International Standard

ISO/IEC 23093-2

Information technology — Internet of media things —

Part 2: Discovery and communication application programming interface (API)

Technologies de l'information — Internet des objets media — Partie 2: API pour la decouverte et la communication

Third edition
2025-12

Reference number
ISO/IEC 23093-2:2025(en)

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Published in Switzerland

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Foreword

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This document was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 29, *Coding of audio, picture, multimedia and hypermedia information*.

This third edition cancels and replaces the first edition (ISO/IEC 23093-2:2022), which has been technically revised.

The main changes are as follows:

— modification of the Introduction;

— addition of new APIs for discovery and communication.

A list of all parts in the ISO/IEC 23093 series can be found on the ISO and IEC websites.

Any feedback or questions on this document should be directed to the user’s national standards body. A complete listing of these bodies can be found at www.iso.org/members.html and www.iec.ch/national-committees.

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Introduction

The ISO/IEC 23093 series provides an architecture and specifies APIs and compressed representation of data flowing between media things (MThings).

The APIs for MThings facilitate the discovery of other MThings in the network, as well as the connection and efficient exchange of data between MThings. The APIs also support transaction tokens to access valuable functionalities, resources, and data from MThings.

MThing-related information comprises characteristics and discovery data, mission descriptions from system designers and end-users, raw and processed sensed data and actuation information. The ISO/IEC 23093 series specifies input and output data formats for media sensors, actuators, storages, and analysers. In addition, media analysers can process sensed data from media sensors to produce analysed data, which can be cascaded to other media analysers to extract semantic information. Multiple MThings can be gathered and operated autonomously using mission descriptions given by system designers and end-users.

This document contains the APIs to discover media things in the network, communication between media things, and the APIs to facilitate transactions between media things.

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Information technology — Internet of media things —

Part 2:
Discovery and communication application programming interface (API)

1 Scope

This document specifies the abstract class of a media thing (MThing), a basic component to construct the Internet of media things. The MThing class contains the basic APIs to:

— discover other MThing(s) in the network;

— connect/disconnect MThing(s); and,

— support transactions (e.g. payments) using media tokens between MThings.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/IEC 23093-1, *Information technology — Internet of media things — Part 1: Architecture*

ISO/IEC 23093-3, *Information technology — Internet of media things — Part 3: Media data formats and API*

ISO/IEC 21000-7:2007, *Information technology — Multimedia framework (MPEG-21) — Part 7: Digital Item Adaptation*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO/IEC 23093-1 apply.

ISO and IEC maintain terminology databases for use in standardisation at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

4 APIs

4.1 General

This clause specifies APIs to discover MThings and connect/disconnect communication between MThings. Besides, APIs and return class types are specified to provide MThing information and hardware descriptions.

An MThing can be discovered by its capabilities or supported media token types. The discovered MThing(s) can then relay its (their) information to the requester (i.e. another MThing).

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