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| The International Teleocmmunication Union - Connecting the World. | | **International telecommunication union**  **Telecommunication Standardization Bureau** | |  |
|  | | | Geneva, 03 May 2023 | |
| **Ref:** | **TSB Circular 96**  **SG20/CB** | | **To:**  - Administrations of Member States of the Union;  **Copy to:**  - ITU-T Sector Members;  - Associates of ITU-T Study Group 20;  - ITU Academia;  - The Chairman and Vice-Chairmen of ITU-T Study Group 20;  - The Director of the Telecommunication Development Bureau;  - The Director of the Radiocommunication Bureau | |
| **Tel:** | +41 22 730 6301 | |
| **Fax:**  **E-mail:** | +41 22 730 5853  [tsbsg20@itu.int](mailto:tsbsg20@itu.int) | |
| **Subject:** | **Member State consultation on Determined draft new Recommendations**  **ITU-T** **Y.4221 (ex Y.ElecMon-Reqts), Y.4222 (ex Y.smart-evacuation), Y.4223 (ex Y.SCC-Reqts), Y.4487 (ex Y.RMDFS-arch), Y.4488 (ex Y.IoT-SPWE) and Y.4604 (ex Y.IoT-MCSI) proposed for approval at the meeting of ITU-T Study Group 20 (Arusha, 13-22 September 2023)** | | | |

Dear Sir/Madam,

1 ITU-T Study Group 20 (SG20: Internet of things (IoT) and smart cities and communities (SC&C)) intends to apply the Traditional Approval Procedure as described in Section 9 of WTSA Resolution 1 (Rev. Geneva, 2022) for the approval of the above-mentioned draft Recommendations at its next meeting in Arusha, Tanzania, from 13 to 22 September 2023. The agenda and all relevant information concerning the ITU‑T Study Group 20 meeting will be available in [Collective letter 3/20](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T22-SG20-COL-0003).

2 The titles, summaries and locations of the draft new Recommendations ITU-T Y.4221 (ex Y.ElecMon-Reqts), Y.4222 (ex Y.smart-evacuation), Y.4223 (ex Y.SCC-Reqts), Y.4487 (ex Y.RMDFS-arch), Y.4488 (ex Y.IoT-SPWE) and Y.4604 (ex Y.IoT-MCSI), proposed for approval can be found in Annex 1.

3 This Circular initiates the formal consultation with ITU Member States on whether these texts may be considered for approval at the upcoming meeting, in accordance with clause 9.4 of Resolution 1. Member States are kindly requested to complete and return the form in Annex 2 by 2359 hours UTC on **1 September 2023**.

4 If 70% or more of the replies from Member States support consideration for approval, one Plenary session will be devoted to apply the approval procedure. Member States that do not assign authority to proceed should inform the Director of TSB of the reasons for this opinion and indicate the possible changes that would enable the work to progress.

TSB NOTE 1– As of the date of this Circular, no IPR statements had been received by TSB regarding any of these draft texts. For up-to-date information, members are invited to consult the IPR database at [www.itu.int/ipr/](http://www.itu.int/ipr/).

Yours faithfully

Seizo Onoe   
Director of the Telecommunication  
Standardization Bureau

**Annexes:** 2

**Annex 1**

**Summary and location of Determined draft new Recommendations ITU-T Y.4221 (ex Y.ElecMon-Reqts), Y.4222 (ex Y.smart-evacuation), Y.4223 (ex Y.SCC-Reqts), Y.4487 (ex Y.RMDFS-arch), Y.4488 (ex Y.IoT-SPWE) and Y.4604 (ex Y.IoT-MCSI)**

**1 Draft new Recommendation ITU-T Y.4221 (ex Y.ElecMon-Reqts): [**[**R5**](https://www.itu.int/md/T22-SG20-R-0005/en)**]**

**Requirements of IoT-based electric power infrastructure monitoring system**

**Summary**

An IoT-based electric power infrastructure monitoring system is an effective means to obtain the operation health status of electric power infrastructures. It provides advanced and efficient auxiliary monitoring and diagnosis methods for maintaining the safe and stable operation of an electric power system and improving the comprehensive management level of such a system. Thus, it brings great convenience for maintaining electric power infrastructures.

This Recommendation specifies the requirements specific to an IoT-based electric power infrastructure monitoring system for the purpose of maintaining electric power infrastructure.

**2 Draft new Recommendation ITU-T Y.4222 (ex Y.smart-evacuation): [**[**R6**](https://www.itu.int/md/T22-SG20-R-0006/en)**]**

**Framework of smart evacuation in a disaster or emergency in smart cities and communities**

**Summary**

Smart evacuation facilitates effective and efficient solutions for people inside a disaster or emergency zone and for people that need to enter such a zone as part of the response. Internet of things (IoT) and smart cities and communities could be used to provide smart evacuation during a disaster or an emergency.

This Recommendation describes concepts and features of smart evacuation control in disaster and emergency situations. It identifies high-level requirements and ICT infrastructure for smart evacuation along with use cases in disaster and emergency situations.

The introduction of a smart evacuation service will allow the maintenance of the level of comfort for the population achieved in a smart city even in the event of an emergency of natural or man-made origin. This is fundamental to justify the enormous material costs for the rapid development of smart cities around the world against the background of natural and man-made emergencies that have become more frequent throughout the world.

**3 Draft new Recommendation ITU-T Y.4223 (ex Y.SCC-Reqts): [**[**R7**](https://www.itu.int/md/T22-SG20-R-0007/en)**]**

**Common requirements and capabilities of smart cities and communities from IoT and ICT perspectives**

**Summary**

Smart cities and communities (SC&C) share the goal of achieving urban sustainability without sacrificing the quality of life (QoL) of their citizens. SC&C strive to create a sustainable living environment for citizens using Internet of things (IoT) technologies and information communication technologies (ICTs).

SC&C standardization is ongoing in ITU-T and other relevant standards developing organizations, related to aspects including, but not limited to, SC&C framework, infrastructure, integrated sensing and management system, platform, data processing and services and applications (e.g., smart water management, smart buildings, smart residential community, smart tourism and smart parking lots, amongst many others). Based on the fundamental characteristics of smart cities and communities, this Recommendation specifies common requirements and capabilities of SC&C from IoT and ICT perspectives.

The specified common requirements and capabilities are intended to be generally applicable in SC&C.

**4 Draft new Recommendation ITU-T Y.4487 (ex Y.RMDFS-arch): [**[**R8**](https://www.itu.int/md/T22-SG20-R-0008/en)**]**

**A functional architecture of roadside multi-sensor data fusion systems for autonomous vehicles**

**Summary**

With the development of autonomous driving, perception methods relying solely on the vehicle's own sensors or on traditional roadside sensing systems that lack sufficient collaboration between devices are no longer sufficient to support higher-level autonomous driving applications. A higher requirement for roadside perception capabilities is therefore proposed. The roadside multi-sensor data fusion system (RMDFS) can provide new functionalities which will contribute to enhancing roadside perception capabilities by combining different types of roadside sensing devices such as cameras, lidars, millimetre wave radars, etc. according to their characteristics, and perform unified management and coordination so as to achieve accurate perception of road information, and support for autonomous driving applications.

Recommendation ITU-T Y.4487 defines a reference functional architecture of roadside multi-sensor data fusion systems. It clarifies the concept and components of the systems, and specifies the key functional entities of the systems and the reference points between the functional entities. Use cases based on roadside multi-sensor data fusion systems are also provided in the appendix.

**5 Draft new Recommendation ITU-T Y.4488 (ex Y.IoT-SPWE): [**[**R9**](https://www.itu.int/md/T22-SG20-R-0009/en)**]**

**Framework of IoT service for safety protection of working environments**

**Summary**

This Recommendation specifies the framework of Internet of things (IoT) service for the safety protection of working environments.

By deploying IoT services, the working environment makes use of the IoT technologies to collect information remotely, identify risky behaviour, equipment coordination, etc. These technologies could support intelligent services such as safety protection information monitoring including workers and environment, predictive maintenance, etc., which can help to reduce incidents and casualties and improve the safety level of working environments.

**6 Draft new Recommendation ITU-T Y.4604 (ex Y.IoT-MCSI): [**[**R10**](https://www.itu.int/md/T22-SG20-R-0010/en)**]**

**Metadata for camera sensing information of autonomous mobile IoT devices**

**Summary**

In the case of low-cost and low-resolution Internet of things (IoT) camera sensor devices, it is not possible to support full-featured camera sensing information due to resource-limited IoT device capabilities. Traditional full-performance digital camera devices provide complex metadata such as camera settings (stimulus, sensitivity, shutter speed, etc.), time, location information, camera model, etc.

There is no guidance for compliant and compromised IoT camera sensing metadata from different manufacturers. This causes problems related to interchangeable metadata. It is essential therefore to provide basic and minimal camera sensing metadata to enable interoperability between IoT applications and services.

Recommendation ITU-T Y.4604 defines metadata for camera sensing information (MCSI) and describes characteristics and features of individual MCSI working on autonomous mobile IoT devices (AMIDs).

**Annex 2**

**Subject: Member State response to TSB Circular 96:  
Consultation on Determined draft new Recommendations ITU-T Y.4221 (ex Y.ElecMon-Reqts), Y.4222 (ex Y.smart-evacuation), Y.4223 (ex Y.SCC-Reqts), Y.4487 (ex Y.RMDFS-arch), Y.4488 (ex Y.IoT-SPWE) and Y.4604 (ex Y.IoT-MCSI)**

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| --- | --- | --- | --- |
| **To**: | Director of the  Telecommunication Standardization Bureau,  International Telecommunication Union  Place des Nations  CH 1211 Geneva 20, Switzerland | **From**: | [Name]  [Official role/title]  [Address] |
| **Fax**:  **E-mail**: | +41-22-730-5853  [tsbdir@itu.int](mailto:tsbdir@itu.int) | **Fax**:  **E-mail**: |  |
|  |  | **Date**: | [Place,] [Date] |

Dear Sir/Madam,

With respect to the Member State consultation on the Determined draft texts listed in TSB Circular 96, I would like to advise you of the opinion of this Administration, which is set out in the table below.

|  | **Select one of the two boxes** |
| --- | --- |
| **Draft new Recommendation ITU-T Y.4221 (ex Y.ElecMon-Reqts)** | **assigns authority** to Study Group 20 to consider this text for approval (in which case, select one of the two options ⃝):  ⃝ No comments or suggested changes  ⃝ Comments and suggested changes are attached |
| **does not assign authority** to Study Group 20 to consider this text for approval (reasons for this opinion and an outline of possible changes that would enable the work to progress are attached) |
| **Draft new Recommendation ITU-T Y.4222 (ex Y.smart-evacuation)** | **assigns authority** to Study Group 20 to consider this text for approval (in which case, select one of the two options ⃝):  ⃝ No comments or suggested changes  ⃝ Comments and suggested changes are attached |
| **does not assign authority** to Study Group 20 to consider this text for approval (reasons for this opinion and an outline of possible changes that would enable the work to progress are attached) |
| **Draft new Recommendation ITU-T Y.4223 (ex Y.SCC-Reqts)** | **assigns authority** to Study Group 20 to consider this text for approval (in which case, select one of the two options ⃝):  ⃝ No comments or suggested changes  ⃝ Comments and suggested changes are attached |
| **does not assign authority** to Study Group 20 to consider this text for approval (reasons for this opinion and an outline of possible changes that would enable the work to progress are attached) |
| **Draft new Recommendation ITU-T Y.4487 (ex Y.RMDFS-arch)** | **assigns authority** to Study Group 20 to consider this text for approval (in which case, select one of the two options ⃝):  ⃝ No comments or suggested changes  ⃝ Comments and suggested changes are attached |
| **does not assign authority** to Study Group 20 to consider this text for approval (reasons for this opinion and an outline of possible changes that would enable the work to progress are attached) |
| **Draft new Recommendation ITU-T Y.4488 (ex Y.IoT-SPWE)** | **assigns authority** to Study Group 20 to consider this text for approval (in which case, select one of the two options ⃝):  ⃝ No comments or suggested changes  ⃝ Comments and suggested changes are attached |
| **does not assign authority** to Study Group 20 to consider this text for approval (reasons for this opinion and an outline of possible changes that would enable the work to progress are attached) |
| **Draft new Recommendation ITU-T Y.4604 (ex Y.IoT-MCSI)** | **assigns authority** to Study Group 20 to consider this text for approval (in which case, select one of the two options ⃝):  ⃝ No comments or suggested changes  ⃝ Comments and suggested changes are attached |
| **does not assign authority** to Study Group 20 to consider this text for approval (reasons for this opinion and an outline of possible changes that would enable the work to progress are attached) |

Yours faithfully,

[Name]

[Official role/title]

Administration of [Member State]

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