



Event

The Japan-Turkey 5G Workshop in Turkey

The Joint Statement on cooperation on information and communication technologies had been signed on 7 October 2015 between the Ministry of Internal Affairs and Communications (MIC) of Japan and the Information and Communication Technologies Authority (ICTA) of the Republic of Turkey. This Joint Statement had contained cooperation in discussions at international organizations such as ITU and 3GPP and reinforcement of relations between the private sectors of both countries in order to strengthen cooperation on the next generation mobile communication system (5G) between Japan and Turkey.

Based on the above Joint Statement, the 5G workshop was held as follows.

1. Overview of the workshop

Sponsor	MIC of Japan and ICTA of the Republic of Turkey
Date	10 January 2017 10:00 -18:00
Location	Large conference room of ICTA (Ankara, Turkey)
Participants	<p>Turkey: Approximately 250 people from the Turkish Administration, telecommunications carriers, manufacturers, universities and research institutes (Connected local offices of ICTA by TV conference)</p> <p>Japan : 5 people headed by Mr. Tominaga (Director-General of the Telecommunications Bureau, MIC)</p> <p>※Dr. Kohei Satoh participated from ARIB as the Secretary General of the 5th Generation Mobile Communications Promotion Forum (5GMF).</p>

2. Outline of each session in the workshop

(1) Opening session

After welcome address and explanation of the purpose of holding the workshop, Dr. Ömer Fatih Sayan (President of ICTA) explained the circumstances of the cooperation between Japan and Turkey, together with the development situation of Turkey's economy and technology. Also, he mentioned that the Turkish 5G Forum (5GTR Forum) had been established in April 2016, so he wanted to cooperate toward the 5G standardization.



Dr. Sayan
(President of ICTA)

After that, the guest speech by Dr. Davut Kavranoglu (the Chief Adviser to the President of Turkey) and greeting and presentation of the outline of 5G's R&D situation in Japan by Mr. Tominaga (Director-General of the Telecommunications Bureau, MIC of Japan) were carried out.



Mr. Tominaga
(Director-General of the
Telecommunications Bureau, MIC)

(2) Government officials' session

Presentation about the technology and policy trends related to 5G in Turkey was carried out by Mr. R. Yilmaz (Director of the Market Surveillance Institute of ICTA), and presentation about the development situation of mobile communication system and efforts to realize 5G, etc. in Japan was carried out by Mr. Fumitake Takahashi (Deputy Director of Land Mobile Communications Division, MIC).

(3) Private sector session

Presentation about the status of participation in R&D and standardization activities of 4G / 5G was carried out by ASELSAN Elektronik (Manufacturer of radio equipment and electronic systems in Turkey).

Presentation about the background and outline of the establishment of 5GMF and the latest activity status focusing on white paper was carried out by Dr. Kohei Satoh (the Secretary General of 5GMF). In addition to considering cooperation with the 5GTR Forum in Turkey positively, announcement to invite a representative of the 5GTR Forum to the 3rd Global 5G Event which would be organized by 5GMF in Tokyo in May was made.

(4) Special session on research and development

Presentation about the outline of TÜBİTAK and activity situation, 5G vision and R & D situation was carried out by BİLGEM (Informatics and Information Security Research Center of TÜBİTAK), and presentation about DOCOMO's 5G deployment

strategy and frequency consideration for 5G, and outline of demonstration experiment with domestic and overseas companies to realize 5G was carried out by Mr. Takehiro Nakamura (Acting Chairman of Strategy & Planning Committee (NTT DOCOMO)).



Lecturers with Japan and Turkey officials

The 8th Study Group Meeting on Private wireless communication

The Study Group on Private wireless communication was established on April 2015 in order to provide a place to investigate technologies and usage trends of the private wireless communication, domestic and worldwide, and study the enhancement of Private wireless communication.

On 17 January 2017, the 8th study group meeting was held attended by 92 people.

In the study group meeting, following presentations had been carried out.

- (1) "Start of consideration on technical conditions related to advancement of 920 MHz low power radio system" by the Ministry of Internal Affairs and Communications
- (2) "Current status of the Tokyo Fire Department wireless communications network" by Tokyo Fire Department
- (3) "Trends in foreign countries on public safety communication networks utilizing the public network" by the Foundation for MultiMedia Communications (FMMC)
- (4) " Possibility of public safety communication service utilizing public network" by NTT DOCOMO and KDDI

After the presentation, lively free discussion was carried out.



The 8th Study Group on Private wireless communication

The 48th CJK IMT WG Meeting

CJK IMT Working Group Meeting is aiming to exchange information and views about the activities of international IMT standardizations in ITU-R, APT, 3GPPs, and so on, among members of SDOs in China, Japan and South Korea.

The 48th CJK IMT Working Group Meeting was held as follows.

1. Overview of the Meeting

Date	From 17 to 18, January 2017
Location	Busan, South Korea
Participants	9 members from ARIB, 9 members from CCSA (China) and 17 members from TTA (South Korea), as members of each country's standardization organization.



The 48th CJK IMT WG Meeting

2. Main results of the Meeting

- (1) Confirmed the results of the 20th meeting of the Asia-Pacific Telecommunity Wireless Group (AWG) held in September 2016 and the 25th ITU-R SG5 Working Party 5D (WP5D) meeting held in October 2016, each SDO's activity report and 3GPP discussion status report
- (2) Shared the information about the status of preparation towards the 25th WP5D meeting, and based on the status of activities of three Special Interest Group (SIG-Spectrum, SIG-Requirements and SIG-Evaluation), discussed the joint contribution documents on the basis of the common part of the proposed contents of each SDO

- (3) Determined to promote the coordination of 6 contribution documents toward the joint contribution
- (4) Elected Mr. Kato (Director of Land Mobile Communication Group of ARIB) as the chairman of the CJK IMT WG and Mr. Meng (CCSA) as a 3GPPs coordinator for one year from the next 49th meeting

3. Next meeting schedule

The next CJK IMT Working Group Meeting was scheduled on 9 and 10 May 2017 in Japan.

Digital TV Summit 2017 in Philippines
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The Digital TV Summit 2017 was held at the Novotel Manila Araneta Center on February 14 and 15 in Manila, the Philippines.

About 400 people participated in the Summit, including the representatives from the Filipino government, academia, broadcasters, manufacturers, etc. The Japanese delegation was headed by Mr. S. Suzuki, Vice Minister for Policy Coordination of the Ministry of Internal Affairs and Communications (MIC), and included representatives from DiBEG member companies and ARIB/DiBEG secretariat.

The Department of Information and Communications Technology (DICT) of the Philippines officially announced their migration plan toward digital television; and at this occasion DICT hosted this Digital TV Summit 2017.

During the Digital TV Summit on February 14th, there was a ceremony of "Digital Switch On" performed to symbolize the migration from analog to digital television. While there were plenary sessions going on for 2 days, outlining Filipino broadcasting history up to the introduction of digital TV and the migration plan as well as future plans toward nationwide digital terrestrial television, technical sessions and exhibition were also going on in parallel introducing the ISDB-T technology for the afternoon of February 14th and the whole day of 15th.

On the morning of the first day of the Summit on February 14th, an official announcement was made at the Opening Ceremony, declaring that the digital terrestrial TV services were now launched, attended by the executives from DICT and the National Telecommunications Commission (NTC), together with the Japanese Vice Minister Mr. S. Suzuki, manipulating a lever together to migrate analog TV to digital on the stage.



Ceremony of Migration from Analog to Digital TV

At the Plenary Session, following the opening remarks by Mr. Rodolfo A. Salalima, Secretary of DICT, substitute for Mr. Gamaliel Cordova, NTC Commissioner, Mr. S. Suzuki, Vice Minister of MIC and Mr. Jose Ruperto Martin M. Andanar, Secretary of Presidential Communications Operations Office (PCOO) each made a speech celebrating the Summit at this occasion.

DICT also outlined their migration plan from analog to digital TV, whose official announcement would be on March 31, 2017. DICT showed their intention to implement the Analog Switch-Off (ASO) nationwide in the coming 4 to 6 years, targeting the completion by the year 2023.

During the sessions the current status of the major broadcasters in the Philippines toward digital terrestrial TV was introduced. According to ABS-CBN, one of the largest broadcasting corporations, it started digital terrestrial TV as of February 11, 2015, and are currently broadcasting as many as 6 channels of news, entertainment, etc., with the accumulated sale of STBs of more than 2.4 million units.

There were also 2-day technical sessions on ISDB-T held at the venue. 3 representatives from DiBEG participated in these sessions, presenting "Transmission Technology" by Mr. J. Abe, "Datacasting, EPG and Closed Caption" by Mr. O. Hashimoto, and "EWBS (Emergency Warning Broadcast System)" by Mr. Y. Sakaguchi.

In addition to the presentations by the above 3 Japanese experts, there were some more presentations made by the Filipino engineering people, regarding the outline of ISDB-T technology, SNF technology, considerations on STL/TTL. etc., where more than 80 people almost filled up the session room with standing participants, exchanging views and opinions actively. The atmosphere in the hall strongly indicated that the people in the field of broadcasting in the Philippines are eagerly tackling digital terrestrial TV, and they enjoyed this invaluable opportunity.

There was also an exhibition area provided, where MIC, ARIB/DiBEG and some of the

DiBEG member companies participated. At the ARIB/DiBEG booth a display of prototype EWBS receiving module and a demonstration of EWBS reception were performed.

ARIB/DiBEG participated in the exhibition under the auspices of MIC, showing the prototype unit of EWBS receiving module developed by NHK Itec, one of the DiBEG member companies. Also at the ARIB/DiBEG booth pamphlets and leaflets showing ARIB's recent broadcast standardization activities and DiBEG's international promotional activities on ISDB-T were handed over to the Summit participants, while also showing videos on the development of EWBS technology, international promotional activities on ISDB-T, etc.

The EWBS receiving module, exhibited at the booth, attracted strong attention of the people from research institutions, DICT, broadcasters, manufacturers, etc.



Display at the ARIB/DiBEG Booth

In the exhibition area, not only MIC and DiBEG but also some of the Filipino affiliates of DiBEG member companies such as Sharp Philippines, NEC Philippines, etc. participated. Also, Philippine Appliance Industry Association (PAIA), a trade association of electro-domestic manufacturers of the Philippines, and some other local organizations joined the exhibition.

The 26th ITU-R WP5D Meeting

The 27th ITU-R WP5D Meeting was held as below.

1. Overview of the meeting

Schedule	From 14 to 22 February 2017
Venue	ITU headquarters (Geneva , Switzerland)
Participants	About 264 people from 45 countries (41 organizations)
Participants from Japan	20 people (including 3 people from ARIB) headed by Ms. Yamauchi (Deputy Director of Land Mobile Communications Division, MIC)



The 26th ITU-R WP5D Meeting

2. Main results

- (1) With regard to the radio interface requirements for the IMT-2020, all the requested values were agreed and submitted to SG5 to seek for adoption as a new report of ITU-R M. [IMT-2020.TECH PERF REQ].
- (2) With regard to the parameters used for the radio interface evaluation of the IMT-2020, conditions on Large Cell Low Mobility (LCLM) used in India were added. With regard to the test environment of Rural High Speed, proposal that it was necessary to newly examine at 30GHz was made from Japan at the Meeting, and it was decided to continue the layout study together with China's 4GHz. With regard to the Preliminary Draft New Report of the ITU-R M. [IMT-2020.EVAL] which defined the evaluation method and condition of the IMT-2020 radio interface, it was agreed to complete at the next meeting.

- (3) With regard to the ITU-R M. [IMT-2020.SUBMISSION] that specified the method of proposing the IMT-2020 radio interface was studied based on the Japan and South Korea joint contribution document, and made it the status of the new report draft.
- (4) With regard to the revision of the IMT-2020/2 document which defined the development process of the IMT-2020 radio interface, the sentence in Step 2 was finalized, and completed the draft revision. This revision was approved at the WP5D Plenary and will be posted on the Web Page.
- (5) With regard to the revision toward the 3rd edition of IMT-Advanced Details Wireless Interface Recommendation ITU-R M.2012, confirmation of the input from the GCS Proponent of LTE-Advanced was done, and the working document was created. With regard to the IMT-2000 Details Wireless Interface Recommendation ITU-R M.1457, a schedule on the revision for the 14th edition (IMT-2000/7 document) and a liaison document to external organizations were created and approved at the WP5D Plenary.
- (6) Decision to send a liaison document telling the completion of the 2nd edition Supplement of IMT-2020/2 to external organizations (5GMF, 5GIC, 3GPP, ARIB etc.) was made. In the 2nd edition Supplement, documents describing the details of external evaluation organizations (ITU members or standards bodies or other independent evaluation organizations) and recommending the early registration to ITU-R were added. With regard to the IMT-2020 workshop to be held in October 2017, it was decided to provide the information as an attachment to the 2nd edition Supplement.
- (7) On the new report ITU-R M. [IMT.BY.INDUSTRIES] about the use of the terrestrial IMT by the industry sector, issue of a liaison documents to WP5A which had the review authority was agreed at the SWG level on the railway and ITS. However, at the plenary, it was treated as carry forward because UAE (United Arab Emirates) claimed it premature.
- (8) The draft of liaison document to TG 5/1 on the frequency needs of WRC-19 agenda item 1.13 was finalized. Based on the two methods (application, technical performance) and multiple assumptions as frequency need identification method, the required bandwidth of IMT-2020 at the frequency of 24.25 - 86 GHz (an example is shown in the table below) was agreed. It was decided to compile information on frequency demand from each country and provide information to TG 5/1 along with calculation results based on the above.

Examples of spectrum needs for frequency ranges between 24.25 and 86 GHz

	Examples	Associated conditions for different examples (For details, please see the corresponding sections in the Annex A)	Spectrum needs in total (GHz)	Spectrum needs (GHz) per range
Application-based approach	1	Overcrowded, Dense urban and Urban areas	18.7	3.3 (24.25-33.4 GHz range) 6.1 (37-52.6 GHz range) 9.3 (66-86 GHz range)
		Dense urban and Urban areas	11.4	2.0 (24.25-33.4 GHz range) 3.7 (37-52.6 GHz range) 5.7 (66-86 GHz range)
	2	Highly crowded area	3.7	0.67 (24.25-33.4 GHz range) 1.2 (37-52.6 GHz range) 1.9 (66-86 GHz range)
		Crowded area	1.8	0.33 (24.25-33.4 GHz range) 0.61 (37-52.6 GHz range) 0.93 (66-86 GHz range)

- (9) With regard to the coexistence study of WRC-19 Agenda 1.13, the draft of liaison document to TG 5/1 on IMT side parameters was finalized. System parameter values were discussed and agreed based on information provided by 3GPP. With regard to the introduction parameters (typical operational values), "hot spot of suburban area", "hot spot of urban area" and "indoor" were agreed as basic deployment environments, and radio station density and radio station specifications (antenna height, transmission power etc.) corresponding to each environment were agreed.
- (10) It was described that the 31st WP5D Meeting to be held in October 2018 would be invited by Japan.
- (11) Sharing of the results of the previous studies on IMT-2020 and the future work plan between WP5D and ITU-T SG13 was made.

3. Next meeting schedule

The next 27th meeting is scheduled to be held in Canada (Niagara Falls) on 13 to 21 June 2017.

<p align="center">"oneM2M Showcase 2" (ARIB, NICT, TTC co-organized event)</p>
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oneM2M is the global standards initiative that provides a common service platform that supports various services / applications of IoT / M2M, and it is expected that oneM2M will facilitate the collection of information from various devices and control of such devices, and new IoT / M2M services will be able to be realized in a short period of time at low cost.

In oneM2M, Standard Specification Release 2 was enacted in August 2016. This Release 2 specification is a specification set that covers enough functions to construct the IoT platform, including interworking and semantics with other IoT technologies. It supports various services / applications of IoT, and has the necessary functions to create a new business.

"oneM2M Showcase 2" is regarded as the second step of oneM2M showcase event held for the first time in Japan in May 2015. This event had been co-organized by ARIB, NICT and TTC, and held as below in early March.

1. Overview of the event

Name	oneM2M Showcase 2
Schedule	2 March 2017 12:00 – 17:30 (Japan Time)
Organizers	ARIB (Association of Radio Industries and Businesses) NICT (National Institute of Information and Communications Technology) TTC (Telecommunication Technology Committee)
Venue	Fukuracia Shinagawa Crystal Square (Tokyo)
Participants	About 260 people

2. Result of the event

In this event, improvement of oneM2M specification and a big progress of its implementation were shown by exhibiting oneM2M specification based equipment. At the lecture, the activities of industry, academia and government to realize the world of IoT and expectations for oneM2M were introduced.

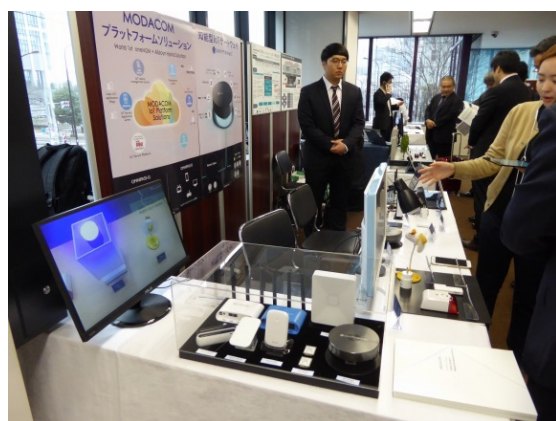
Applicants wishing to attend were beyond the initial assumptions and the event was a successful with about 260 participants.



The lecture



**Closing remarks from Mr. Fusaki Matsui
(Secretary General of ARIB)**



Demonstration display

The 2nd Japan-Nicaragua JWG Meeting in Nicaragua

The 2nd Japan–Nicaragua Joint Working Group (JWG) meeting was held in Managua, Nicaragua on March 9, 2017. The Japanese delegation was headed by Mr. Y. Ando, Ambassador of Japan to Nicaragua, with the representatives from Ministry of Internal Affairs and Communications (MIC), ARIB/DiBEG, a JICA expert in Costa Rica, etc. The Nicaraguan side was headed by Mr. Marvin Collado, Subdirector General Instituto Nicaragüense de Telecomunicaciones y Correos (TELCOR), together with the representatives from TELCOR, Ministry of Foreign Affairs and National TV (Channel 6).

When Nicaragua decided to adopt ISDB-T as its national standard of digital terrestrial television in August 2015, the bilateral JWG was set up to support the implementation of digital TV in Nicaragua. ARIB/DiBEG has also been an active member to extend its technical support for the introduction of digital TV in the country.

The 2nd JWG meeting was held in Managua, the Nicaraguan capital this time, where the Japanese delegation made detailed explanations on Japan's field experiences in the transition to digital television, the outline of international activities of ARIB/DiBEG, methodologies to set up nationwide channel planning, etc.

At the meeting Nicaraguan side made reference to the idea of starting up digital terrestrial TV from the level of a small-scale pilot project, and expressed their expectation on Japan in the technical support and cooperation, including the training of human resources for the digital TV implementation. Japan responded they would study necessary support and cooperation to Nicaragua through a JICA expert as a window of communications.



Headquarter of TELCOR



Joint Working Group Meeting

Monthly seminars on radio wave use

No.148	3 March 2017
Title	Introduction of high resolution millimeter wave radar technology using 79 GHz band
Speaker	Mr. Yoichi Nakagawa Innovation Center, AVC Networks Company, Panasonic Corporation
Summary	The seminar covered the verification experiment result performed in the Cross-ministerial Strategic Innovation Promotion Program (SIP), in addition to the explanation of the technical potential and international trend of the 79 GHz band high resolution radar.

Standards

1. Newly established Standards at Standard Assembly on 24 March 2017

None

2. Revised or abolished Standards at Standard Assembly on 24 March 2017

(1) Telecommunications field

STD Number	Standard Name	Version
STD-T63	IMT-2000 DS-CDMA and TDD-CDMA System	Ver.12.30
STD-T104	LTE-Advanced System	Ver.4.30
STD-T111	79 GHz BAND HIGH-RESOLUTION RADAR	Ver.1.1

(2) Broadcasting field

STD Number	Standard Name	Version
STD-B10	SERVICE INFORMATION FOR DIGITAL BROADCASTING SYSTEM	Ver.5.10
STD-B43	PORTABLE MILLIMETER-WAVE DIGITAL TRANSMISSION SYSTEM FOR TELEVISION PROGRAM CONTRIBUTION	Ver.2.0
STD-B60	MMT-BASED MEDIA TRANSPORT SCHEME IN DIGITAL BROADCASTING SYSTEMS	Ver.1.9
STD-B61	CONDITIONAL ACCESS SYSTEM (SECOND GENERATION) AND CAS PROGRAM DOWNLOAD SYSTEM SPECIFICATIONS FOR DIGITAL BROADCASTING	Ver.1.3
STD-B69	EXCHANGE FORMAT OF THE DIGITAL CLOSED CAPTION FILE FOR DIGITAL TELEVISION BROADCASTING SYSTEM (SECOND GENERATION)	Ver.1.1



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