

## CTO MEETING COMMUNIQUÉ

6 December 2014

Doha, Qatar



Fifteen information and communication technology (ICT) leaders and the strategic management of the ITU Telecommunication Standardization Sector (ITU-T) met for the sixth annual Chief Technology Officers' (CTO) meeting in Doha, Qatar, 6 December 2014.

Networks, video and the Internet of Things were key topics in the discussions and were identified as areas of particular strategic importance to the participants.

A major trend in the telecommunication/ICT sector and subject of ongoing standardization is the demand for ever-higher speeds across a wide range of networking technologies. Participants agreed that ITU-T is, and should continue to be, a strategic standards-developing organization (SDO) for the standardization of essential **access and transport technologies and infrastructures**.

The meeting highlighted the expectation that recent developments in **software-defined networking (SDN)** and **network function virtualization** will complement physical network infrastructure, picking up where the hardware leaves off to control network traffic within the virtualized computing environment. A vibrant standardization ecosystem has emerged, and participants took note of ITU-T's SDN standardization roadmap. The group also identified and supported that bridging with developing countries at the early stages of the implementation of SDN-based networks will be important in reducing the gap between the rates at which new technologies are adopted by developed and developing countries.

Participants pointed out that **video**, as one of the most important driving forces of the ICT economy, should be made one of the focuses of ITU in the context of a global ecosystem of major SDOs and industry organizations. Participants identified the adoption of video applications as a key factor in the growth of network traffic, and highlighted the importance of networks being able to measure, monitor and provide the service quality necessary to support these new applications, in particular when moving to higher resolutions and the next generation of video codecs.

Participants stressed the need to optimize video traffic. Inter-organization collaboration was emphasized with the understanding that ITU can play a critical role in the Joint Collaborative Team on Video Coding (ITU, ISO, IEC) "JCT-VC-3GPP-GSMA" configuration as a key leading organization. From a holistic ecosystem point of view, the collaboration between telecom, broadcasting and over-the-top (OTT) players was highlighted and some expected future trends were explored. The meeting recognized ITU-T's major milestones and success stories in the area of video codec standards, including Recommendations ITU-T H.264 and H.265, and called for the organization to take the steps necessary to prepare and reflect industry needs in future generations of video codecs and related technologies. A series of actions were proposed for consideration, including ITU-MPEG collaboration on next-generation codec standards and an industry-wide workshop about video industry promotion.

Although forecast as such by ITU and others in 2005, the **Internet of Things (IoT)** has only recently become a pivotal topic on the agenda of SDOs, forums and consortia. The meeting observed that many of the standardization efforts are specific to a vertical market and are thus the work of vertically oriented bodies, which was why the Global Standards Symposium of 2012 encouraged ITU-T to develop closer relations with these

sectors. Participants identified architecture and capabilities; security and privacy; semantics; and interworking with **cyber-physical systems** as areas to be considered within ongoing ITU-T standardization efforts on IoT. The meeting also identified that IoT will be largely based on mobile broadband systems. The Director of the ITU Telecommunication Standardization Bureau was thus requested to consider these aspects when carrying out the instructions of Resolution WG-PL/3 of the ITU Plenipotentiary Conference 2014 on “Facilitating the Internet of Things to prepare for a globally connected world”.

**Intelligent Transport Systems (ITS)** can be seen as a use case for IoT. Public policy will play an essential role in the roll-out of ITS. A globally harmonized deployment is essential for traffic across borders and ITU-T should seek to support the development of globally harmonized public policies. It was agreed that this should be discussed at the Future Networked Car event at the Geneva Motor Show 2015, and contributions will be made by the CTO group to the event and the ITS Collaboration meeting which follows it.

With the constant **evolution of the standards landscape** always a key topic of discussion for the CTO meeting, 2014’s meeting called for continued effort on ITU-T’s part to create greater efficiency in the development of standards across multiple bodies and vertical industry sectors.

The development of bilateral coordination between ITU-T and other SDOs was strongly encouraged by the meeting. This is particularly relevant in the case of ICT **standardization for vertical sectors**, for example in health and transport, or for new standardization issues which in some way question the role of a United Nations agency in this domain. The CTO meeting also asked ITU-T to strengthen collaborative development of standards with concerned organizations. Participants recalled the role of the Global Standards Collaboration (GSC), as well as the need to extend its membership to the key standardization organizations identified by the CTO meeting.

Participants welcomed the progress made by the **ITU-T Review Committee**, which was established to ensure that ITU-T continues meeting the standardization needs of the evolving business environment. The Review Committee’s Chairman, Yoichi Maeda, and CTO meeting participants discussed the proposal of a new membership-driven **Technical Steering Committee**, which would identify technological trends and market needs in ITU-T’s fields of activity; discuss how ITU-T should address new topics; and propose strategic meetings with relevant organizations in order to facilitate cooperation, enable market growth and enhance ITU’s role and visibility and avoid duplication of effort. The meeting participants considered that another way for ITU-T structure to better reflect industry and market needs and views might be to enhance the role and status of the CTO meeting, to make it more open, strategic and agile, whilst avoiding duplication with current bodies and entities. This will be further considered by advisers in preparation for future meetings of the Review Committee and the CTO Group.

ITU was praised for its work to collect stakeholders’ views on the complex challenge of ICT counterfeiting through its recent discussions on **combating counterfeit ICT devices**. There was concern expressed over proposals for a new equipment identifier system that some countries and organizations have proposed, and support was expressed for the current equipment identifier systems used in the mobile market (e.g., IMEI).

The meeting congratulated ITU for the successful launch of its new initiative to leverage **digital financial services in the interests of greater financial inclusion**,

understanding that it will focus on the telecom infrastructure to support new financial services. Mobile-enabled digital financial services have the potential to improve quality of life for more than 2.5 billion adults without access to a formal bank account, most of whom are citizens of developing countries.

The CTO meeting supported the maintenance and expansion of ITU efforts to address the disparity between the standardization capacities of developed and developing countries. In particular it would be helpful if ITU could provide some guidance in relation to policy consideration on data access.

The industry leaders present at the 2014 CTO meeting appreciated the opportunity to be briefed on key outcomes of the **ITU Plenipotentiary Conference 2014** and to meet and exchange views with Chaesub Lee, Director *Elect* of the ITU Telecommunication Standardization Bureau, who will take office on 1 January 2015. The meeting thanked Malcolm Johnson for his leadership of the TSB over the last 8 years and wished him well in his new role as ITU Deputy Secretary-General.

### **Participation at the sixth CTO Meeting**

Participants at the meeting in Doha enjoyed constructive discussions and expressed their gratitude to outgoing TSB Director, Malcolm Johnson, for the establishment of the CTO meeting in 2009, which has since offered a valuable platform to discuss the standardization landscape and thereby identify and coordinate standardization priorities in such a way as to ensure that ITU standards continue to meet the needs of industry.

The participating organizations were as follows:

*Alcatel-Lucent, Cisco Systems, Fujitsu, Georgia Institute of Technology, Huawei, Mitsubishi Electric, NEC, NetScout Systems, Nokia, NTT, Ooredoo Qatar, Orange, Qatar Computing Research Institute, Samsung Electronics, Tunisie Telecom, TTC (ITU-T Review Committee Chairman), and ITU/TSB*