norihiko HIRATA HITACHI
Interworking with semantics ontology -Interconnection function between different platforms-	Mr. Hiroyuki MAEOMICHI NTT
Interoperability testing and certification -Guarantee of end-to-end interoperability-	Ms. Kei HARADA NTT
Smart city in the world -Linking between smart cities spreading with oneM2M-	Mr. Hiroshi HAMANO TTC
Q&A	
Part Two	
Moderator: Mr. Masakazu SHIROTA (Qualcomm Japan)	
Overview of 3GPP latest mobile network -Summary of 5G Ph1 standard specifications-	Mr. Daisuke YOKOTA Softbank
3GPP Release15 RAN Overview -5G Ph1 RAN new function overview, IoT-related functions-	Mr. Shinichiro AIKAWA Fujitsu
3GPP Release 15 Core Network Overview -Service Based Architecture-	Mr. Ikuo YAMADA NTT DOCOMO
Latest technical specifications of 3GPP supporting IoT business -Edge Computing, etc.-	Mr. Toshiyuki TAMURA NTT
Cooperation between 3GPP and oneM2M -Realization of seamless IoT services by linking networks and services-	Mr. Yusuke NAKANO KDDI
Q&A	
(Closing remarks)	Mr. Seiji NISHIOKA ARIB



ARIB-DVB Regular Meeting

A regular meeting between DVB (Digital Video Broadcasting), a standardization body that develops European digital television broadcasting systems, and ARIB was held in September 2019, in time with IBC (International Broadcasting Convention) 2019, the largest broadcasting equipment exhibition in Europe.

This meeting is being held annually based on the agreement on the mutual exchange of information concluded at the “Japan - EC Postal Regular Consultation” in 1994.

◆ Outline of the Seminar

- Schedule 16 September 2019
- Venue Amsterdam, The Netherland (RAI Exhibition Center)
- Participants Mr. Peter MacAvock (DVB Chairman)
Mr. Ryoichi Nakai (ARIB)
Mr. Masayuki Sugawara (DiBEG Chairman)
Mr. Takashi Kato (NHK Science and Technical Research Laboratories)
Mr. Tsuyoshi Nakatogawa (NHK Science and Technical Research Laboratories)



◆ Agenda

1. Report from DVB

- (1) Work Completed Since Last Meeting
- (2) A status update from DVB
 - Improvement activities in DVB
 - Trends and Future Vision in European Broadcasting Industry
 - Importance of DVB-I

2. Report from ARIB

- (1) Progress in new 4K8K satellite broadcasting in Japan
- (2) Issues in terrestrial 4K8K broadcasting in Japan
- (3) Activities of ARIB over the past year

3. Confirmation of liaison between DVB and ARIB

CJK the 56th IMT Working Group Meeting in Kyoto

CJK IMT Working Group Meeting is aiming to exchange information and views about the activities of international IMT standardizations in ITU-R, APT, 3GPP, etc. among the members of SDOs in China, Japan and Korea. The 56th IMT Working Group Meeting was held in September.

◆ Outline of the Meeting

Schedule: From 26 to 27 September 2019

Venue: Kyoto, Japan (Mielparque Kyoto)

Participants: ARIB (Japan) 13, CCSA (China) 11, TTA (Korea) 9



◆ Main Results

- (1) The results of ITU-R SG5 held in September, the 25th APT Wireless Group (AWG-25) held in August and ITU-R SG5 the 32nd WP5D held in June were confirmed. Also, report of each SDO's activities and the discussion at 3GPP were shared.
- (2) Plan for proposal to ITU-R of IMT-2020 radio interface from each country, and the activity progress of the evaluation group outside each SDO, was shared.
- (3) Information was shared on the preparation progress of each country for the ITU-R Radiocommunication Assembly 2019 (RA-19) and World Radiocommunication Conference 2019 (WRC-19) meetings which would start in October.
- (4) Information was shared on the preparation progress of each country for the ITU-R SG5 the 33rd WP5D to be held from 10 December, and two joint contribution was decided to be developed, based on the SIG-Evaluation activities.

◆ Future Plan

The next CJK IMT WG Meeting will be scheduled on 15 and 16 January 2020 in Jeju, Korea.

Standards

1. Newly established Standards at Standard Assembly on 30 July 2019

No standards were newly established at the Assembly.

2. Revised or abolished Standards at Standard Assembly on 30 July 2019

STD Number	Standard Name	Version
STD-T67	400 MHz-Band and 1,200 MHz-Band Telemeter, Telecontrol and Data Transmission Radio Equipment for Specified Low-Power Radio Station	Ver.2.0
STD-T120	IMT Systems based on 3GPP Specifications	Ver.1.30
RCR STD-38	Radiofrequency-Exposure Protection	Ver.3.0
STD-B62	Multimedia Coding Specification for Digital Broadcasting (Second Generation)	Ver.2.2
STD-B63	Receiver for Advanced Wide Band Digital Satellite Broadcasting (Desirable Specifications)	Ver.1.8
STD-B72	Colour Bar Test Pattern for Hybrid Log-Gamma (HLG) High Dynamic Range Television (HDR-TV) System	Ver.1.1



Association of Radio Industries and Businesses

ARIB SEASON
Publishing

1-4-1 Kasumigaseki, Chiyoda-ku, Tokyo 100-0013 JAPAN
<https://www.arib.or.jp/english/>