= A Serial Introduction Part 2=
Winners of ITU-AJ Encouragement Awards

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 in 2014, allow us to introduce some of those remarkable winners;

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My experiences working with the ITU

The author's first experience of an ITU meeting was the inaugural WP5D in January 2008. This was followed by four other meetings, in which he was assigned the task of revising the recommendations relating to unwanted emission in IMT-2000. During this period, he not only took part as the Japanese delegate at the meetings, but was also involved in joint negotiations with China and South Korea at the CJK meetings. He also worked on investigations and proposal requests for additional provisions to the standards developing organizations (SDOs) to avoid affecting the operation of existing systems. He finally succeeded in having the content of these amendments aligned with the Japanese radio equipment regulations, contributing to the effective use of radio resources, and made a small but significant contribution to international roaming on IMT-2000 terminals brought into Japan from overseas.

During this activity at the ITU, he gained three impressions.

- In standardization, it is very rare for the assertions of one's own country to pass unopposed, and in almost all cases it is essential to ascertain the permissible range of the other negotiating parties and strive for a relaxed outcome that overlaps with the permissible range of one's own country.
- Regardless of one's own interests, it is far more exciting to bear a large responsibility and take on topics at the center of a discussion instead of being a calm bystander. It also enables the formation of human networks.
- In off-line negotiations and the like, the distances between one's own standpoint and those of the other negotiators are very important, as is the need for a confident attitude. To achieve this, it is of course essential to be fully prepared before taking part in the meeting.

The author is currently removed from standardization and is in a position to make business strategy, but to enable him to fuse standardization strategy and business strategy in the future, he would like to support the promotion of standardization that can thrive in business by taking on a role that connects between the two.

The author would like to thank everyone who helped out during the author's period of activity at the ITU.

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Security and Standardization for Successful Mobile Communications

Standardization paves the way to global markets. This is particularly evident in the field of mobile communication, where standardized technology is used all over the world. Since mobile communication is an integral part of human society, security / cyber attacks can have major implications, thus making secure solutions a must. But the risk of attacks is not the only reason for elevating the importance of security. Security — in the form of subscriber authentication — is an integral part of mobile communications businesses to ensure that subscribers are billed correctly for the services they use. This is done using standardized security tools, which are of key importance to the success of mobile communications on a global scale. This is where my role comes in. I am the chairman of 3GPP SA3, the group that specifies mobile communications security, and I have been active in Indian security standardization for several years in GISFI (Global ICT Standardisation Forum of India) as chairman of the Security & Privacy working group. Recently, I have also been involved in TSDSI (Telecommunications Standardization Development

Society, India).

Mobile communications technology is evolving so fast nowadays that the technology on the market changes completely every ten years, and thus requires new standards. Today we are once again in the phase where new standardized technology for mobile communications is needed. The use cases for this new technology will be very different from what we have today, because mobile communications has already penetrated into the deepest parts of human society all over the world. This means that the security requirements and the requirements of security will also change. In the future, I will therefore continue to apply my skills in security and standardization to the development of the next generation of mobile communications technologies.

Last but not least, I am really grateful to ITU-AJ for this award. I would never have got this far on my own, so I must also thank my colleagues, friends and family for their support in making this happen. I will carry on doing whatever I can to develop mobile communications and security solutions to make life better for everyone.

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A bright international community where it is possible to learn and develop with close international cooperation and collaboration

I have participated in transmission trials of the Kizuna (WINDS) ultrafast Internet satellite to provide everyone in the international community with equal access to high-speed telecommunication services, and observation data distribution trials for the new Himawari 8/9 meteorological satellites, which aim to provide better disaster prevention capabilities. Through this work, I have learned the importance of maintaining an attitude of close cooperation, collaboration and shared learning with people in the local country in order to establish fruitful international partnerships. In southeast Asia and Pacific island countries, trials have been performed to verify the effectiveness and feasibility of bringing parabolic antennas and high-speed communication equipment to the local area in order to implement services such as e-learning trials and transmission trials of high-resolution/high-quality cloud imaging and weather information. These trials have continued to entail hard work such as carrying measuring equipment around in field studies of radio interference, getting high-performance test equipment accepted through customs, and then setting up and performing experiments in the rain. But with the tremendous support of local partners, we were able to clear all the experimental tasks.

The unfailing support of our local partners has been a common theme in all our experiments, allowing us to respond quickly and appropriately to a series of unforeseen situations. As a case in point, when satellite communication is afflicted by rain attenuation (its worst enemy), we teamed up with local partners to investigate, learn and discuss the issues to find how they could be addressed. Cases like this where problems were solved in together with local partners are too numerous to mention.

Though we may speak different languages and live in different cultures with different customs, we have equally large expectations of realizing new initiatives aimed at the development of a better lifestyle and society for everyone. Through this activity we have built a mutually educational and sympathetic relationship with the local people, and have experienced how international cooperation is a driving force that can overcome diverse issues.

In the future, I hope we can keep on contributing to the international community to share the benefits of international friendship while making a sincere effort to make the most of expertise that has so far been built up.
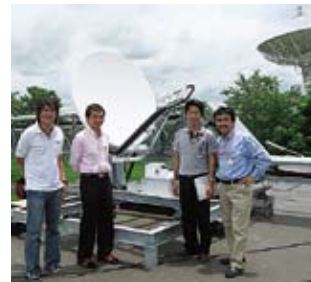
Around the "Kizuna (WINDS)" user earth station

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Report ITU-R M.2243 (Services for IMT systems and future market trends) approaching completion

I have been involved in the activities of ITU-R SG5 Working Party 5D since the ninth meeting in Chongqing, China, which was held in October 2010. Since the tenth meeting, I have mainly been working towards the completion of the new report ITU-R M.2243 ("Assessment of the global mobile broadband deployments and forecasts for international mobile telecommunications").

Since April 2011, I have also been working as chief investigator for the ARIB standardization committee, where I have been

studying various factors (technological, market-related, etc.) with a bearing on the advancement of mobile broadband, and preparing contributions to new reports setting forth Japan's policies and the prediction of future traffic based on these factors. The concept of future traffic prediction turned out to be the hardest thing I had to coordinate, and there were constant discussions on this issue. This is because smartphones and other such devices became popular in many different countries during overlapping periods, so every country had a clear set of ideas and proposals relating to this matter. As Japan's representative, my job was to set forth Japan's contributions, and during this period I gained valuable experience of the skills needed at an international conference — (1) listening, (2) speaking, (3) reading and (4) writing.

We have now moved forward from these discussions, and are currently discussing the shape of the new future vision of society that will be invited in by mobile technology. We have also laid out the pathway to a future world based on advanced technology, which is very interesting. Given the opportunity, I would really like to do whatever I can to take part in future standardization activities as a member of this new global movement.

The scarcity of Japanese women in the International Telecommunication Union (ITU) is, I think, a matter of some concern. I feel that it is my duty to actively participate in the International Telecommunication Union (ITU) to raise the profile of Japanese women and vigorously engage in various standardization activities in the future.

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Standardization of advanced Intelligent Transport Systems (ITS)

In the area of ITS, electric toll collection (ETC) systems using Dedicated Short Range communications (DSRC) have been deployed in many countries. According to ITU-R Recommendation M.1453, DSRC at 5.8GHz only supports a maximum data transmission rate of 4Mbit/s.

To extend existing ITS applications and achieve traffic safety combined with a reduction of environmental burden in the transportation sector, R&D and standardization projects on advanced ITS radiocommunications have been actively conducted in several regions, including Europe, North America and Asia-Pacific. For example, in Japan, Safe Driving Support Systems have been studied intensively as a way of reducing traffic accidents. Part of the 700MHz frequency band has been assigned for use with these systems in the new Digital Dividend spectrum allocation and the relevant ARIB standard (ARIB STD-T109; "700MHz band ITS"). These works include not only vehicle-to-infrastructure (V2I) communication but also direct vehicle-to-vehicle (V2V) communication with latency of no more than a few hundred milliseconds and a range of a few hundred meters or more. To accommodate hundreds of vehicles in the communication range and allow them to exchange information with such low latency, higher data rate wireless access technology is needed for advanced ITS radiocommunications.

To share the progress in standardization and relevant activities in each region, Japan proposed the creation of a new report on Advanced ITS radiocommunications in 2009. Since then, I have

been working as the editor of the report in WP5A, and developed Report ITU-R M.2228 on advanced ITS radiocommunications in November 2011. This report describes the characteristics and requirements of Advanced ITS. It also describes the situations in Japan, Korea and Europe to share standardization and relevant activities.

Since standardization and the relevant activities on advanced ITS are still ongoing in each region, Report ITU-R M.2228 is now under revision. The revision will be completed in July 2015.

Japan also proposed the development of a new recommendation on V2V and V2I communications (ITU-R M.[V2X]) in 2013, in order to prepare for their efficient deployment on advanced ITS. This recommendation is expected to identify specific radio interface standards of V2V and V2I communications for ITS applications. The technical and operational characteristics described in the recommendation are to be based on current and existing frequency bands already identified for ITS and its applications.

I am also working as editor of ITU-R M.[V2X], and the work in WP5A is expected to be completed in July 2015.

I am delighted to be able to work as editor of the ITU-R recommendation and report on advanced ITS.

I am also attending Asia-Pacific Telecommunity Wireless Group (AWG) meetings to introduce the ITS activities in WP5A, and I would like to contribute closer cooperation between WP5A and AWG on further ITS activities.