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| **Purpose:** | Information |
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| **Keywords:** | WTSA; Resolution 2; SG mandate; areas of study; lead study group; points of guidance; SG13; |
| **Abstract:** | This TD shows the proposed by SG13 updates to the WTSA-16 Resolution 2 (SG13 related portions). Changes are shown in revision track mode. |

**Draft revision of WTSA-16 Resolution 2 (SG13 part)**

**1 Annex A of WTSA Resolution 2, Part 1 - General Areas of Study**

ITU‑T Study Group 13

Future networks and emerging network technologies

ITU‑T Study Group 13 is responsible for studies relating to the requirements, architectures, capabilities and APIs as well as softwarization and orchestration aspects of converged future networks (FN) including the application of machine learning technologies. It develops standards related to information-centric networking (ICN) and content-centric networking (CCN) . Regarding IMT2020 and beyond it particularly focuses on non-radio related parts . SG13 responsibility also includes IMT-2020 and beyond project management coordination across all ITU‑T study groups and release planning.

It is also responsible for studies relating to future computing including cloud computing and data handling in telecommunication networks. This covers capabilities and technologies from network side to support data utilization, exchange, sharing, and data quality assessment and computing-aware networking as well as end to end awareness, control and management of future computing including cloud, cloud security and data handling.

SG13 studies aspects relating to fixed, mobile and satellite convergence for multi access networks, mobility management, and enhancements to existing ITU‑T Recommendations on mobile communications, including the energy-saving aspects. Study Group 13 develops standards for quantum key distribution networks (QKDN) and related technologies. It further studies the concepts and mechanisms to enable trusted ICT, including framework, requirements, capabilities, architectures and implementation scenarios of trusted network infrastructures and trusted cloud solutions in coordination with all study groups concerned.

**2. Annex A of WTSA Resolution 2, Part 2 - Lead Study Group**

SG13 Lead study group on future networks such as IMT-2020 networks and beyond (non-radio related parts)
Lead study group on fixed mobile convergence
Lead study group on cloud computing

 Lead study group on Machine Learning

**3. Annex B of WTSA Resolution 2, Points of Guidance**

ITU‑T Study Group 13

The key areas of competence of ITU‑T Study Group 13 include:

• IMT-2020 and beyond network aspects: Studies on the requirements and capabilities for networks based on the service scenarios of IMT-2020 and beyond. This includes development of Recommendations on the framework and architecture design including also network-related aspects of reliability, quality of service (QoS) and security. Furthermore, it includes interworking with current networks including IMT-Advanced, etc.

• Application of machine learning technologies aspects for future networks: Studies on how to incorporate network intelligence into IMT-2020 and beyond. Development of Recommendations on overall requirements, functional architecture and application support capabilities for the networks which include artificial intelligence and machine learning mechanism, based on but not limited to and the gap analysis identified by FG on Machine Learning for Future Networks including 5G.

• Software‑defined networking (SDN), network slicing and orchestration aspects: Studies on SDN and data plane programmability to support functions such as network virtualization and network slicing necessary for exploding and diversifying services taking into account scalability, security and distribution of functions. Development of Recommendations on the orchestration and related management-control continuum capabilities/policies of network function components, softwarized network and network slices, including enhancement and support of distributed networking capabilities.

• Information-centric networking (ICN) and public packet telecom data network aspects: Studies related to analysis of ICN applicability to IMT-2020 and beyond Development of new Recommendations on ICN general requirements, functional architecture and mechanisms of ICN networking and use‑case specific mechanisms and architectures, including deployment of corresponding identifiers. Development of Recommendations on packet data network based on the study of requirements, frameworks and candidate mechanisms. Development of Recommendations on architecture, network virtualization, resource control and other technical issues of future packet-based network (FPBN), including migration from the conventional IP-based network to FPBN.

• Fixed, mobile and satellite convergence aspects: Studies related to access-agnostic core, which integrates fixed, mobile and satellite, and the application of innovative technologies to enhance such convergence, such as AI/ML., etc. This also includes the development of Recommendations on full connectivity for various types of user equipment

• Knowledge-centric trustworthy networking and services aspects: Studies related to requirements and functions to support the building of trusted ICT infrastructures. Development of Recommendations regarding environmental and socio-economic awareness in order to minimize the environmental impact of future networks, as well as to reduce the barriers to entry for various actors involved in the network ecosystem.

• Quantum enhanced networks: Studies related to quantum key distribution networks (QKDN). Furthermore development of new Recommendations related to user networks interacting with quantum enhanced networks.

• Aspects related to future computing including cloud computing and data handling in telecommunication networks: Studies of the requirements, functional architectures and their capabilities, mechanisms and deployment models of future computing including cloud computing and data handling, covering inter- and intra-cloud scenarios as well as the applications of future computing in vertical domains. Studies include the development of technologies from network aspect to support end to end awareness, control and management of future computing including cloud, cloud security and data handling.

Study Group 13 activities will also cover regulatory implications, including deep packet inspection, and lower energy consumption networks. Furthermore, it includes activities related to innovative service scenarios, deployment models and migration issues based on future networks.

In order to assist countries with economies in transition, developing countries and especially the least developed countries in the application of networks of the future, including IMT-2020 and beyond and other innovative technologies, Study Group 13 maintains a dedicated Question on this topic and its regional group for Africa. Consultations should thereby be enabled with representatives of the ITU Telecommunication Development Sector (ITU-D) with a view to identifying how this assistance might best be done through an appropriate activity conducted in conjunction with ITU‑D.

Joint rapporteur group activities of different study groups shall be seen as complying with the WTSA expectations for collocation.

**4. Annex C of WTSA Resolution 2, List of Recommendations**

ITU‑T Study Group 13

ITU‑T F.600-series

ITU‑T G.801, ITU‑T G.802, ITU‑T G.860-series

ITU‑T I-series, except those under the responsibility of Study Groups 2, 12 and 15, and those having double/triple numbering in other series

ITU‑T Q.933, ITU‑T Q.933*bis*, ITU‑T Q.10xx-series and ITU‑T Q.1700-series

ITU‑T X.1 − ITU‑T X.25, ITU‑T X.28 − ITU‑T X.49, ITU‑T X.60 − ITU‑T X.84, ITU‑T X.90 − ITU‑T X.159, ITU‑T X.180 − ITU‑T X.199, ITU‑T X.272, ITU‑T X.300-series

ITU‑T Y-series, except those under the responsibility of Study Groups 12, 15, 16 and 20

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