
**Information technology — Multimedia
service platform technologies —**

**Part 5:
Service aggregation**

*Technologies de l'information — Technologies de la plate-forme de
services multimédia —*

Partie 5: Aggrégation de service



COPYRIGHT PROTECTED DOCUMENT

© ISO/IEC 2013

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

Contents

Page

Foreword	iv
Introduction.....	v
1 Scope.....	1
2 Normative References.....	1
3 Terms, definitions and abbreviated terms	1
3.1 Terms and definitions	1
3.2 Abbreviated terms	3
4 Namespaces and conventions	4
4.1 Namespaces.....	4
4.2 Namespace convention	4
4.3 Conventions	5
4.4 MPEG-M Elementary and Aggregated Services Registration Authority.....	5
5 Overview.....	5
6 Aggregated Service definition	6
6.1 Introduction.....	6
6.2 Methodology	6
6.3 MPEG-M Elementary and Aggregated Services Registration Authority.....	7
6.4 Examples	7
6.4.1 Introduction.....	7
6.4.2 Application of the methodology to the seller use case.....	7
6.4.3 Application of the methodology to the buyer use case	14
7 Formal representation of service workflows	19
7.1 Introduction.....	19
7.2 BPMN 2.0 Representation of aggregated services using bpmn:collaboration.....	19
7.3 BPMN 2.0 Representation of aggregated services using bpmn:choreography	21
7.4 Representation of Service Types.....	22
Annex A (informative) MPEG-M Elementary and Aggregated Services Registration Procedure	24
A.1 General information	24
A.2 Access to the MPEG-M Elementary and Aggregated Services Registration Authority	24
A.3 Review and response to applicants	25
A.4 Acceptance criteria for registration application	25
A.5 Assignment of identifiers	26
A.6 Maintenance	26
Annex B (informative) Create and Identify Content Aggregated Service.....	27
Annex C (informative) TV-Multimedia Processing Aggregated Service.....	32
C.1 Aggregated Service Definition	32
C.2 Syntax of Service Type data format	39
C.3 Semantics of Service Type data format	42
C.4 ServiceType XML declarations	46
C.5 Classification Schemes of Service Type data format.....	47
C.5.1 TVMContentIOTypeCS	47
C.6 Example.....	48
Annex D (informative) VOD Service via Speech Interface	51
Bibliography.....	57

Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of the joint technical committee is to prepare International Standards. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights.

ISO/IEC 23006-5 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 29, *Coding of audio, picture, multimedia and hypermedia information*.

ISO/IEC 23006 consists of the following parts, under the general title *Information technology — Multimedia service platform technologies*:

- *Part 1: Architecture*
- *Part 2: MPEG extensible middleware (MXM) API*
- *Part 3: Conformance and reference software*
- *Part 4: Elementary services*
- *Part 5: Service aggregation*

Introduction

ISO/IEC 23006 is a suite of standards that has been developed for the purpose of enabling the easy design and implementation of media-handling value chains whose devices interoperate because they are all based on the same set of technologies accessible from the middleware.

ISO/IEC 23006 was referred to as MPEG Extensible Middleware (MXM) in its first edition, and it specified an architecture (Part 1), an API (Part 2), a reference software (Part 3) and a set of protocols to which MXM Devices had to adhere (Part 4).

ISO/IEC 23006 is referred to as Multimedia Service Platform Technologies (MSPT) in its second edition, and it conserves the architecture and design philosophy of the first edition, but stresses the Service Oriented Architecture character. It also specifies how to combine elementary services into aggregated services (Part 5).

This second edition has been specified to address the demand of service specification for an advanced IPTV terminal (AIT). The ISO/IEC 23006 suite of standards also aims at leveraging on advanced technologies to bring into IPTV services the buoyancy of new exciting initiatives – sometimes assembling millions of users in a fortnight – that pop up almost every day with new features such as open APIs and the possibility for third parties to provide applications to those APIs.

This enables the development of a global market of:

- MSPT applications that can run on MSPT devices, such as Advanced IPTV Terminals (AITs), thanks to the existence of a standard MSPT application API;
- MSPT devices executing MSPT applications thanks to the existence of a standard MSPT architecture;
- MSPT engines thanks to the existence of standard MSPT architecture and standard APIs;
- Innovative business models because of the ease to design and implement media-handling value chains whose devices interoperate because they are all based on the same set of technologies, especially MPEG technologies.

[This is a preview - click here to buy the full publication](#)

Information technology — Multimedia service platform technologies —

Part 5: Service aggregation

1 Scope

This part of ISO/IEC 23006 specifies the technology enabling the combination of Elementary Services (ESs) to build Aggregated Services (ASs). It is worth noting that it does not impose the use of any set of technologies but provides a methodology which defines the basic steps for the definition of new ASs and gives some representative examples to help in the understanding of the methodology.

It also describes the mechanism for registration of ASs and new ESs not present in ISO/IEC 23006-4. The services registered could be then used in the same way as the ones defined in ISO/IEC 23006-4 for further usage, for instance, for the development of new Aggregated Services.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/IEC 23006-4, *Information technology — Multimedia service platform technologies — Part 4: Elementary services*