India (Replublic of)

PROPOSED MODIFICATION TO RESOLUTION 98
"Enhancing the standardization of Internet of things and smart cities and communities for global development"

PROPOSED MODIFICATION TO DRAFT PRELIMINARY APT COMMON PROPOSAL
(APT WTSA20-WG3-IM/TMP-04)

1. 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" from India. The proposal is based on the outcome document APT WTSA20-WG3-IM/TMP-04 by joint drafting committee in the Interim Meeting of Working Group 3 of the APT-WTSA20 (APT WTSA20-WG3-IM). The candidate draft PACP was prepared based on the contributions of China and Malaysia.

[Editor's Note] The proposed modifications (insertions/ deletions of text) from India have been highlighted in yellow background.

2. Introduction

RESOLUTION 98 "Enhancing the standardization of Internet of things and smart cities and communities for global development" released during WTSA-16 dates back to year 2016. Since then, much progress has been made in efforts to develop collaboration between ITU-T and other organizations in IoT and SC&C areas. 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, 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 and 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.

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3. Proposal

In order to facilitate the standardization development of IoT and SC&C in ITU-T, India proposes the following changes in addition to the changes proposed by China and Malaysia to modify Resolution 98 as follows:

1) in "recalling" part, SDG 3, 6, 7, 9, 11, 13, 14 and 15 are added, sub-clause e) is added, and subsequent sub-clauses are re-numbered; 2) in "considering" part, descriptions related to infrastructure, smart oceans and seas, global crisis are added and sub-clauses n), o), p) are added;

3) in "recognizing" part, descriptions related to FG-DMP, security, area list (Industrial Internet, Internet of Vehicles, Smart Oceans & Seas, Smart Supply Chain, and Smart Home) are added;

4) in "instruct SG20" part, the sentences are re-written;

6) Clause "instruct SG13" part is added;

7) in "instructs the Director of the Telecommunication Standardization Bureau" part, the following sentence is added: "to encourage all related organisation to use open standards and specifications on interoperability, in order to increase the value proposition of IoT by having different infrastructure and system interconnects and exchange information.";

8) in "invites the ITU Telecommunication Standardization Sector membership" part, in sub-clause 5, the text "including promotion of the use of globally unique identifiers that uniformly address connected devices and application" is added and the following bullets are added:

   a)   to promote bootstrapping of constrained devices using network layer security infrastructure,

   b)   To ensure that relevant authorities provides a minimum level of security guidelines and approaches referred to as "Baseline" security capabilities. This includes common baseline certification scheme and baseline conformance testing, which should be made available to device manufacturer; Editors note has been added.

   c)   To ensure that all IoT devices pass the baseline security requirement before it is being deployed;

   d)   To disseminate best practices document that will be a guide for industries and users.

Annex

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 (XXX, 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 (Geneva, 2015) of the Radiocommunication Assembly, on studies related to wireless systems and applications for the development of IoT;

c) Resolution 58 (Rev. Buenos Aires,2017) of the World Telecommunication Development Conference (WTDC), which invites Member States to promote and undertake research and development of ICT-accessible equipment, services and software;

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) Recommendation ITU-T Y.4000/Y.2060, on overview of IoT, which defines IoT as "a global infrastructure for the information society, enabling advanced services by interconnecting (physical and virtual) things based on existing and evolving interoperable information and communication technologies";

f) Recommendation ITU-T Y.4702, on common requirements and capabilities of device management in IoT, which establishes common requirements and capabilities of device management in IoT for different application scenarios;

g) 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 absolutely 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 of devices to the network by the year 2025, with consequences for almost all aspects of daily life and 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;

d) that IoT can play a greater role in the development of the marine sectors and the marine industries, and play a key role for mankind, 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 crisis such as natural disasters and epidemics, and help the recovery of the global economy and industry to ensure the stable operation of the global supply chain and economy

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 IoT has evolved into a wide variety of applications with different aims and requirements, as a result of which it is necessary to work in coordination with other international standardization bodies and other related organizations in order to integrate better standardization frameworks;

i)　　　　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;

j)　　　　that ITU-T should play a leading role in the development of IoT-related and SC&C-related standards;

k)　　　　that data interoperability is important for collaboratively assessing and standardizing IoT and SC&C;

l)　　　　that IoT may have an impact in many areas, which may require further cooperation between national, regional and international entities concerned on relevant aspects in order to maximize the benefits of IoT;

m)　　　　that relevant standards of IoT and SC&C need to consider the difference in development level and demand between different regions or countries,

n)　　　　that connected devices and applications represent a massive, diverse and distributed ecosystem across industry verticals and geographies;

o)　　　　that Industrial and enterprise applications require captive networks and service infrastructure that requires new service providers and business models;

p)　　　　that globally unique identifiers for devices and applications are a significant enabler for the development of trust repositories,

　　　　　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 are required;

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, and standardization work should be carried out in these areas;

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 the following technologies in IoT and SC&C: Distributed Ledger Technology(DLT), edge computing, artificial intelligence, digital twins, quantum information, Industrial Internet, Internet of Vehicles, Smart Oceans and Seas, Smart Supply Chain, and other key technologies in IoT and SC&C in good coordination and collaboration with other Study Groups where such technologies are being studied on a necessary basis;

2   to develop ITU-T Recommendations aimed at utilization of globally unique identifiers that uniformly address connected devices and application in the IoT ecosystem;

3   to promote the transformation of the deliverables of relevant Focus Groups into ITU-T Recommendations;

[Editor's note] It is not necessary to mention it here, it belongs to usual job according to ITU-T A.74   to take a more flexible step in shaping the structure of Study Group 20 during the study period, in order to quickly respond to the needs of the industry and the development of technologies, and to promote the development of ITU-T Recommendations to quickly adapt to social, economic and environmental needs and expand the influence of Study Group 20 in the industry;

[Editor's note] request to further discussion.

5   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;

6   to collaborate with other ITU 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;

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

8.   to develop standards related to the platform for IoT and Smart cities to have interoperability across platforms, enabling sharing of data.

resolves to instruct Study Group 13 of the ITU Telecommunication Standardization Sector

1   to assess the requirements of standards for interaction between entities provisioning IoT networks and other networks for sharing of Knowledge-centric trustworthy networking and services,

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;

2   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 including promotion of the use of globally unique identifiers that uniformly address connected devices and application;

6   to promote bootstrapping of constrained IoT devices using network layer security infrastructure,

7   to ensure that relevant authorities provides a minimum level of security guidelines and approaches referred to as "Baseline" security capabilities, taking into account current recommendations produced by study group 17 and other study groups. This includes common baseline certification scheme and baseline conformance testing, which should be made available to device manufacturer;

[Editors Note: The issues related to security, privacy and trust are already under study in Study Group 20, therefore this item needs review.]

8   to ensure that all IoT devices pass the baseline security and safety requirement before it is being deployed;

9   to disseminate best practices document that will be a guide for industries and users.