

= A Serial Introduction Part 1= 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;

Lan Chen

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Fields of activity: 3GPP RAN1/2, IEEE 802.11v, FuTURE FORUM



Three Pillars for Achieving Our Goals in Standardization Meeting

First of all, I would like to thank my colleagues in the DOCOMO Beijing Labs and Radio Access Network Development Department for their cooperation and thank my bosses for their invaluable advice and support while I was conducting research in the field of standardization. These allowed me to make technical proposals and contribute to the field of radio access network for LTE/LTE-Advanced technology in 3GPP standardization and IEEE 802.11v. Furthermore, as the vice chairperson of WG5 in the FuTURE Forum in China, I had a chance to contribute to the consensus building towards the direction of the future mobile network by expediting technical discussions and collaboration between universities, enterprises, and the governments of Japan and China.

Through these experiences, I firmly believe that three key factors are crucial for achieving our goals at the standardization

meeting. The first key factor is technical skill, which is self-explanatory. The second key factor is coordination skill, which includes but is not limited to fully utilizing English for debate purposes, strategizing each move to identify potential partners and opponents, and acting swiftly with the correct timing. In particular, understanding the situation and intent of our partners as well as rivals is the basis of coordination skill. Last but not least, the third key factor is the conviction to win negotiation, the so-called "battle". Only when you are absolutely confident about the advantages of your proposal can you convince others and come to an agreement. I want to emphasize that crucial as these skills are, they can be practiced and honed in various situations in everyday work, and as we all know, practice makes perfect. One step at a time, let's do it.

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Using ICT to resolve social issues in medicine and healthcare

I am greatly honored to have been awarded the ITU Association Award for Encouragement of International Activity in a Field of Achievement, and I am deeply grateful to all the many people in Japan and in other countries who have given me their guidance and cooperation.

My work in the field of e-Health (the use of ICT in medicine and healthcare) has been continuing now for about ten years, and in particular, I have been working on surveys, proposals, R&D, verification trials and promotional activities aimed at the creation of markets in EHR (Electronic Health Records) and PHR (Personal Health Records), which are frameworks for sharing information between the fields of medicine and healthcare. International standardization is extremely important for the

realization of EHR and PHR.

In the course of these activities, a study on e-Health was conducted in the spring of 2012 by the ITU-T Focus Group on Machine-to-Machine Service Layer (FG-M2M). At the Telecommunication Technology Committee (TTC), I had the opportunity to work as the leader of the e-Health Working Party, where I was able to make progress on FG-M2M together with affiliated businesses in Japan. In FG-M2M, I also worked as editor of the use case results document while taking part in international standardization efforts for the first time, and although I had a lot of things going on at the same time, I managed to see the project through to completion with the cooperation of everyone who was involved with it.

On the other hand, in my own post at NTT, I have continued to work on the development of mobile Health (m-Health) systems compatible with the Continua Health Alliance Design Guidelines, the verification of global interoperability and promotion of business development in Japan, and promotion activities for global development including developing countries. As part of these activities, I worked in partnership with the ITU-T SG16

rapporteur to hold exhibitions at various ITU events, and was able to implement the ITU-T recommendations (H.810) for Continua Health Alliance Design Guidelines (December 2013).

As the world's population becomes increasingly elderly, the demand for ICT in the medicine and healthcare fields is growing rapidly. I hope that my work will make some contribution to solving this sort of issue.

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Optical Transport Network (OTN) standardization efforts

As the Internet spreads, network traffic is continuing to increase. This includes high-speed network connection services using optical fibers, and wireless access services as used by smart phones and tablet computers. Networks such as these are supported at their foundations by high-capacity long-distance optical fiber communication systems. Optical fiber communication systems that connect between major cities use wavelength division multiplexing (WDM) transmission technologies, whereby optical signals of different wavelengths are multiplexed together and transmitted along a single optical fiber. WDM transmission systems operating at a bit rate of 100 Gbit/s per wavelength are currently being put to practical use, and considerable effort is being put into research and development for the implementation of Beyond 100G transmission.

International standardization is one of the essential roles to be played in the practical application of high-capacity optical fiber communication systems of this sort. International standardization makes it possible to implement technologies that are more advanced by ensuring interoperability, and making mass production more efficient.

Since 2006, I have been involved in the international standardization of Optical Transport Network (OTN) technology at ITU-T. At that time, OTN technology was suitable for the transport of voice traffic, but with the increase in data traffic, it became necessary to expand the range of applicable traffic. However, the proposed extension of OTN to data traffic was not readily accepted. This is because optical communication systems are used over many years and must therefore be compatible with existing systems. On the other hand, it is thought that some form of extension is needed considering the future prospects of this technology. Although this has been widely discussed, a stalemate situation has continued for a long time. After the extensive discussion, agreement was reached through a gradual process of understanding.

This agreement could be described as a major turning point in the adaptation of OTN from voice communication to data communication. Witnessing this turning point of OTN has been a hugely valuable and highly stimulating experience. Next, I hope to promote the development of society by working on next generation optical communication technology.

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Fields of activity: ITU-R SG5 WP5A/WP5C



My activities in ITU-R

Achievements

Through my continued participation in ITU-R Working Parties 5A (WP5A) and 5C (WP5C) and the World Radiocommunication Conference (WRC), I have made substantial contributions to the development of revised ITU-R Recommendations and new ITU-R Reports in the fields of fixed wireless systems and land mobile wireless systems. My main achievements are as follows.

(1) Developing the ITU-R Report "Fixed wireless system use and future trends" at WP5C

While developing a new ITU-R report, including the proposal of a new Question relating to this report, I not only submitted contributions on my own behalf, but was also appointed as chairman of the drafting group (DG) at the WP5C meetings, and contributed greatly to effective discussions at the WP5C meetings by serving as chairman of the correspondence group (CG) that performed work between the meetings.

(2) Revision of Recommendations to facilitate sharing with space services and fixed services (FS)

Responding to requests for revisions to the

Recommendations from WP7B in order to protect data relay satellites (DRS), I succeeded in obtaining the agreement of all the related members by proposing contributions to satisfy this requirement while ensuring the operation of existing FS stations in consideration of members who already have FS stations in operation.

- (3) Revision of Recommendation relating to standard technology for fixed broadband wireless access (BWA)

With regard to this Recommendation, I proposed contributions to keep up with recent technological developments and changing circumstances and to make structural modifications to simplify the Recommendation. I also saw through the revisions to this Recommendation by serving as chairman of the DG during the WP5A meeting.

- (4) WRC-12 Agenda Item 1.8: Consideration of the progress of ITU-R studies concerning technical and regulatory issues relative to the fixed service in bands between 71 GHz and

238 GHz

I took part in the development of a Report relating to this Agenda Item at the ITU-R WP5C meeting. At WRC-12 and at the 5th meeting of the APT Preparatory Group for WRC-12 (APG12-5), I stated Japan's position actively and contributed to the achievement of consensus between all members, including Japan.

Future prospects and goals

In the future, I hope to continue participating in ITU-R WP5A/WP5C meetings, not only to emphasize Japan's leading position through developing documents on Japanese technology relating to fixed wireless and land mobile systems, but also to stimulate ITU activities by actively serving as a promoter of discussions at the workshops. I also hope to continue contributing to the enhancement of Japan's presence at the ITU.

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Thank you!

April 2001 (to March 2010): ITU-T SSG, SG19, SG13

From 2001 to 2008, in SSG and SG19, I contributed to the drafting of a series of Recommendations (Q.1702, Q.1703 and Q.1704) concerned with a long-term vision of mobile communication services and network capacity in around 2010. As a first attempt at the international deployment of TTC's next-generation all-IP mobile network research results, these results were brought to ITU-T before the 3GPP and IETF. In particular, I played a leading role in the drafting of Recommendation Q.1704 by taking charge of proceedings as the Q.1/19 rapporteur representative and working as editor.

June 2001 (to December 2005): EU IST MIND and WWI/E2R projects

From June 2001 to November 2002 (MIND), and from January 2004 to December 2005 (WWI/E2R), I participated in the European IST projects MIND and WWI/E2R on next-generation mobile networks, where I learned about the trends in European studies.

October 2006 (to March 2011): NGMN

From 2006 to 2011, I participated in and contributed to the NGMN Alliance as an international cooperative effort towards the realization of LTE. In 2006, I contributed as a member of the editing team that drew up the NGMN White Paper presenting the NGMN's overall vision. In 2010, I contributed as a member of the editing team that drew up the NGMN Technical Achievements 2007–2010 white paper. At the time, I was awarded a Certificate of Appreciation by the NGMN board chairman and

NGMN secretary-general for the contributions I had made.

April 2011 (to present): 3GPP SA1, SA2, SA

Since 2011, I have been working on EPC standardization at the 3GPP. Initially I was mainly involved with development feedback issues at SA2, but in November 2012 I transferred to SA1 where I have been contributing to the study of access control enhancements — specifically, (1) access restrictions during communication (working item name: PMOC), and (2) per-application access restrictions (working item names: ASAC, FS_ACDC, ACDC). With regard to (1), I played a leading role as rapporteur in drawing up the service requirements for the application of access restrictions during communication, which have hitherto only been effective during idle states. With regard to (2), I played a leading role as rapporteur in drawing up the requirements for optimizing access restrictions that are effective for individual applications, whereas hitherto they were only valid on a per-terminal basis (except for SSAC in the restriction of VoLTE voice calls).

In mobile communications, I am currently beginning studies aimed at 5G technology. From the viewpoint of being involved in standardization activities since the first studies of 4G, I feel strongly that I have gained a thorough grounding in all areas of this field. In the future, I hope to contribute with renewed enthusiasm to the standardization of 5G. Given the opportunity, I also hope to push forward with standardization efforts from a position of greater responsibility such as vice chairman or chairman.