BS ISO/IEC 23736-4:2020

BSI Standards Publication

Information technology — Digital publishing — EPUB 3.0.1

Open container format

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National foreword

This British Standard is the UK implementation of ISO/IEC 23736-4:2020.

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Foreword

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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.

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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.

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› 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 EPUB® Publication 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.

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- When delivering the final EPUB Publication to an EPUB Reading System or User, 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.

› 1.2 Terminology

EPUB Publication

A collection of one or more Renditions conforming to this specification and its sibling specifications , packaged in an EPUB Container.

An EPUB Publication typically represents a single intellectual or artistic work, but this specification and its sibling specifications do not circumscribe the nature of the content.

Rendition

A logical document entity consisting of a set of interrelated resources representing one rendering of an EPUB Publication.

Default Rendition

The Rendition listed in the first `rootfile` element in the container.xml file.

Publication Resource

A resource that contains content or instructions that contribute to the logic and rendering of at least one Rendition of an EPUB Publication. In the absence of this resource, the EPUB Publication might not render as intended by the Author. Examples of Publication Resources include a Rendition's Package Document, EPUB Content Document, EPUB Style Sheets, audio, video, images, embedded fonts and scripts.

With the exception of the Package Document itself, the Publication Resources required to render a Rendition are listed in that Rendition's manifest [Publications301] and bundled in the EPUB Container file (unless specified otherwise in Publication Resource Locations [Publications301]).

Examples of resources that are not Publication Resources include those identified by the Package Document link [Publications301] element and those identified in outbound hyperlinks that resolve outside the EPUB Container (e.g., referenced from an [HTML5] `a` element `href` attribute).

EPUB Content Document

A Publication Resource that conforms to one of the EPUB Content Document definitions (XHTML or SVG).

An EPUB Content Document is a Core Media Type, and may therefore be included in the EPUB Publication without the provision of fallbacks [Publications301] .

XHTML Content Document

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An EPUB Content Document conforming to the profile of [HTML5] defined in XHTML Content Documents [ContentDocs301] .

XHTML Content Documents use the XHTML syntax of [HTML5].

SVG Content Document

An EPUB Content Document conforming to the constraints expressed in SVG Content Documents [ContentDocs301] .

Core Media Type

A set of Publication Resource types for which no fallback is required. Refer to Publication Resources [Publications301] for more information.

Package Document

A Publication Resource carrying bibliographical and structural metadata about a given Rendition of an EPUB Publication, as defined in Package Documents [Publications301] .

Unique Identifier

The Unique Identifier is the primary identifier for an EPUB Publication, as identified by the `unique-identifier` attribute. The Unique Identifier may be shared by one or many Renditions of the same EPUB Publication that conform to the EPUB standard and embody the same content.

The Unique Identifier is less granular than the ISBN. However, significant revision, abridgement, etc. of the content requires a new Unique Identifier.

EPUB Style Sheet (or Style Sheet)

A CSS Style Sheet conforming to the CSS profile defined in EPUB Style Sheets [ContentDocs301] .

Viewport

The region of an EPUB Reading System in which the content of an EPUB Publication is rendered visually to a User.

EPUB Container (or Container)

The ZIP-based packaging and distribution format for EPUB Publications defined in *OCF ZIP Container* .

OCF Processor

A software application that processes EPUB Containers according to this specification.

Root Directory

The root directory represents the base of the Abstract Container file system. This directory is virtual in nature: a Reading System might or might not generate a physical root directory for the contents of the Abstract Container if the contents are unzipped.

Author

The person(s) or organization responsible for the creation of an EPUB Publication, which is not necessarily the creator of the content and resources it contains.

User

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An individual that consumes an EPUB Publication using an EPUB Reading System.

EPUB Reading System (or Reading System)

A system that processes EPUB Publications for presentation to a User in a manner conformant with this specification and its sibling specifications .

› 1.3 Typographic Conventions

The following typographic conventions are used in this specification:

`markup`

All markup (elements, attributes, properties), code (JavaScript, pseudo-code), machine processable values (string, characters, media types) and file names are in red-orange monospace font.

`markup`

Links to markup and code definitions are underlined and in red-orange monospace font. Only the first instance in each section is linked.

`http://www.idpf.org/`

URIs are in navy blue monospace font.

hyperlink

Hyperlinks are underlined and in blue.

[reference]

Normative and informative references are enclosed in square brackets.

Term

Terms defined in the Terminology are in capital case.

Term

Links to term definitions have a dotted blue underline. Only the first instance in each section is linked.

Normative element, attribute and property definitions are in blue boxes.

```
Informative markup examples are in white boxes.
```

NOTE

Informative notes are in yellow boxes with a "Note" header.

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CAUTION

Informative cautionary note are in red boxes with a "Caution" header.

› 1.4 Conformance Statements

The keywords MUST, MUST NOT, REQUIRED, SHALL, SHALL NOT, SHOULD, SHOULD NOT, RECOMMENDED, MAY, and OPTIONAL in this document are to be interpreted as described in [RFC2119].

All sections of this specification are normative except where identified by the informative status label "This section is informative". The application of informative status to sections and appendices applies to all child content and subsections they may contain.

All examples in this specification are informative.

› 1.5 Content Conformance

› An OCF Abstract Container MUST meet the conformance constraints defined in *OCF Abstract Container* .

› An OCF ZIP Container (also referred to as an EPUB Container) MUST meet the conformance constraints defined in *OCF ZIP Container* .

› 1.6 Reading System Conformance

An EPUB Reading System MUST meet all of the following criteria:

› It MUST process the OCF ZIP Container in conformance with all Reading System conformance constraints expressed in *OCF ZIP Container* .

› If it has a Viewport, it MUST support deobfuscation of resources as defined in *Resource Obfuscation* .

› 2 OCF Abstract Container

› 2.1 Overview

This section is informative

An OCF Abstract Container defines a file system model for the contents of the container. The file system model uses a single common Root Directory for all of the contents of the container. All (non-remote) resources for embedded Renditions are located within the directory tree headed by the container's root directory, although no specific file system structure is mandated for this. The file

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