

= A Serial Introduction Part 1 = Winners of ITU-AJ Encouragement Awards 2020

In May every year, The ITU Association of Japan (ITU-AJ) proudly presents ITU-AJ Encouragement Awards to people who have made outstanding contributions in the field of international standardization and have helped in the ongoing development of ICT.

These Awards are also an embodiment of our sincere desire to encourage further contributions from these individuals in the future.

If you happen to run into these winners at another meeting in the future, please say hello to them.

But first, as part of the introductory series of Award Winners, allow us to introduce some of those remarkable winners.

Hiroshi Ishikawa

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Fields of activity: 3GPP Core Network Standardization,
GSMA Network Group Activities



IMS and 5G Standardization Activities in 3GPP and GSMA

It is a great honor to receive the ITU-AJ Encouragement Award, and I would like to take this opportunity to thank everyone that has supported me, leading to this great award.

One of my first standardization activities was at 3GPP in 2006, introducing Domain Specific Access Control, which allows independent access control for 3G CS and PS domains. I was later involved with IMS and have contributed to “Common IMS,” which became the foundation for next generation telecommunication services used by multiple access, including fixed access.

In 2017, I joined 5G standardization activities. In order to roll out 5G in the market as fast as possible, Non Stand Alone (NSA) was standardized first, using existing EPC and supporting enhanced Mobile Broadband (eMBB). At the same time, Stand Alone (SA) has also been standardized using a new core network known as 5GC, in order to support valuable features beyond those provided by eMBB. I contributed to enhancements required in both core networks to provide improved features and user

experience compared with the previous system.

I also participated in activities at GSMA dealing with roaming for both 4G and 5G. These included activities to facilitate VoLTE roaming, promoting faster migration from 2G/3G voice roaming, and activities to create new profiles for 5G roaming. While 3GPP defines the features, GSMA defines sets of profiles for its usage, which is important for network operators in rolling out commercial services.

In all of these activities, I believe having active discussions with many delegations, both online and offline, was important to have deeper understanding and contribution to the standards. With networks expected to evolve to 5G, standardizing further 5G network features and methods for migration from legacy networks will be key requirements. I would like to continue to contribute to these activities together with the many other experienced delegates, from both technical and user requirements perspectives, to help evolve the market.

Wataru Ishida

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Fields of activity: ICT development



International Collaboration through APT activities

It is a great honor for me to receive the Encouragement Award from the ITU Association of Japan. I'd like to express my sincere gratitude to all those involved in the ITU-AJ as well as to my supervisors, seniors and colleagues at NTT and NTT East, and the trainees and project members from various countries. In the Global Office of NTT East, I was engaged in international cooperation through the Asia-Pacific Telecommunity (APT), JICA, and NTT Vietnam (currently NTT e-Asia).

For APT, I engaged in the planning and management of human resource development training, international collaborative research, and pilot projects using special contributions from the

Japanese government.

In APT training, I planned and managed training courses for policy makers and engineers in the Asia-Pacific region, mainly on broadband, NGN, and e-government, in cooperation with various companies and institutions.

In APT collaborative research, we collaborated with the Advanced Science and Technology Institute (ASTI) in the Philippines and other institutions, conducting proof-of-concept studies such as for agricultural sensing networks in rural areas and investigating and analyzing the correlation between air pollution and traffic volume and flow in Metro Manila.

For APT pilot projects, we carried out a project to build an Internet connection and educational content distribution environment in Indonesia in collaboration with several universities and research institutions in Japan, connecting a city hall, several junior high schools, high schools, universities, and local telecenters.

I hope that results from these efforts will become use cases contributing to solving issues in ICT development, especially in

rural areas.

I am currently involved in regional development in collaboration with local governments, local financial institutions, and venture companies, and I am working on designing and building a smart city that will enhance convenience for local residents and tourists, utilizing advanced technologies such as AI and IoT. I would like to continue to work to improve living standards in developing countries, making use of these efforts.

Noriyuki Inoue

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Fields of activity: Spectrum and Radio Regulation



Activity toward reaching a resolution in WRC-19

It was completely unexpected, but I am very happy to receive this ITU Association of Japan Encouragement Award at this time. I would like to offer sincere thanks to everyone at the ITU Association of Japan and everyone in the Japan delegation to APG-19 and WRC-19, from MIC and other organizations, for their guidance and encouragement.

Before participating in WRC-19 as the Japan delegation, I had no idea what sort of assembly the WRC was. I heard from senior members that they competed over frequencies, conflicts of interest occurred, and meetings could continue all night, not reaching a decision until the participants had reached their physical limits. I was given the role of APT coordinator, involving a WRC issue that was considered difficult to reach agreement. Two groups were sharply opposed: one wanting to protect terrestrial business and the other attacking to promote satellite business. As such, to avoid being physically overcome, I paid careful attention to my health as I entered Sharm El Sheikh, Egypt, where WRC-19 was being held.

As the APT coordinator, I was promoting APT proposals created through APG, but many countries have different perspectives on APT. At WRC-19, I could not even get a consistent approval from the various Asian countries, though I would have expected them to be amenable, so at times I felt isolated and helpless. Even so, I had off-line talks with country representatives that had objections, and sought advice from the APG-19 chairperson and others, and was able to get cooperation on APT, to reach a resolution on this issue that was causing so much concern. Fortunately, it did not come down to battle of physical limits.

WRC-19 came to an end, and unexpectedly, I was recommended for chairperson of the Drafting Group for issues in APG-23, leading up to WRC-23. I will take this recognition from the ITU Association of Japan as encouragement, and continue studying and contributing to discussion and creating resolutions at APG and WRC.

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Fields of activity: Mobile communication



Open Interface Standardization Activities at the O-RAN Alliance

I am very honored to receive this Encouragement Award from the ITU Association of Japan. I would like to offer sincere thanks to the ITU Association of Japan and everyone that has given their guidance and encouragement.

O-RAN was established in February, 2018 by five mobile operators: AT&T, China Mobile, Deutsche Telekom, NTT DOCOMO and Orange. The objective was to make Radio Access Networks (RANs) including 5G more extensible, open and intelligent. Today, 230 companies around the world, including 27

operators have joined O-RAN (as of January, 2021).

NTT DOCOMO's 5G network, which began commercial services in March 2020, uses equipment compliant with the O-RAN open front-haul (FH) interface specification, and its biggest feature is that it enables interconnectivity between equipment from different vendors. Previously FH interfaces have generally been vendor-specific, O-RAN specifies detailed and comprehensive specifications which enable connections between equipment from different vendors.

O-RAN had participation from more operators and vendors than its xRAN predecessors, so there were companies expressing caution and doubt about feasibility of multi-vendor connectivity in an early discussion phase. I worked tenaciously, repeatedly advocating for the value, feasibility and merits of the effort to both operators and vendors, speaking from NTT DOCOMO's

experience with multi-vendor connectivity. I also listened to opinions from other companies and led the discussion using my skill and experience summarizing and guiding the various opinions at 3GPP. As a result, my O-RAN colleagues and I were able to publish the first O-RAN FH interfaces specification in March, 2019.

Hirokazu Kamoda

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Fields of activity: Broadcast Auxiliary Services



Activities related to broadcast auxiliary services

It is an honor to receive this ITU-AJ Encouragement Award. I express my sincere gratitude to the ITU Association of Japan and all those who have given me guidance and encouragement.

I have been acting as a member of the Japan delegation to ITU-R WP5C since 2016, contributing to WP5C mainly on two issues. The first relates to 42-GHz-band wireless systems used in broadcast auxiliary services. This wireless system enables reliable contribution links to be established quickly for HDTV and 4K/8K broadcasting, where neither wired nor wireless communication means exist. I contributed to adding parameters for this system to the recommendation for frequency sharing studies (F.1777). At a time when the frequency identification for IMT-2020 (5G) was taking place, these parameters provided timely input and contributed to the study of frequency sharing.

The other issue concerns WRC-19 Agenda Item 1.14, regarding High-Altitude Platform Stations (HAPS). The 6-GHz band is one of the frequency bands assigned to HAPS and has a regional restriction. WP5C was conducting sharing

and compatibility studies to remove the restriction. The 6-GHz band is also used by wireless systems used for live broadcasts and emergency reporting. To examine whether the HAPS interferes with existing fixed wireless systems in Japan, we examined whether the HAPS proponents' sharing conditions were appropriate. I proposed modifying the conditions in consideration of fixed wireless systems in Japan. At the WP5C meeting, I struggled to gain acceptance for our proposal, but it was not accepted. However, through constant negotiations, the parties concerned were able to compromise and agree on a value that could effectively protect the fixed systems. Finally, it was reflected in a new report (F.2437) and the CPM document. I hope both HAPS and existing systems will coexist and develop in better ways.

Through these activities, I was able to experience international negotiations firsthand and learn a lot. I will continue to make efforts to contribute to the effective use of radio waves.

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Fields of activity: SG13, SG15



Lessons learned in standardization activities at ITU-T SG13 and SG15

I am very thankful to be receiving this Encouragement Award from the ITU Association of Japan at this time. I consider it yet another gift from everyone who has given their support and cooperation, and I have many to thank.

Through much deliberation on network virtualization and slicing in SG13 and SG15 since 2018, a recommendation was created from our proposed work item in March, 2019 (Y.3151).

One important lesson learned through standardization activities is to discuss issues with delegates from other countries, while understanding and respecting their perspectives. Sometimes

I talked with participants from other countries over lunch about topics other than standardization, building good relationships, and this then helped our discussions proceed smoothly. I felt strongly that gaining broad knowledge and education from a global perspective is both interesting and important for cross-cultural communication.

I hope to continue contributing to international standardization activities, participating in deliberation while building good relationships with attendees and others from various countries.