
**Information technology — Multimedia
application format (MPEG-A) —**

**Part 16:
Publish/Subscribe Application Format**

*Technologies de l'information — Format des applications
multimedias —*

Partie 16: Format des applications Publier/Souscrire

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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

A list of all parts in the ISO/IEC 23000 series can be found on the ISO website.

<https://standards.iteh.ai/catalog/standards/iso/bc58ce78-0bb9-437f-8378-151df1954b9d/iso-iec-23000-16-2018>

Introduction

ISO/IEC 23000 (also known as “MPEG-A”) is a suite of MPEG standards designed to support a fast track to standardization of tested and verified technologies taken from the MPEG body of standards combined to form Multimedia Application Formats (MAF). If a needed piece of technology is not available within MPEG to achieve the desired format functionality, then additional technologies originating from other organizations may be included by reference.

The MAF defined by the Publish/Subscribe Application Format (PSAF) allows parties of the Publish/Subscribe (PubSub) communication model to support functionalities that are specific to publication, search and consumption of media content (in the following called Resource). The PubSub communication parties are:

- a) *Publishers*:
 - 1) create and store Resource Information (RI) on a publicly accessible location (e.g. an Information Centric Network);
 - 2) create and send Publications Information (PI) to Match Service Providers (MSP);
- b) *Subscribers*:
 - 1) create and send Subscriptions Information (SI) to Match Service Providers (MSP);
- c) *Match Service Providers (MSP)*:
 - 1) perform matches of Subscriptions with Publications;
 - 2) send Notification Information (NI) to users listed in PIs and SIs when a Match has been found;
- d) *Consumers*:
 - 1) receive Notification Information (NI);
 - 2) access the Resource present in or referenced by the Resource Information (RI).

NOTE In PubSub, senders do not communicate information directly to the intended receivers but rely on a service that mediates the sender-receiver relationship and sends notifications to relevant parties.

It should be noted that in PSAF, "Publisher" is not necessarily a user who distributes media to end users and "Subscriber" is not necessarily synonymous with end user or consumer. Indeed, in PSAF, Publisher may represent a user who has created a media item and wants to offer it to publishers and Subscriber may represent a publisher who is looking for media to be published and distributed.

PSAF specifies four formats — RI, PI, SI, and NI — to allow Publishers, Subscribers, Match Service Providers and Consumers to manage and control the way the information they exchange is used while trying to achieve their purposes.

The structure of the document is as follows:

[Clause 2](#) lists normative references. [Clauses 3](#) and [4](#) define the abbreviated terms and the terms used in this document. [Clause 5](#) specifies the PSAF reference model. [Clause 6](#) specifies the DIDL profile schema specific for PSAF and the PSAF Metadata Schema.