= A Serial Introduction Part 1= Winners of ITU-AJ Encouragement Awards 2018

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.

Motohiro Abe
NTT DOCOMO, INC.
Motohiro.abe.cu@nttdocomo.com https://www.nttdocomo.co.jp/english/
Fields of activity: Standardization of the mobile core network

The world of standardization

I am delighted to have been selected to receive the ITU-AJ Encouragement Award, and thank the company for putting my name forward.

Here I would like to introduce something that we tend to take for granted—the world of *standardization*.

Standardization is the process of making a product conform to a standard. For example, consider the familiar dry cell battery. The size has been standardized, so we are able to purchase standard AAA batteries sold under countless brand names all over the world. The key here is interchangeability; for all practical purposes, any AAA battery is the same as any other AAA battery, and will power your device just the same.

My area of expertise is mobile network roaming—the ability to use your cell phone outside your home service area—and here too standardization is critically important. Without roaming, your cell phone would drop calls as soon as you got out of your home service area. We at 3GPP are currently working on a roaming architecture for Voice over LTE (VoLTE) called S8 Home Routing (S8HR). S8HR is simple to implement, and thus shortens the time to rollout.

Standardization is more complicated than just setting uniform characteristics of AAA batteries or other products. It also refers to the creation and use of common rules and guidelines in a particular industry. In the mobile industry, for example, the GSM (Groupe Spécial Mobile) Association orchestrates standardization activities. The GSMA does not actually create standards, but rather represents the interests of its members—mobile operators, manufacturers, and other interested parties—who develop common rules and regulations for the industry. These rules enable roaming and interoperability for new mobile technologies.

It will be apparent that the world of standardization is far from the techno-geek discipline that you might have imagined. It is essential for establishing uniform characteristics of products, as well as for establishing common rules and guidelines for different industries. If you are interested to jumping into this chaotic yet challenging world, I would encourage you to do so!

Atsuro Ichigaya
Shunsuke Iwamura
Shimpei Nemoto
NHK (Japan Broadcasting Corporation)
{ichigaya.a-go, iwamura.s-gc, nemoto.s-fy}@nhk.or.jp
https://www.nhk.or.jp/strl/index-e.html
Fields of activity: ITU-T SG16 WP3 Q.6(Video Coding)

International standardization of video coding

It is a great honor to receive the ITU-AJ Encouragement Award, and I would express my sincere appreciation to the ITU Association of Japan and to all those who helped us along the way.

On the Joint Collaborative Team on Video Coding (JCT-VC) of ITU-T SG16 WP3 Q.6 (VCEG) and ISO/IEC JTC 1/SC 29/WG 11 (MPEG), we have been working on the High Efficiency Video Coding (H.265) standard and its extensions.

Around 2015, we saw a surge on interest among filmmakers, broadcasters, and other video industry players in High Dynamic Range (HDR) video, and in 2016 the JCT-VC began studying a supplement that would provide HDR coding guidelines for H.265 codecs. Interestingly, the HDR standard allows for two competing HDR workflows: Perceptual Quantization (PQ) developed in the U.S., and Hybrid-Log Gamma (HLG) developed in a collaborative effort by NHK and the BBC. PQ supports video services in well managed viewing

environments such as in movie theaters, while HLG is optimized for broadcasting where a wider range of viewing environments would be assumed. In developing guidelines for these two different formats, it was critically important that when we came up with an effective proposal for one, we had to scrutinize it very carefully to make sure that it did not adversely affect the other. We scrutinized and discussed the data of repeated verification experiments. The results of these deliberations were published in 2017 as Supplements 15 and 18 to ITU-T H-series Recommendations.

In 2018, we agree to create a new joint collaborative team between MPEG and VCEG called the Joint Video Experts Team (JVET) that immediately set to work on a next-generation video coding standard that will significantly improve the compression performance. We believe the deliberations made in JCT-VC will also be utilized in the development of the new standard that includes HDR coding with its scope.

Through active involvement in JVET, we are committed to developing a next-generation video coding standard that will support future broadcasting services.

Koichi Ichikawa

Nippon Telegraph and Telephone East - Minamikantou Corporation
kouichi.ichikawa@east.ntt.co.jp http://www.ntt-east.co.jp/en/
Fields of activity: Telecommunications

Activities in the United Republic of Tanzania and the Socialist Republic of Vietnam

It is a great honor to receive the ITU-AJ Encouragement Award. My first involvement in international cooperation was a two-year stint in Tanzania as a Japan Overseas Cooperation Volunteer (JOCV). I remember feeling a sense of elation and hope coupled with trepidation as the plane departed from Narita in December 1986 for the two-day trip to Dar es Salaam. A month later, I was assigned to serve as a telephone line engineer for the Dar es Salaam Telephone Company of Tanzania Posts and Telecommunications with responsibility for maintaining underground cable. Basically my job involved technology transfer working together Tanzanian telecom employees to troubleshoot and repair problems using special measurement gear and equipment. During the first year, we had over 80,000 repair requests for 24,000 subscriber lines, and I finished two full years of cooperative activity cleaning up Tanzania's poor telephony situation.

Then in 2007, I got involved in an optical access trial in Thang Long Industrial Park in Hanoi, Vietnam. This was a collaborative venture between NTT Group and Hanoi Telecom Group to install a Gigabit-Ethernet Passive Optical Network (GE-PON) in the Thang Long Industrial Park central office, to connect the GE-PON to the Hanoi Telecom network, then upgrade transmission speed and verify network stability through data transmissions to and from Japan. The role of our company, NTT-ME, was technology transfer in the broadest sense of the term. This involved preliminary investigation and design, drawing up a list of equipment to be procured, assemble trial equipment on time, prepare a manual, supervise on-the-job training, and ensure Hanoi Telecom operations and maintenance are running smoothly after the trial equipment is installed.

I experienced firsthand the high expectations of Vietnam through implementation of this optical access trial. Based on my experiences overseas, I think I will have other opportunities to help countries upgrade their telecom infrastructure in the years ahead.

Junichi Iwatani

Nippon Telegraph and Telephone Corporation
iwatani.junichi@lab.ntt.co.jp http://www.ntt.co.jp/index_e.html
Fields of activity: ITU-R SG5 WP5A, Wireless LAN

Activities to Improve Operational Conditions of Wireless LANs

It is a great honor to receive the ITU-AJ Encouragement Award. Starting in 2015, I was engaged in preparing and revising the draft standard of the next-generation high efficiency wireless LAN (802.11ax) in the IEEE 802.11 Task Group ax, and in 2017 I joined the Japanese delegation to ITU-R WP5A to work on revision of 5 GHz wireless LAN operational conditions (WRC-19 Agenda Item 1.16).

In ITU-R WP5A meetings, I am currently focusing on activities to relax restrictions on 5 GHz wireless LANs including expansion of outdoor use, and in the draft CPM text for the WRC-19 recently completed in May 2018 we have successfully reflected some of Japan's proposals to allow outdoor use and higher power transmission in the 5.2 GHz band as an option for revision of the Radio Regulations.

The immediate issue is whether the frequency band can be shared with other systems once the regulations are relaxed. While we have conducted technical studies and insisted that the frequency band can be shared under certain conditions so far, it is imperative that this should be reflected in an ITU-R Report on sharing and compatibility. Based on these technical studies, I would like to work on building a consensus at the ITU-R meetings on relaxing the conditions toward revision of the regulations at the WRC-19.

Based on my own experience working for both the IEEE and the ITU-R meetings, I would like to contribute over the long term to further upgrading operational conditions of wireless LANs and raising Japan's profile and influence in standardization meetings.