
**Information technology — MPEG
systems technologies —**

**Part 15:
Carriage of web resources in ISOBMFF**

*Technologies de l'information — Technologies des systèmes MPEG —
Partie 15: Transport de ressources web au format ISOBMFF*





COPYRIGHT PROTECTED DOCUMENT

© ISO/IEC 2019

All rights reserved. Unless otherwise specified, or required in the context of its implementation, 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
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Fax: +41 22 749 09 47
Email: copyright@iso.org
Website: 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	2
4 Hypothetical processing	2
4.1 Overview	2
4.2 General processing models	2
4.3 Item processing and caching	3
4.4 Timed sample processing	3
5 Carriage of web data in ISOBMFF	4
5.1 Overview	4
5.2 Timed web resources	4
5.2.1 Overview	4
5.2.2 Track layout	4
5.2.3 Track definitions	4
5.3 Non-timed web resources	6
5.3.1 Overview	6
5.3.2 Web Items	7
5.4 URLs to web resources embedded in ISOBMFF files	7
Annex A (informative) Examples	9
Bibliography	19

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.

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 document 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).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents) or the IEC list of patent declarations received (see <http://patents.iec.ch>).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see www.iso.org/iso/foreword.html.

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*.

A list of all parts in the ISO/IEC 23001 series can be found on the ISO website.

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.

Introduction

ISO/IEC 14496-12 specifies a format for the storage of timed resources such as media streams as well as of resources for which no timed stream structure exists, or when the timed stream structure does not need to be exposed.

This document specifies the use of ISO/IEC 14496-12 tools for the storage and delivery of web data. The specified storage is designed to enable enriching audio/video content, as well as audio-only content, with synchronized, animated, interactive web data, including overlays.

Information technology — MPEG systems technologies —

Part 15:

Carriage of web resources in ISOBMFF

1 Scope

This document specifies how the format defined in ISO/IEC 14496-12 can be used to store web resources (HTML, JavaScript, CSS, etc.) and defines brands to identify files conforming to this document. It also specifies hypothetical processing for how these files can be consumed by web browsers.

The specified storage enables the delivery of synchronized media and web resources as supported by ISO/IEC 14496-12: file download, progressive file download, streaming, broadcast, etc.

This document also defines how to signal required web capabilities to process the files. This is done in a way that web profiles defined by other organizations can be signalled in a dedicated box, e.g. the MIME Box, similarly to how it is done in ISO/IEC 14496-30.

This document does not define any profiles for web data, only their carriage.

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 14496-12, *Information technology — Coding of audio-visual objects — Part 12: ISO Base Media file format*