# INTERNATIONAL STANDARD

ISO/IEC 23736-4

First edition 2020-02

## Information technology — Digital publishing — EPUB 3.0.1 —

Part 4:

## Open container format

Technologies de l'information — Publications numériques — EPUB 3.0.1 —

Partie 4: Format de conteneur ouvert





#### **COPYRIGHT PROTECTED DOCUMENT**

#### © ISO/IEC 2020

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

#### **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 (see <a href="https://www.iso.org/directives">www.iso.org/directives</a>).

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 <a href="www.iso.org/patents">www.iso.org/patents</a>) or the IEC list of patent declarations received (see <a href="http://patents.iec.ch">http://patents.iec.ch</a>).

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 <a href="https://www.iso.org/iso/foreword.html">www.iso.org/iso/foreword.html</a>.

This document was prepared by the World Wide Web Consortium (W3C) [as EPUB Open Container Format (OCF) 3.0.1] and drafted in accordance with its editorial rules. It was adopted, under the JTC 1 PAS procedure, by Joint Technical Committee ISO/IEC JTC 1, *Information technology*.

A list of all parts in the ISO/IEC 23736 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 <a href="https://www.iso.org/members.html">www.iso.org/members.html</a>.

## EPUB Open Container Format (OCF) 3.0.1



### Recommended Specification 26 June 2014

THIS VERSION

http://www.idpf.org/epub/301/spec/epub-ocf-20140626.html

LATEST VERSION

http://www.idpf.org/epub3/latest/ocf

PREVIOUS VERSION

http://www.idpf.org/epub/301/spec/epub-ocf-20140228.html

A diff of changes from the previous version is also available.

Please refer to the errata for this document, which may include some normative corrections.

Copyright © 2010-2013 International Digital Publishing Forum™

All rights reserved. This work is protected under Title 17 of the United States Code. Reproduction and dissemination of this work with changes is prohibited except with the written permission of the <u>International Digital Publishing Forum (IDPF)</u>.

EPUB is a registered trademark of the International Digital Publishing Forum.

#### **Editors**

James Pritchett, Learning Ally (formerly Recording for the Blind & Dyslexic)

Markus Gylling, International Digital Publishing Forum (IDPF)

#### TABLE OF CONTENTS

#### 1. Overview

- 1.1. Purpose and Scope
- 1.2. Terminology
- 1.3. Typographic Conventions
- 1.4. Conformance Statements
- 1.5. Content Conformance
- 1.6. Reading System Conformance

#### 2. OCF Abstract Container

- 2.1. Overview
- 2.2. File and Directory Structure
- 2.3. Relative IRIs for Referencing Other Components
- 2.4. File Names
- 2.5. META-INF
  - 2.5.1. Container META-INF/container.xml
  - 2.5.2. Encryption META-INF/encryption.xml
  - 2.5.3. Manifest META-INF/manifest.xml
  - 2.5.4. Metadata META-INF/metadata.xml
  - 2.5.5. Rights Management META-INF/rights.xml
  - 2.5.6. Digital Signatures META-INF/signatures.xml

#### 3. OCF ZIP Container

#### ISO/IEC 23736-4:2020(E)

- 3.1. Overview
- 3.2. ZIP File Requirements
- 3.3. OCF ZIP Container Media Type Identification

#### 4. Resource Obfuscation

- 4.1. Introduction
- 4.2. Obfuscation Key
- 4.3. Obfuscation Algorithm
- 4.4. Specifying Obfuscated Resources

#### A. Schemas

- A.1. Schema for container.xml
- A.2. Schema for encryption.xml
- A.3. Schema for signatures.xml

#### B. Example

C. The application/epub+zip Media Type

D. Acknowledgements and Contributors

References

#### > 1 Overview

#### > 1.1 Purpose and Scope

#### This section is informative

This specification, EPUB Open Container Format (OCF) 3.0.1, defines a file format and processing model for encapsulating the set of related resources that comprise an <a href="EPUB® Publication">EPUB® Publication</a> into a single-file container.

This specification is one of a family of related specifications that compose EPUB 3, the third major revision of an interchange and delivery format for digital publications based on XML and Web Standards. It is meant to be read and understood in concert with the other specifications that make up EPUB 3:

- The EPUB 3 Overview [EPUB3Overview], which provides an informative overview of EPUB and a roadmap to the rest of the EPUB 3 documents. The Overview should be read first.
- EPUB Publications 3.0.1 [Publications301], which defines the semantics and overarching conformance requirements for each Rendition of an EPUB Publication.
- EPUB Content Documents 3.0.1 [ContentDocs301], which defines profiles of XHTML, SVG and CSS for use in the context of EPUB Publications.
- EPUB Media Overlays 3.0.1 [MediaOverlays301], which defines a format and a processing model for synchronization of text and audio.

OCF is the required container technology for EPUB Publications. OCF may play a role in the following workflows:

- During the preparation steps in producing an EPUB Publication, OCF may be used as the container format when exchanging an in-progress EPUB Publication between different individuals and/or different organizations.
- When providing an EPUB Publication from publisher or conversion house to the distribution or sales channel, OCF is the recommended container format to be used as the transport format.

• When delivering the final EPUB Publication to an EPUB Reading System or <u>User</u>, OCF is the required format for the container that holds all of the assets that make up the EPUB Publication.

The OCF specification defines the rules for structuring the file collection in the abstract: the "abstract container". It also defines the rules for the representation of this abstract container within a ZIP archive: the "physical container". The rules for ZIP physical containers build upon the ZIP technologies used by [ODF]. OCF also defines a standard method for obfuscating embedded resources, such as fonts, for those EPUB Publications that require this functionality.

This specification supersedes Open Container Format (OCF) 3.0 [OCF30]. Refer to [EPUB3Changes] for information on differences between this specification and its predecessor.