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| The International Teleocmmunication Union - Connecting the World. | | **International telecommunication union**  **Telecommunication Standardization Bureau** | |  |
|  | | | Geneva, 14 September 2022 | |
| **Ref:** | **TSB Circular 37**  **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.4601 (ex Y.dt-smartfirefighting) and Y.4500.3 (ex Y.oneM2M.SEC.SOL), proposed for approval at the meeting of ITU-T Study Group 20 (Geneva, 30 January – 10 February 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 2 draft Recommendations at its next meeting planned from 30 January – 10 February 2023. 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/meetingdoc.asp?lang=en&parent=T22-SG20-COL-0002).

2. The titles, summaries and locations of the draft new Recommendations Y.4601 (ex Y.dt-smartfirefighting) and Y.4500.3 (ex Y.oneM2M.SEC.SOL), 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 **18 January 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/).

TSB NOTE 2 – An ITU-T A.5 justification document has been prepared for the determined draft Recommendation ITU-T Y.4500.3 (ex Y.oneM2M.SEC.SOL).

Yours faithfully

Chaesub Lee  
Director of the Telecommunication  
Standardization Bureau

**Annexes:** 2

**Annex 1**

**Summary and location of Determined draft new Recommendations ITU-T Y.4601 (ex Y.dt-smartfirefighting) and Y.4500.3 (ex Y.oneM2M.SEC.SOL)**

**1 Draft new Recommendation ITU-T Y.4601 (ex Y.dt-smartfirefighting): [**[**R2**](https://www.itu.int/md/T22-SG20-R-0002/en)**]**

**Requirements and capability framework of a digital twin for smart firefighting**

**Summary**

Draft Recommendation ITU-T Y.4601 specifies the requirements and capability framework of a digital twin for smart firefighting.

A digital twin is a digital representation of an object of interest and may require different capabilities according to the specific domain of application such as synchronization between a physical thing and its digital representation, and real-time support (see Recommendation ITU-T Y.4600).

Through the Internet of things (IoT) technology deployment and the information integration process, a digital twin can provide high fidelity digital representation of a fire scene, enable dynamic convergence between the physical entity and digital entity, achieve comprehensive understanding and control of the past, present and future of the fire scene. The current state of the art for firefighting lacks comprehensive dynamic sensing capability and prediction capability. It cannot provide delayed information, and adequate visibility of the interaction between personnel and a fire scene.

Through the deployment of gateways, sensors, high quality networks, multi-physics simulations, dynamic analysis and predictions and three dimensional (3D) visualizations, the smart firefighting digital twin enables intelligent services such as personnel tracking, hazard tracking, fire scene dynamic analysis, rescue strategy optimization, pre-simulation, historical scene reconstruction, etc. These intelligent services can help to improve decision-making processes and reduce casualties.

**2 Draft new Recommendation ITU-T Y.4500.3 (ex Y.oneM2M.SEC.SOL) [**[**R3**](https://www.itu.int/md/T22-SG20-R-0003/en)**]**

**oneM2M – Security solutions**

**Summary**

Draft Recommendation ITU-T Y.4500.3 provides specifications for machine to machine (M2M) security and privacy protection.

**Annex 2**

**Subject: Member State response to TSB Circular 37:  
Consultation on Determined draft new Recommendations ITU-T Y.4601 (ex Y.dt-smartfirefighting) and Y.4500.3 (ex Y.oneM2M.SEC.SOL)**

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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 37, 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.4601 (ex Y.dt-smartfirefighting)** | **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.4500.3 (ex Y.oneM2M.SEC.SOL)** | **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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