

Radio Spectrum and Technical Standards Advisory Committee

SSAC Paper 12/2016 for Information:

**Outcome of World Telecommunication
Standardization Assembly (WTSA-16)**

Office of the Communications Authority
10 November 2016

Background



WTSA is held once every four years to define the work of ITU-T for the study period that follows

WTSA-16 was attended by +1000 participants from +100 countries



Participation

- ❑ Chinese delegation team is led by the Ministry of Industry and Information Technology (MIIT)
- ❑ 34 delegates from MIIT, China Academy of Telecommunication Research, Huawei, ZTE, China Mobile, China Unicom, China Telecom, Alibaba, OFCA and others
- ❑ Prior to WTSA-16, China and OFCA participated in meetings of the Preparatory Group for WTSA-16 of the Asia-Pacific Telecommunity (APT) in formulating APT Common Proposals (ACPs)

Work of WTSA-16

- ❑ To consider and approve new or revised resolutions
- ❑ To consider and approve new recommendations of study groups
- ❑ To consider and approve the reports submitted by study groups for the previous study period (2013-2016)
- ❑ To review the work and structure of study groups
- ❑ To appoint Chairmen and Vice-Chairmen for Study Groups for the next study period (2017-2020)

Outcome of World Telecommunication Standardization Assembly 2016

WTSA-16 Outcome at a Glance

- ❑ ITU-T study group structure remains unchanged for the next study period (2017-2020)
- ❑ Approved 1 revised and 4 new recommendations by Study Group 3
- ❑ Approved 16 new resolutions on: new standardization items, consumer protection, mobile device theft and counterfeit, ITU-T house-keeping, etc
- ❑ Revised 31 resolutions on: ITU-T working methods, mandates of study groups, work programmes, software-defined networking, numbering, addressing, IPv6, combating spam and cybersecurity, etc

Adoption of ACPs by WTSA-16

- ❑ APT submitted 21 ACPs to ITU-T
 - 18 proposals on revisions to existing resolutions on ITU-T working methods and standardization issues
- ❑ Proposed new resolutions on the standardization work
 - IoT and Smart Cities & Communities
 - IMT-2020 (fixed network side)
 - Cloud-based event data technology
- ❑ All 21 ACPs were adopted by WTSA-16 with slight modifications of the original text

ITU-T Study Groups (2017 – 2020)

SG	Title
2	Operational aspects of service provision and telecommunication management
3	Tariff and accounting principles including related telecommunication economic and policy issues
5	Environment and , climate change and circular economy
9	Television and sound transmission and integrated broadband cable networks
11	Signalling requirements, protocols, and test specifications and combating counterfeit products

SG	Title
12	Performance, QoS and QoE
13	Future networks including cloud computing, mobile and next-generation networks with focus on IMT-2020, cloud computing and trust network architectures
15	Networks, technologies and infrastructures for transport, access and home
16	Multimedia coding, systems and applications
17	Security
20	IoT and its applications including smart cities and communities (SC&C)

Recommendations adopted

Adopted 1 revised and 4 new recommendations of Study Group 3

MOD - D.271 "Charging and accounting principles for NGN"

NEW - D.97 "Methodological principles for determining international mobile roaming rates"

NEW - D.52 "Establishing and connecting Regional Internet Exchange Points (IXPs) to reduce costs of International internet connectivity"

NEW - D.53 "International aspects of universal service"

NEW - D.261 "Principles for market definition and identification of operators with significant market power - SMP"

Major standardization works of ITU-T in 2017 – 2020

IMT-2020 (non-radio) standardization

- ❑ Collaborate with ITU-R to meet the roadmap of IMT-2020 standard activities
- ❑ Aim to achieve a total standard solution covering
 - network architecture, fronthaul and backhaul, softwarization, network slicing, network management, signalling, protocol, QoS, testing and fixed-mobile convergence, etc.

IMT-2020
For network service providers



Definition of IMT-2020 Roadmap

Spring 2017:

- ➔ IMT-2020 Network Requirements
- ➔ Framework of IMT-2020 Network Architecture
- ➔ Softwarization General Requirements

Interconnection of 4G, IMT-2020 networks and beyond

- ❑ Problems of delivering Voice over LTE (VoLTE) and Video over LTE (ViLTE) across national and international networks
- ❑ Study groups to develop standards for interconnection of IP-based 4G, 5G/IMT-2020 and beyond
- ❑ Specify the framework and signalling architecture for interconnection to achieve interoperability worldwide



- ❑ Consider the wider use ENUM which facilitates the use of E.164 numbers in IP networks

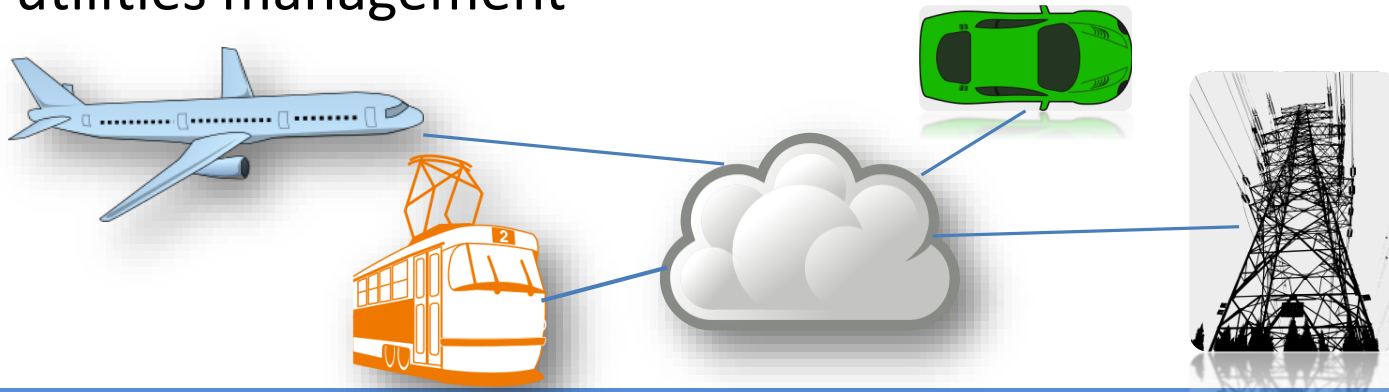
IoT and Smart Cities & Communities (SC&C)

- ❑ SG20 is requested to:
 - Design a roadmap for the harmonized and coordinated international telecommunication standards for the development of IoT
 - develop ITU-T standards for implementing IoT and SC&C for vertical industries
 - Standardize IoT information exchange (addressing, identification and security, etc.) and interoperability



Cloud-based event data technology

- ❑ Study Groups to collaborate on standardization work for cloud-based event data technology
- ❑ Enhance aircraft safety by data analysis of cockpit voice recorders and flight data records in a cloud platform
- ❑ Supplement WRC-15 allocation of 1087.7-1092.3 MHz for global flight tracking
- ❑ Applicable to automated driving, smart grid and smart utilities management



Software-defined Networking (SDN)

- ❑ SDN shifts network provisions from hardware to software
- ❑ Provide greater flexibility and cost savings in carrier network implementation
- ❑ Resolution 77 is revised for enhancing the standardization work -
 - to continue to develop ITU-T standards to enhance interoperability between SDN controller products
 - to accelerate the work of carrier SDN
 - to collaborate with SDN-related standards bodies and forum on performance aspects and interoperability

Digital Financial Service

- ❑ Promote the use of ICT technologies to bridge the financial inclusion gap
- ❑ Study Groups will develop standards to cover all technical aspects including security, interoperability and formulate guidance for consumer protection

Mobile Device Theft and Counterfeit

- ❑ New resolutions calling for technical standards to tackle mobile device theft and counterfeit (CF)
 - CF phones pre-installed with backdoors
 - Forging of identifiers such as IMEI, MAC addresses and IP addresses can be done
- ❑ Leveraging on emerging technologies of IoT, identity management and geolocation tracking, etc
- ❑ ITU-T standards can be used in different industries such as pharmaceutical, automotive, avionic, etc

Way Forward

OFCA will

- ❑ continue to monitor the development of the ITU-T standardization work for its new study period in 2017-2020
- ❑ attend Asia-Pacific Telecommunity Standardization Program (ASTAP), the themes of which are aligned with ITU-T study group work programmes
- ❑ brief and update SSAC in due course on the development of new ITU-T standards relevant to Hong Kong

Thank You