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SERIES Y: GLOBAL INFORMATION  
INFRASTRUCTURE, INTERNET PROTOCOL ASPECTS,  
NEXT-GENERATION NETWORKS, INTERNET OF  
THINGS AND SMART CITIES

Internet of things and smart cities and communities –  
Requirements and use cases

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## Requirements and capabilities of the Internet of things for support of wearable devices and related services

Recommendation ITU-T Y.4117

ITU-T

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# Recommendation ITU-T Y.4117

## Requirements and capabilities of the Internet of things for support of wearable devices and related services

### Summary

Recommendation ITU-T Y.4117 describes characteristics, specific requirements and capabilities of the Internet of things (IoT) for support of wearable devices and related services.

From an IoT requirement perspective, wearable device-related services (WDS) are classified in this Recommendation into four main classes: wearable device-related multimedia services (WDMS), wearable device-related health management services (WDHS), wearable device-related sport services (WDSS) and wearable device-related assistant services (WDAS). Wearable devices (WDs) can be categorized according to their usage (WDS class).

Specific requirements and capabilities of the IoT to support the different WDs and WDS are provided. Furthermore, information concerning relevant use cases for WDs and WDS is provided in an appendix.

### History

| Edition | Recommendation | Approval   | Study Group | Unique ID*                                                                   |
|---------|----------------|------------|-------------|------------------------------------------------------------------------------|
| 1.0     | ITU-T Y.4117   | 2017-10-29 | 20          | <a href="http://handle.itu.int/11.1002/1000/11830-en">11.1002/1000/13386</a> |

### Keywords

Capabilities, characteristics, Internet of things (IoT), requirements, use cases, wearable devices, wearable device-related services.

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\* To access the Recommendation, type the URL <http://handle.itu.int/> in the address field of your web browser, followed by the Recommendation's unique ID. For example, <http://handle.itu.int/11.1002/1000/11830-en>.

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The World Telecommunication Standardization Assembly (WTSA), which meets every four years, establishes the topics for study by the ITU-T study groups which, in turn, produce Recommendations on these topics.

The approval of ITU-T Recommendations is covered by the procedure laid down in WTSA Resolution 1.

In some areas of information technology which fall within ITU-T's purview, the necessary standards are prepared on a collaborative basis with ISO and IEC.

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# Recommendation ITU-T Y.4117

## Requirements and capabilities of the Internet of things for support of wearable devices and related services

### 1 Scope

This Recommendation investigates characteristics of wearable devices (WDs) and wearable device-related services (WDS), and provides specific requirements and capabilities of the Internet of things (IoT) in order to support them.

The common requirements of the IoT [ITU-T Y.4100] are high-level requirements applicable to WDs and WDS. This Recommendation builds on the common requirements of the IoT and provides specific requirements and capabilities for support of WDs and WDS. These specific capabilities complement the capabilities of the IoT described in [ITU-T Y.4401].

The scope of this Recommendation includes:

- description of characteristics of WDs and WDS;
- specific requirements of the IoT for support of WDs and WDS;
- specific capabilities of the IoT for support of WDs and WDS.

Information concerning use cases for WDs and WDS is provided in Appendix I.

This Recommendation does not address requirements and capabilities of wearable devices themselves.

### 2 References

The following ITU-T Recommendations and other references contain provisions which, through reference in this text, constitute provisions of this Recommendation. At the time of publication, the editions indicated were valid. All Recommendations and other references are subject to revision; users of this Recommendation are therefore encouraged to investigate the possibility of applying the most recent edition of the Recommendations and other references listed below. A list of the currently valid ITU-T Recommendations is regularly published. The reference to a document within this Recommendation does not give it, as a stand-alone document, the status of a Recommendation.

- [ITU-T Y.4000] Recommendation ITU-T Y.4000/Y.2060 (2012), *Overview of the Internet of things*.
- [ITU-T Y.4100] Recommendation ITU-T Y.4100/Y.2066 (2014), *Common requirements of the Internet of things*.
- [ITU-T Y.4401] Recommendation ITU-T Y.4401/Y.2068 (2015), *Functional framework and capabilities of the Internet of things*.
- [ITU-R P.525] Recommendation ITU-R P.525 (2016), *Calculation of free-space attenuation*, incorporated to the Radio Regulations by reference.
- [IEC 60601-1-2] IEC 60601-1-2:2014, *Medical electrical equipment - Part 1-2: General requirements for basic safety and essential performance – Collateral Standard: Electromagnetic disturbances – Requirements and tests*.