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| World Telecommunication Standardization Assembly (WTSA-20) Geneva, 1-9 March 2022 |  |
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| PLENARY MEETING | Addendum 23 to Document 39-E |
|  | **24 March 2021** |
|  | **Original: English** |
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| Member States of the Inter-American Telecommunication Commission (CITEL) | |
| Proposed modification of Resolution 98 | |
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| **Abstract:** | WTSA Resolution 98 addresses the standardization of Internet of things and smart cities and communities for global development; CITEL’s modifications proposed to Resolution 98 consider the need to study the related IoT security aspects, how the IoT ecosystem can assist on the achievement of the United Nations sustainable development goals and improve developing countries. |

Introduction

With the exponential growth of the IoT ecosystem around the world and the number of IoT devices connected to the network, its necessary to study the IoT security aspects to guarantee the stability and security of the networks and the users of these devices.

Additionally, considering the various verticals where IoT are being used to deploy new creative solutions (such as smart cities, e-health and education), it is important to study these proposals and how they can assist ITU members fulfil the SDGs and how the IoT Ecosystem can improve the economy and life of the population, especially in developing countries.

Finally, some editorial changes are made to clarify the involvement of study groups in IoT studies.

Proposal

Modify Resolution 98 considering the aspects above.

MOD IAP/39A23/1

RESOLUTION 98 (Rev.Geneva, 2022)

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

(Hammamet, 2016;Geneva, 2022)

The World Telecommunication Standardization Assembly (Geneva, 2022),

recalling

*a)* Resolution 197 (Rev. Dubai, 2018) of the Plenipotentiary Conference, on facilitating the Internet of things (IoT) to prepare for a globally connected world;

*b)* Resolution 66 (Rev. Sharm El-Sheikh, 2019) 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)* Resolution 85 (Buenos Aires, 2017) of the World Telecommunication Development Conference (WTDC), on facilitating the Internet of things (IoT) and smart cities and communities for global development;

*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,

considering

*a)* that it is expected that the development of IoT technologies will make it possible to connect billions of devices to the network by the year 2020, with consequences for almost all aspects of daily life;

*b)* the importance of IoT in contributing to achievement of the 2030 Agenda for Sustainable Development;

*c)* that various industrial sectors, such as energy, transportation, health and agriculture, are collaborating for the development of IoT and smart cities and communities (SC&C) applications and services across verticals;

*d)* that IoT can be a key enabler for the information society and offers the opportunity to transform the urban infrastructure, taking advantage, among other things, of the efficiencies of smart buildings and transport systems, and smart water management, working together with services for the benefit of users;

*e)* that research and development in IoT can help to improve global development, delivery of basic services and monitoring and evaluation programmes in different sectors;

*f)* that IoT involves various stakeholders and areas, which may require coordination and cooperation;

*g)* 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;

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

*j)* the importance of collaboratively assessing and standardizing IoT data interoperability;

*k)* 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;

*l)* that security aspects are a key component in the development of a reliable and secure IoT ecosystem,

recognizing

*a)* that industry forums, standards development organizations (SDOs) and 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 its applications, including SC&C;

*e)* that Study Group 20 is also a platform where the ITU‑T membership, including Member States, Sector Members, Associates and Academia, can come together to exert an impact on the drafting of international standards for IoT and their implementation;

*f)* that ITU-T Study Group 2, Study Group 12 and Study Group 17 may have related work on IoT and its application,

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, including, but not limited to, on issues related to emerging technologies and vertical industries;

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, Member States needs and fostering a competitive environment;

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

4 to interact with SG2, SG12 and SG17 to develop standards related to identification, quality of service (QoS) and security, respectively, in IoT systems;

5 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 quality 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 share its deliverables with ITU‑T Study Group 20 and other study groups concerned;

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

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 foster joint work among ITU Sectors to discuss the various aspects related to the development of IoT ecosystem and solutions to SC&C, in the context of the achievement of the sustainable development goals and the framework of the World Summit for the Information Society;

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;

4 to assist developing countries on the implementation of recommendations, technical reports and guidelines related to IoT and SC&C;

5 to assist developing countries by providing capacity building and training opportunities for IoT and SC&C,

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 the IoT ecosystem, as well as smart and sustainable cities and communities and to promote social development and economic growth;

3 to cooperate and exchange experiences and knowledge related to this topic;

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.