= A Serial Introduction Part 4 = Winners of ITU-AJ Encouragement Awards 2023

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.

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Fields of activity: ICT Development in the Asia and Pacific Region

Overcoming Pandemic Challenges facing International Collaborative Projects

Being deeply honored to receive the ITU-AJ Encouragement Award, I sincerely thank the members of the ITU Association of Japan and everyone who has collaborated with me on my endeavors. The international collaborative projects recognized by this award were primarily part of the Asia-Pacific Telecommunity (APT) initiative aimed at bridging the digital divide. These projects, carried out in developing countries and rural areas, started with establishing the physical layer, such as constructing a robust terrestrial optical fiber network based on technology developed by Japan. After that, the projects were extended beyond the physical layer to deal with a wide range of social issues, including healthcare, education, disaster management, and reducing disparities for the disabled, through deployment of the application layer. From identifying challenges to implementing solutions during these projects, I found that active communication with the partner country is critical.

The COVID-19-pandemic-induced disruption to international travel posed a significant challenge to the progress of the projects. Communication was confined to online channels, and we had to rely on remote coordination based on local information and verbal instructions from remote locations.

Despite these hurdles, we made steady progress in areas that could be advanced remotely, such as finalizing system specifications and remote procurement, with an online communication tool that developed rapidly as a result of the pandemic. Thanks to those efforts, we could quickly resume project activities once the pandemic subsided after mid-2022, and we could achieve the expected results soon after the resumption. This accomplishment is a typical example of overcoming the various obstacles we encountered through utilization of ICT. Thus, thanks to the solid ICT infrastructure developed as a result of the pandemic, the projects could rapidly introduce the benefits of new ICT technologies to developing countries and rural areas soon after the pandemic subsided. By utilizing the upward spiral of ICT, I intend to accelerate my international contributions.

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Fields of activity: Promote ICT development in Vietnam and other Southeast Asian countries

Utilizing ICT to Develop Local Communities in Southeast Asia

I am grateful to receive the Japan ITU-AJ Encouragement Award, and I express my sincere gratitude to the ITU Association of Japan and all those involved who provided guidance and cooperation on a daily basis.

From 2004 to 2008, under a Business Cooperation Contract between the Vietnam Posts and Telecommunications Group (VNPT) and NTT Vietnam (now NTT e-Asia), a group company of NTT East, I worked with VNPT members on the construction and operation of telecommunications facilities. During that time, starting in 2006, I was involved in conducting joint trial projects concerning the deployment of FTTH in Vietnam, in which FTTH had not yet been introduced. We dispatched experts from Japan to transfer know-how on equipment design, construction techniques, and maintenance operations to local engineers. I believe that these projects contributed to the development of FTTH services in Vietnam.

From 2019, in accordance with a Memorandum of Understanding of cooperation on promotion of smart cities signed by NTT East with BECAMEX IDC in Binh Duong Province, Vietnam, NTT East has been discussing and studying in conjunction with its group telecommunications company VNTT and others on solving social issues through ICT. We are currently expanding our activities beyond Vietnam; namely, we are working to create businesses in Vietnam and other Southeast Asian countries that solve local community issues by combining NTT East's assets with those of our local partners.

Many companies in Southeast-Asian countries that possess ICT technology superior to that of Japan have recently emerged, and we are working to partner with such companies to solve Japan's problems. In conjunction with various partners, we intend to create new businesses that contribute to the development of Southeast Asian countries by utilizing ICT.

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Fields of activity: Clock Synchronization

Steps toward Space-Time Synchronization

We are honored to receive this prestigious ITU-AJ Encouragement Award. Since 2021, NICT Space-time Standards Laboratory has been actively involved in ITU-R WP5D standardization activities, such as introducing the concept of "space-time synchronization" as a novel trend in future technology. Initially unfamiliar with these activities, we cautiously participated in meetings while learning from colleagues in the standardization division at NICT.

The importance of space-time synchronization in the context of the emerging 5G era is becoming more pronounced as the need for accurate and stable time increases and efficient coordination between people, objects, and events becomes more crucial. We propose combining ultra-compact atomic clocks, high-precision wireless time synchronization, and large-scale network timing to achieve ubiquitous high-precision time synchronization that makes it easier to measure device location.

Despite time synchronization of current mobile device being accurate to milliseconds, implementing organic coordination requires synchronization at the nanosecond level, which poses a significant challenge. Although we acknowledge the difficulty of advancing technological development, market creation, standardization, and international networking simultaneously, we are determined to overcome these obstacles with the help of experts.

The acceptance of space-time synchronization as a "future technology trend" at the ITU-R WP5D meeting marks a significant milestone that lays the groundwork for its implementation. While we recognize we are just at the beginning of this journey, receiving the encouragement award serves as motivation to persist firmly.

We pledge to continue striving towards promoting the migration to space-time synchronization, including standardization efforts, and we express deep gratitude to our colleagues at NICT for their indispensable support.