TSB DIRECTOR CTO MEETING

13 November 2016 (pm), Bangkok, Thailand

COMMUNIQUÉ

The results of the ITU World Telecommunication Standardization Assembly 2016 (WTSA-16) and standards for future smart 5G systems were the key topics discussed at a meeting of 14 high-level ICT industry executives (CTOs) with the senior management of the ITU Telecommunication Standardization Sector (ITU-T) and the ITU Radiocommunication Sector (ITU-R).

The CTO meeting was held at the outset of ITU Telecom World 2016 in Bangkok, Thailand, and provided the private sector an opportunity to brief, advise and exchange views with ITU on industry needs and standardization priorities.

Review of the outcomes of WTSA-16

The meeting gave CTOs the opportunity to learn more about the key outcomes of WTSA-16. These outcomes include the revised Study Group structure, mandates and leadership roles; as well as new and revised WTSA Resolutions, including the revised Resolution 68, which calls on the ITU secretariat to continue organizing CTO meetings to assist in identifying and coordinating standardization priorities and subjects.

The CTO meeting took note of the conclusions of the Global Standards Symposium (GSS-16) held the day prior to WTSA-16, which tackled the theme of 'Security, Privacy and Trust in Standardization'. The conclusions of GSS-16 underlined the need to support and promote principles of transparency and technological integrity; mitigate the risks posed by IoT botnets using security standards; and assess the impact of quantum computing on security, privacy and trust.

CTOs present in Bangkok also reviewed the results of a pre-WTSA 'CxO meeting' of high-level industry executives representing leading ICT companies, with the Arab and African regions especially well-represented. This meeting discussed strategies to accelerate the deployment of gigabit-speed broadband access networks and the new industry dynamics introduced by the rise of over-the-top (OTT) services.

5G technology and standards landscape

One of the key results of WTSA-16 was the agreement of a new Resolution on non-radio aspects of international mobile telecommunications (IMT), which calls on ITU-T to strengthen and accelerate its standardization activities in the field of IMT-2020 (5G). The CTOs were briefed on the progress of the ITU-T Focus Group on network aspects of IMT-2020 and its work streams on architecture and fixed-mobile convergence, the evolution of software defined networking, end-to-end network management, and information-centric networking. The Focus Group will conclude its work by the close of 2016, at which point its findings will be submitted to ITU-T Study Groups to inform their development of international

standards. The meeting was informed of a recent cooperation agreement[1] between ITU and the NGMN Alliance, highlighting the mutual intent of both organizations to coordinate their contributions to the development of 5G technology and architecture.

The CTO meeting discussed the phased approach employed by 3GPP in developing a new 5G system architecture and core network. Phase 1 will comprise a basic system that meets expectations for initial deployments of 5G systems, including the new 5G core network. Phase 2 will build a complete, feature-rich 5G system using the basic system as a foundation to ensure backward compatibility, and enable convergence with the fixed network. While the work in 3GPP is central to 5G architecture, collaboration with BBF on convergence, and with ETSI on NFV and MEC, amongst others, is ongoing.

CTOs highlighted that a single end-to-end network management standard covering both wireless and wireline networks, and an integrated control, orchestration and management platform, would constitute stepping stones towards convergence, an important goal for future 5G systems. The system architecture should leverage software-based networking functions as well as multi-access edge computing to cater to a large number and variety of use cases, in different industry segments. Participants in the meeting also stressed the need for a review of user and device authentication mechanisms, including harmonized security-by-design frameworks, with a view to reducing fragmentation and discouraging unauthenticated access technologies.

CTOs were of the opinion that organizations working on 5G system architecture standards should strengthen collaboration to foster a coherent set of 5G-relevant standards, and encouraged ITU-T to ensure interoperability in a multi-vendor environment, e.g., by defining critical network interfaces. The meeting agreed that standards and open-source software make complementary contributions to the development of 5G systems, and that more effort should be made to facilitate the exchange of work between these communities.

The meeting highlighted the importance for standardization efforts to be aligned with the IMT-2020 deliverables of ITU-R, ensuring that work on the network aspects of 5G is informed by the progression of its radio-transmission systems.

CTOs recognized that standards, harmonized at a global level, would facilitate collaboration between the ICT sector and other industry sectors, enabling the development and roll-out of end-to-end solutions for multiple industries on a common network platform. In order to identify detailed requirements of the automotive, healthcare, utilities and other vertical sectors, and to address their needs in the ICT standardization processes, it was suggested to establish and leverage cross-industry partnerships, and to open future CTO meetings to high-level executives representing these markets.

The CTO meeting also encouraged ITU-T to identify strategies, in close coordination with ITU-D, to assist developing countries and emerging markets in the implementation of future 5G systems, identifying relevant cost-effective use cases for 5G systems and related migration scenarios.

Moving forward

The CTO meeting's participants expressed their appreciation to ITU for providing this forum to learn more about WTSA-16 and exchange views on 5G systems and associated standardization needs. The ITU-T

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[1] See http://newslog.itu.int/archives/1396

management noted that this communiqué will be brought to the attention of the ITU membership, and to the new rapporteur group on standardization strategy operating under the Telecommunication Standardization Advisory Group (TSAG).

The next CTO meeting was tentatively scheduled for 24 September 2017 in Busan, Republic of Korea, the venue of ITU Telecom World 2017.

The participating organizations were:

Cisco Systems, United States; **Ericsson**, Sweden; **ETRI**, Korea; **Fujitsu**, Japan; **Huawei Technologies**, China; **KDDI**, Japan; **KT Corporation**, Korea; **NEC**, Japan; **NICT**, Japan; **Nokia**, Finland; **NTT DoCoMo**, Japan; **Trace Media – Telecom Review**, United Arab Emirates; **TTC**, Japan; **ZTE**, China; **ITU**.