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| The International Teleocmmunication Union - Connecting the World. | **International telecommunication union****Telecommunication Standardization Bureau** |  |
|  | Geneva, 14 April 2025 |
| **Ref:** | TSB Circular 39SG20/CB | **To:**- Administrations of Member States of the Union;- The State of Palestine (Res. 99 (Rev. Dubai, 2018))**Copy to:**- ITU-T Sector Members;- Associates of ITU-T Study Group 20; - ITU Academia;- The Chair and Vice-Chairs 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: | +41 22 730 5853 |
| E-mail: | tsbsg20@itu.int  |
| **Subject:** | **Member State consultation on Determined** **draft new Recommendations ITU-T Y.4235 (ex Y.PGComNet-Reqts), ITU-T Y.4236 (ex Y.EMM-Reqts), ITU-T Y.4237 (ex Y.dt-IWCS), ITU-T Y.4496 (ex Y.RA-PHE), ITU-T Y.4708 (ex Y.IoT-DPE), ITU-T Y.4609 (ex Y.metadata-EPI), ITU-T Y.4813 (ex Y.iepi-dm-sa), ITU-T Y.4814 (ex Y.IoT-acs-fra) and ITU-T Y.4911 (ex Y.KPI-Flood), proposed for approval at the meeting of ITU-T Study Group 20, Geneva, 15-25 September 2025** |

Dear Sir/Madam,

1 ITU-T Study Group 20 (SG20: Internet of Things, digital twins and smart sustainable cities and communities) 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 new Recommendations ITU-T Y.4235 (ex Y.PGComNet-Reqts), ITU-T Y.4236 (ex Y.EMM-Reqts), ITU-T Y.4237 (ex Y.dt-IWCS), ITU-T Y.4496 (ex Y.RA-PHE), ITU-T Y.4708 (ex Y.IoT-DPE), ITU-T Y.4609 (ex Y.metadata-EPI), ITU-T Y.4813 (ex Y.iepi-dm-sa), ITU-T Y.4814 (ex Y.IoT-acs-fra) and ITU-T Y.4911 (ex Y.KPI-Flood) at its next meeting in Geneva, Switzerland, 15-25 September 2025. The agenda and all relevant information concerning the ITU-T Study Group 20 meeting will be available in [Collective letter 2/20](https://www.itu.int/md/T25-SG20-COL-0002/en).

2 The titles, summaries and locations of the draft ITU-T Recommendations 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 **3 September 2025**.

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 – As of the date of this Circular, no IPR statements had been received by TSB regarding this draft text. 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.4235 (ex Y.PGComNet-Reqts), ITU-T Y.4236 (ex Y.EMM-Reqts), ITU-T Y.4237 (ex Y.dt-IWCS), ITU-T Y.4496 (ex Y.RA-PHE), ITU-T Y.4708 (ex Y.IoT-DPE), ITU-T Y.4609 (ex Y.metadata-EPI), ITU-T Y.4813 (ex Y.iepi-dm-sa), ITU-T Y.4814 (ex Y.IoT-acs-fra) and ITU-T Y.4911 (ex Y.KPI-Flood)

# 1 Draft new Recommendation ITU-T Y.4235 (ex Y.PGComNet-Reqts) [[SG20-R2](https://www.itu.int/md/T25-SG20-R-0002/en)]

## Requirements of IoT-based power grid communication network

## Summary

This Recommendation specifies the requirements of the IoT-based power grid communication network.

The IoT-based power grid communication network provides bidirectional data interaction in all phases of power grid operations, including electric power generation, transmission, distribution and consumption. It is an effective means to achieve comprehensive awareness of power grid status and to enable human-computer interaction and ubiquitous access to the IoT devices of the power grid.

# 2 Draft new Recommendation ITU-T Y.4236 (ex Y.EMM-Reqts) [[SG20-R3](https://www.itu.int/md/T25-SG20-R-0003/en)]

## Requirements for real-time event monitoring and integrated management in smart city platforms

## Summary

# This Recommendation presents an overview, and specifies the requirements, of a real-time event monitoring and integrated management (EMM) platform. The EMM platform is a kind of smart city platform (SCP) (see Recommendation ITU-T Y.4201). The platform is particularly designed to allow internal and external city authorities to make informed decisions and respond promptly to events that may arise in a city through real-time monitoring, ultimately improving the efficiency of providing city services to citizens.

# 3 Draft new Recommendation ITU-T Y.4237 (ex Y.dt-IWCS) [[SG20-R4](https://www.itu.int/md/T25-SG20-R-0004/en)]

## Requirements and capability framework of digital twin for intelligent water conservancy system

## Summary

# Recommendation ITU-T Y.4237 specifies the requirements and capability framework of the digital twin for intelligent water conservancy system (DT-IWCS).

# Water conservancy is always an important factor in water resource scheduling. An intelligent water conservancy system driven by digital twin can support intelligent monitoring, and control and management of the usage of water conservancy via the digital twin interaction between digital objects and physical objects of the intelligent water conservancy system.

# 4 Draft new Recommendation ITU-T Y.4496 (ex Y.RA-PHE) [[SG20-R5](https://www.itu.int/md/T25-SG20-R-0005/en)]

## Requirements and reference architecture of smart public health emergency information system

## Summary

# Recommendation ITU-T Y.4496 provides the requirements and reference architecture for a smart public health emergency information system that can be implemented to address current and future potential public health risks.

# 5 Draft new Recommendation ITU-T Y.4708 (ex Y.IoT-DPE) [[SG20-R6](https://www.itu.int/md/T25-SG20-R-0006/en)]

## Management framework for IoT-based distributed power equipment

## Summary

# In recent years, the trend towards the intelligence and IoT integration of power equipment has become increasingly evident. Utilizing various distributed sensors and their IoT systems enables functions such as power equipment status monitoring, diagnostic evaluation and maintenance decision-making. Meanwhile, the safe, stable and reliable operation of power equipment also depends on the effective collaboration of numerous IoT sensing and controlling devices. Consequently, the need for unified management and coordination of power equipment and their sensing or controlling devices using distributed IoT technology has become increasingly urgent.

# This Recommendation provides the management framework for IoT-based distributed power equipment, including the framework, functional systems and reference interfaces.

# 6 Draft new Recommendation ITU-T Y.4609 (ex Y.metadata-EPI) [[SG20-R7](https://www.itu.int/md/T25-SG20-R-0007/en)]

## Inventory metadata for IoT-based electric power infrastructure monitoring system

## Summary

# The extensive deployment of the IoT-based electric power infrastructure monitoring system (IoT-EPIMS) has improved the intelligence and digitization of power systems. However, due to the uneven nature of systems, the suitability and performance vary greatly when monitoring a specific event, which increases the difficulty of efficient application of the monitoring system. Constructing metadata of an IoT-based electric power infrastructure monitoring system, can effectively enhance the data management and application capabilities, and make more transparent, intelligent, and advanced energy services in smart cities. Recommendation ITU-T Y.4609 presents inventory metadata for the IoT-based electric power infrastructure monitoring system.

# 7 Draft new Recommendation ITU-T Y.4813 (ex Y.iepi-dm-sa) [[SG20-R8](https://www.itu.int/md/T25-SG20-R-0008/en)]

## Security assessment framework of data management for IoT-based electric power infrastructure

## Summary

# Security assessment of data management encompasses various aspects of the data lifecycle of Internet of things-based electric power infrastructure (IoT-EPI), including data collection, data transmission, data storage, data processing and data service. By evaluating the security capabilities at each stage of the data lifecycle, the security assessment aims to promote mitigating security risks and threats associated with IoT-based electric power infrastructure, and improve the provision of efficient and secure data services in smart cities.

# This Recommendation specifies a security assessment framework and relevant security assessment factors of data management for IoT-based electric power infrastructure.

# 8 Draft new Recommendation ITU-T Y.4814 (ex Y.IoT-acs-fra) [[SG20-R9](https://www.itu.int/md/T25-SG20-R-0009/en)]

## Functional requirements and architecture of access control service of Internet of things (IoT) platform enabled by zero trust in decentralized environments

## Summary

# There are many substantial challenges for Internet of things (IoT) platforms in decentralized environments to making trust among IoT entities (such as IoT devices, IoT services, IoT gateways) when they interact with each other. The traditional access control solutions of IoT platforms (such as perimeter control, password authentication, virtual private network) cannot fully cope with those challenges, especially when IoT entities are deployed in decentralized environments.

# Zero trust (ZT) is a type of cybersecurity principle that provides a collection of concepts and ideas designed to minimize uncertainty in enforcing accurate, least privilege per-request access decisions in information systems and services in the face of a network viewed as compromised [b-NIST SP 800-207]. In ZT-based access control solutions, it is no longer required to determine access rights by location and security domain for IoT entities to discover and access other IoT entities in the same or different IoT platforms. It is required to be determined for any requests to discover and access any IoT entities in IoT platforms. Therefore, ZT-based access control solutions are suitable for IoT platforms in decentralized environments.

# This Recommendation introduces an access control service of an IoT platform in decentralized environments as enabled by ZT, and specifies its technical characteristics, functional requirements and architecture.

# 9 Draft new Recommendation ITU-T Y.4911 (ex Y.KPI-Flood) [[SG20-R10](https://www.itu.int/md/T25-SG20-R-0010/en)]

## Key performance indicators of ICT-based data support capabilities for urban flood disaster prevention and mitigation

## Summary

Flood disaster is a critical issue influencing the safety of a city. There are many kinds of data support for flood disaster prevention and mitigation; however, a comprehensive assessment of data support capabilities would be highly beneficial for cities. This Recommendation specifies a set of key performance indicators to assess ICT-based data support capabilities for urban flood disaster prevention and mitigation.

Annex 2
Subject: Member State response to TSB Circular 39:
Consultation on Determined draft new Recommendations ITU-T Y.4235 (ex Y.PGComNet-Reqts), ITU-T Y.4236 (ex Y.EMM-Reqts), ITU-T Y.4237 (ex Y.dt-IWCS), ITU-T Y.4496 (ex Y.RA-PHE), ITU-T Y.4708 (ex Y.IoT-DPE), ITU-T Y.4609 (ex Y.metadata-EPI), ITU-T Y.4813 (ex Y.iepi-dm-sa), ITU-T Y.4814 (ex Y.IoT-acs-fra) and ITU-T Y.4911 (ex Y.KPI-Flood)

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

Dear Sir/Madam,

With respect to the Member State consultation on the Determined draft texts listed in TSB Circular 39, 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.4235 (ex Y.PGComNet-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.4236 (ex Y.EMM-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.4237 (ex Y.dt-IWCS)** | [ ]  **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.4496 (ex Y.RA-PHE)** | [ ]  **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.4708 (ex Y.IoT-DPE)** | [ ]  **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.4609 (ex Y.metadata-EPI)** | [ ]  **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.4813 (ex Y.iepi-dm-sa)** | [ ]  **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.4814 (ex Y.IoT-acs-fra)** | [ ]  **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.4911 (ex Y.KPI-Flood)** | [ ]  **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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