



WG3

**DRAFT PRELIMINARY APT COMMON PROPOSAL  
PROPOSED MODIFICATION TO WTSA-16 RESOLUTION 98**

“Enhancing the standardization of Internet of things and smart cities and communities for global development”

**Abstract:**

This document contains the proposal of modification to WTSA-16 Resolution 98 “Enhancing the standardization of Internet of things and smart cities and communities for global development”.

**Introduction**

RESOLUTION 98 “Enhancing the standardization of Internet of things and smart cities and communities for global development” was released in WTSA-16. Since then, much progress has been made in efforts to develop collaboration between ITU-T and other organizations in IoT and SC&C areas.

IoT technology has special characteristics that differ from previous mobile technology with its various forms and use cases as well as benefit to across vertical industries. This difference creates new challenges, such as, slower adoption and utilisation rate due to various forms, use cases, utilisation across vertical industries. A variety of IoT technologies that are used to automate and accelerate different key industries such as Industrial Internet, Internet of Vehicles, Smart Oceans and Seas, Smart Supply Chain, Smart Home, digital transformation, digital economy, etc., have also been added to the list which can be covered by Resolution 98. Further, due to the requirements of frugality in the IoT device ecosystem proliferation of IoT services, a need is felt to develop a framework for provision of trusted services using the network layer security infrastructure. Such requirements, as well as promotion of the framework by the member states, can also be covered by Resolution 98 to ensure a smooth implementation and interoperability across underlying network technologies.

**Proposal**

APT members propose the revision of WTSA-16 Resolution 98 “Enhancing the standardization of Internet of things and smart cities and communities for global development” shown in the Annex of this document.

**Annex:**

Resolution 98

MOD

RESOLUTION 98 (REV. Hyderabad, 2020)  
**Enhancing the standardization of Internet of things and  
smart cities and communities for global development**  
(Hyderabad, 2020)

The World Telecommunication Standardization Assembly (Hyderabad, 2020),  
*recalling*

- a) Resolution 197 (Dubai, 2018) of the Plenipotentiary Conference, on promoting the development of the Internet of Things (IoT) and sustainable smart cities and communities (SC&C);
- b) Resolution 66 (Sharm El-Sheikh, 2019) of the Radiocommunication Assembly, on studies related to wireless systems and applications for the development of the Internet of Things;
- c) Resolution 85 (Rev. Buenos Aires, 2017) of the World Telecommunication Development Conference (WTDC), on facilitating the Internet of Things and smart cities and communities for global development;
- d) the objectives of the ITU Telecommunication Standardization Sector (ITU-T) in Resolution 71 (Rev. Dubai, 2018) of the Plenipotentiary Conference, and in particular Objective T.5, which mandates ITU-T to extend and facilitate cooperation with international, regional and national standardization bodies;
- e) The United Nations (UN) Sustainable Development Goals (SDGs) 3, 6, 7, 9, 11, 13, 14 and 15 propose development goals for health, water, energy, infrastructure, cities and residential areas, land, oceans, and biodiversity etc., Information and Communications Technology (ICT) is critical for accelerating the achievement of the above SDGs by 2030 and ensuring that no one is left behind,

*considering*

- a) that it is expected that the development of IoT technologies will make it possible to connect tens of billions devices to the network by the year 2025, impacting almost all aspects of daily life production, and strongly promoting the process of industrial digitalization;
- b) that various industrial sectors, such as energy, transportation, health and agriculture, are collaborating for the development of IoT and SC&C applications and services across verticals;
- c) that IoT and SC&C will become a new type of infrastructure that will benefit users and promote the construction and development of the information society, as well as bring in new service providers and business models;
- d) that IoT can play a greater role in the development of the marine sectors and the marine industries, especially in coastal / island countries and regions, to cope with the challenges of marine development and climate change, promote economic and trade cooperation, and eliminate poverty;
- e) that IoT can use the latest technological achievements to quickly discover and respond to regional or global crises such as natural disasters and epidemics/pandemics, and help the recovery of the global economy and industry;
- f) that research and development in IoT can help to improve global development, delivery of basic services and monitoring and evaluation programmes in different sectors;
- g) that IoT involves various stakeholders and areas, which may require coordination and cooperation;
- h) that technical standards as well as public-private partnerships should reduce the time and cost for implementing IoT with benefits in terms of economies of scale;

- i) that data interoperability is important for collaboratively assessing and standardizing IoT and SC&C;
  - j) that relevant standards of IoT and SC&C need to consider the difference in development level and demand between different regions or countries;
  - k) that connected devices and applications represent a massive, diverse and distributed ecosystem across industry verticals and geographies;
  - l) that globally unique identifiers for devices and applications can enable confidence and security in ICTs,
- recognizing*
- a) that industry forums and standards development organizations (SDO) partnership projects are developing technical specifications for IoT;
  - b) that the purpose of the Joint Coordination Activity on Internet of things and smart cities and communities (JCA-IoT and SC&C), under the leadership of ITU-T Study Group 20, is to coordinate the work on IoT and SC&C within ITU, and to seek cooperation from external bodies working in the field of IoT and SC&C;
  - c) that much progress has been made in efforts to develop collaboration between ITU-T and other organizations;
  - d) that Study Group 20 is responsible for studies and standardization work relating to IoT and SC&C;
  - e) that Study Group 20 concluded the work of the Focus Group on Data Processing and Management (FG-DPM);
  - f) that IoT and SC&C continuously put forward technical requirements for the sustainable development and evolution of existing networks, data, security, identification, trust, etc., and long-term research and standardization activities based on market requirements;
  - g) that IoT technology plays an important role in the areas such as Industrial Internet of Things, Internet of Vehicles, Smart Oceans and Seas, Smart Supply Chain, and Smart Home, digital transformation, and digital economy, and standardization work should be carried out in these areas based on market requirements;
  - h) that Study Group 20 is also a platform where the ITU-T membership, including administrations, Sector Members and Associates, can come together to exert an impact on the drafting of international standards for IoT and their implementation;

*resolves to instruct Study Group 20 of the ITU Telecommunication Standardization Sector*

1 to develop ITU-T Recommendations aimed at implementing IoT and SC&C, and accelerate the development of Recommendations on applications of emerging technologies in IoT and SC&C enabling sharing of data, information and trust across verticals and platforms, including globally unique identifiers that uniformly address connected devices and applications, thereby ensuring interoperability 2 to continue, within its mandate, to work with a special focus on the design of a roadmap and harmonized and coordinated international telecommunication standards for the development of IoT, taking into account the needs of each region and fostering a competitive environment;

3 to collaborate with other ITU-T study groups, as well as IoT-related standardization development organizations (SDOs) and other stakeholders such as industry forums and associations, and consortia taking into account relevant work;

4 to collate, evaluate, assess and share IoT use cases from the interoperability and standardization standpoints for data and information exchange;

*instructs the Director of the Telecommunication Standardization Bureau*

1 to provide necessary assistance in order to take advantage of every opportunity, within the assigned budget, to promote standardization work in a timely manner, and to

communicate with telecommunication and ICT industries in order to promote their participation in ITU-T's standardization activities on IoT and SC&C;

2 to carry out, in collaboration with Member States and cities, pilot projects in cities related to SC&C key performance indicator (KPI) assessment activities, aimed at facilitating the deployment and implementation of IoT and SC&C standards worldwide;

3 to continue to support the United for Smart Sustainable Cities Initiative (U4SSC), launched by ITU together with the United Nations Economic Commission for Europe (UNECE) in May 2016 and supported by other UN agencies, and share its deliverables with ITU-T Study Group 20 and other study groups concerned;

4 to continue encouraging cooperation with other international SDOs and other related organizations, in order to increase the development of international telecommunication standards and reports that facilitate the interoperability of IoT services;

5 to encourage all related organisations to use open standards and specifications on interoperability, in order to increase the value proposition of IoT and SC&C by having different infrastructures and systems to interconnect and exchange information,

*instructs the Director of the Telecommunication Standardization Bureau, in collaboration with the Directors of the Telecommunication Development Bureau and the Radiocommunication Bureau*

1 to prepare reports considering, in particular, the needs of developing countries in terms of the study of IoT and its applications, sensor networks, services and infrastructure, taking into account the results of work being done in ITU-R and ITU-D to avoid duplication of effort;

2 to promote the adoption of IoT across vertical industries and the development of smart cities and communities in order to maximize the benefits in advancing socio-economic development and contribute to achieving the Sustainable Development Goals;

3 to continue disseminating ITU publications on IoT and SC&C, as well as organizing forums, seminars and workshops on the subject, taking into account the needs of developing countries, in particular,

*invites the ITU Telecommunication Standardization Sector membership*

1 to submit contributions and continue participating actively in the work of Study Group 20 and in the studies on IoT and SC&C being conducted by ITU-T;

2 to develop master plans and exchange use cases and best practices in order to promote smart and sustainable cities and communities and to promote social development and economic growth in order to achieve SDGs;

3 to cooperate and exchange experiences and knowledge related to the global development of IoT and SC&C;

4 to support and organize forums, seminars and workshops on IoT in order to promote innovation, development and growth in IoT technologies and solutions;

5 to take necessary measures to facilitate the growth of IoT in relation to areas such as the establishment of standards, bootstrapping of constrained IoT devices and applications, using network and internet layer security infrastructure and promotion of the use of globally unique identifiers that uniformly address connected devices and application;

6 to develop and disseminate best practice documents that will be a guide for industries and users.