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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 document should be noted (see www.iso.org/directives).

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This document was prepared by the World Wide Web Consortium (W3C) (as EPUB Content Documents 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*.

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EPUB Content Documents 3.0.1



Recommended Specification 26 June 2014

THIS VERSION

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

LATEST VERSION

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

PREVIOUS VERSION

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

A <u>diff of changes</u> from the previous version is also available.

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

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Editors

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Markus Gylling, International Digital Publishing Forum (IDRF)-2020

William McCoy, International Digital Publishing Forum (IDPF)

Elika J. Etemad, Invited Expert

Matt Garrish, Invited Expert

TABLE OF CONTENTS

1. Overview

1.1. Purpose and Scope 1.2. Relationship to Other Specifications 1.2.1. Relationship to HTML5 1.2.2. Relationship to SVG 1.2.3. Relationship to CSS 1.2.4. Future Maintenance 1.3. Terminology **1.4. Typographic Conventions** 1.5. Conformance Statements 1.6. Namespace prefix mappings 2. EPUB Content Documents 2.1. XHTML Content Documents 2.1.1. Content Conformance 2.1.2. Reading System Conformance 2.1.3. HTML5 Extensions 2.1.3.1. Semantic Markup

2.1.3.1.1. Semantic Inflection 2.1.3.1.1.1. Introduction 2.1.3.1.1.2. The epub:type Attribute 2.1.3.1.1.3. Vocabulary Association 2.1.3.1.1.4. Processing Requirements 2.1.3.1.2. Semantic Enrichment 2.1.3.1.2.1. Introduction 2.1.3.1.2.2. Content Conformance 2.1.3.1.2.3. Processing Requirements 2.1.3.2. SSML Attributes 2.1.3.2.1. Overview 2.1.3.2.2. The ssml:ph attribute 2.1.3.2.3. The ssml:alphabet attribute 2.1.3.3. Content Switching 2.1.3.3.1. Introduction 2.1.3.3.2. Definition 2.1.3.3.2.1. The epub: switch Element 2.1.3.3.2.2. The epub: case Element 2.1.3.3.2.3. The epub:default Element 2.1.3.3.3. Processina 2.1.3.4. The epub:trigger Element 2.1.3.5. Alternate Style Tags 2.1.3.6. Custom Attributes 2.1.3.7. The aria-describedat Attribute 2.1.4. HTML5 Deviations and Constraints 2.1.4.1. Embedded MathML 2.1.4.1.1. Introduction 2.1.4.1.2. Content Conformance 2.1.4.1.3. Reading System Conformance REVEW 2.1.4.1.4. Alternative Content 2.1.4.2. Embedded SV(Gtandards.iteh.ai) 2.1.4.2.1. Embedded SVG and CSS 2.1.4.3. Unicode RestrictionsSO/IEC 23736-3:2020 2.1.4.4. Discourageds Gonstructs/standards/sist/bf0c9d82-4968-4d16-80c2-2.1.4.5. Special Considerations9d1/iso-iec-23736-3-2020 2.1.4.5.1. The body element 2.2. EPUB Navigation Documents 2.2.1. Introduction 2.2.2. Content Conformance 2.2.3. Reading System Conformance 2.2.4. EPUB Navigation Document Definition 2.2.4.1. The nav Element: Restrictions 2.2.4.2. The nav Element: Types 2.2.4.2.1. The toc nav Element 2.2.4.2.2. The page-list nav Element 2.2.4.2.3. The landmarks nav Element 2.2.4.2.4. Other nay Elements 2.2.4.3. The hidden attribute 2.3. SVG Content Documents 2.3.1. Introduction 2.3.2. Content Conformance 2.3.3. Restrictions on SVG 1.1 2.3.4. Reading System Conformance 2.3.5. Semantic Inflection 2.4. Scripted Content Documents 2.4.1. Scripting Contexts 2.4.2. Content Conformance 2.4.3. Reading System Conformance 2.4.4. Security Considerations 2.4.5. Event Model Considerations 2.5. Fixed-Layout Documents 2.5.1. Introduction 2.5.2. Reading System Conformance

2.5.3. Viewport Rendering 2.5.4. Content Dimensions for XHTML and SVG 2.5.4.1. Expressing ICB Dimensions in XHTML 2.5.4.2. Expressing ICB Dimensions in SVG 3. EPUB Style Sheets 3.1. Content Conformance 3.2. Reading System Conformance 3.3. EPUB 3 CSS Profile 3.3.1. CSS 2.1 3.3.2. CSS 2.0 3.3.3. CSS 3.0 Speech 3.3.4. CSS Fonts Level 3 3.3.5. CSS Text Level 3 3.3.6. CSS Text Decoration Level 3 3.3.7. CSS Writing Modes 3.3.8. Selectors 3.3.9. Media Queries 3.3.10. CSS Namespaces 3.3.11. CSS Multi-Column Layout 3.3.12. Ruby Positioning 3.3.13. Display Property Values oeb-page-head and oeb-page-foot [DEPRECATED] 4. PLS Documents 4.1. Overview 4.2. EPUB Publication Conformance 4.3. Content Conformance 4.4. Reading System Conformance A. JavaScript epubReadingSystem Object A.1. Syntax **iTeh STANDARD PREVIEW** A.2. Description (standards.iteh.ai) A.3. Properties A.4. Methods ISO/IEC 23736-3:2020 A.4.1. hasFeature A.4.1.1. Styntastandards.iteh.ai/catalog/standards/sist/bf0c9d82-4968-4d16-80c2f7104e7ae9d1/iso-iec-23736-3-2020 A.4.1.2. Description A.4.1.3. Features B. -epub-fullsize-kana Character Mapping Reference C. Acknowledgements and Contributors References

>1 Overview

> 1.1 Purpose and Scope

This section is informative

This specification, EPUB Content Documents 3.0.1, defines profiles of HTML5, SVG, and CSS for use in the context of EPUB® Publications.

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 Open Container Format (OCF) 3.0.1 [OCF301], which defines a file format and processing model for encapsulating a set of related resources into a single-file (ZIP) EPUB Container.
- EPUB Media Overlays 3.0.1 [MediaOverlays301], which defines a format and a processing model for synchronization of text and audio.

This specification supersedes EPUB Content Documents 3.0 [ContentDocs30]. Refer to [EPUB3Changes] for information on differences between this specification and its predecessor.

> 1.2 Relationship to Other Specifications

This section is informative

> 1.2.1 Relationship to HTML5

The <u>XHTML document type defined by this specification</u> is based on W3C [HTML5], and inherits all definitions of semantics, structure and processing behaviors from the HTML5 specification unless otherwise specified.

In addition, this specification defines a set of extensions to the W3C4HTML5-document model that Authors may include in XHTML Content Documents:-23736-3-2020

This specification defines a simplified processing model that does not require Reading Systems to support scripting, HTML5 forms or the HTML5 DOM. <u>EPUB Reading Systems</u> conformant with this specification are only required to be able to process a conforming <u>EPUB Content Document</u>. As <u>support for scripting and HTML5 forms</u> are optional Reading System features, a conformant Reading System might not be a fully-conformant HTML5 User Agent (i.e., it might not implement the complete HTML5 processing model).

> 1.2.2 Relationship to SVG

This specification defines <u>a restricted subset of SVG 1.1</u> to represent vector graphics inline in <u>XHTML</u> Content Documents and as standalone <u>SVG Content Documents</u>.

> 1.2.3 Relationship to CSS

The <u>CSS profile</u> defined in this specification has CSS 2.1 [CSS2.1] as its baseline. Any CSS Style Sheet that conforms to CSS 2.1 may be used in the context of an EPUB Publication, except as noted in <u>CSS 2.1</u>.

This specification also incorporates features defined by CSS3 Modules and introduces EPUB-specific CSS constructs.

> 1.2.4 Future Maintenance

This specification references W3C specifications that are not yet final, and incompatible changes to them may occur in the future that would cause EPUB 3 Content Documents that were previously conformant to no longer be conformant to the latest versions of the referenced specifications.

The IDPF anticipates revising this specification if and when such incompatible changes occur, updating the normative constraints defined herein as necessary.

> 1.3 Terminology

EPUB Publication

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

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

Rendition

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

Publication Resource

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A resource that contains content or instructions that contribute to the logic and rendering of at least one <u>Rendition</u> of an <u>EPUB Publication</u> 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 <u>Package Document</u>, <u>EPUB Content Document</u>, <u>EPUB Style Sheet</u>s, 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 <u>manifest</u> [Publications301] and bundled in the <u>EPUB Container</u> file (unless specified otherwise in <u>Publication Resource Locations</u> [Publications301]).

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

Core Media Type Resource

A <u>Publication Resource</u> that is a <u>Core Media Type</u> and may therefore be included in the EPUB Publication without the provision of <u>fallbacks</u> [Publications301].

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 <u>fallbacks</u> [Publications301].

XHTML Content Document

An EPUB Content Document conforming to the profile of [HTML5] defined in <u>XHTML</u> <u>Content Documents</u>.

XHTML Content Documents use the <u>XHTML syntax</u> of [HTML5].

SVG Content Document

An EPUB Content Document conforming to the constraints expressed in <u>SVG Content</u> <u>Documents</u>.

EPUB Navigation Document

A specialization of the <u>XHTML Content Document</u>, containing human- and machinereadable global navigation information, conforming to the constraints expressed in <u>EPUB</u> <u>Navigation Documents</u>.

Scripted Content Document

An EPUB Content Document that includes scripting or an XHTML Content Document that contains HTML5 forms elements.

Refer to Scripted Content Documents for more information.

Top-level Content Document

An EPUB Content Document referenced from the spine, whether directly or via a fallback chain [Publications301].

Fixed-Layout Document

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An EPUB Content Document directly referenced from the spine that has been designated pre-paginated in the Package Document, as defined in <u>The rendition:layout Property</u>

[Publications30,https://standards.iteh.ai/catalog/standards/sist/bf0c9d82-4968-4d16-80c2-

f7104e7ae9d1/iso-iec-23736-3-2020

The dimensions to use for rendering Fixed-Layout Documents are defined in <u>Fixed-Layout</u> <u>Documents</u> [ContentDocs301].

Core Media Type

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

Package Document

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

Manifest

A list of all <u>Publication Resources</u> that constitute the given <u>Rendition</u> of a <u>EPUB</u> <u>Publication</u>.

Refer to manifest [Publications301] for more information.

Spine

An ordered list of <u>Publication Resources</u>, <u>typically</u> <u>EPUB Content Documents</u>, representing the default reading order of the given <u>Rendition</u> of an EPUB Publication.

Refer to spine [Publications301] for more information.

Text-to-Speech (TTS)

The rendering of the textual content of an <u>EPUB Publication</u> as artificial human speech using a synthesized voice.

EPUB Style Sheet (or Style Sheet)

A CSS Style Sheet conforming to the CSS profile defined in *EPUB Style Sheets*.

Viewport

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

CSS Viewport

A Viewport capable of displaying CSS-styled content.

SVG Viewport

A Viewport capable of displaying SVG images.

EPUB Container (or Container)

The ZIP-based packaging and distribution format for <u>EPUB Publications</u> defined in [OCF301].

Author

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

User

(standards.iteh.ai)

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

EPUB Reading System (or Reading System)

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

> 1.4 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.

<u>markup</u>

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 <u>Terminology</u> 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.		
iTeh STANDARD PREVIEW		
(standards.iteh.ai)		
CAUTION		
Informative cautionary note are in red boxes with a "Caution" header.		
f7104e7ae9d1/iso-iec-23736-3-2020		

> 1.5 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.

> 1.6 Namespace prefix mappings

For convenience, the following namespace prefix mappings [XMLNS] are used throughout this specification:

prefix	namespace URI
epub	http://www.idpf.org/2007/ops

m	http://www.w3.org/1998/Math/MathML
pls	http://www.w3.org/2005/01/pronunciation-lexicon
ssml	http://www.w3.org/2001/10/synthesis
svg	http://www.w3.org/2000/svg

> 2 EPUB Content Documents

> 2.1 XHTML Content Documents

This section defines a profile of [HTML5] for creating XHTML Content Documents. An instance of an XML document that conforms to this profile is a Core Media Type and is referred to in this specification and its <u>sibling specifications</u> as an XHTML Content Document.

Unless otherwise specified, this specification inherits all definitions of semantics, structure and processing behaviors from the [HTML5] specification.



> 2.1.1 Content Conformance

An XHTML Content Document MUST meet all of the following criteria:

Document Properties

> It MUST meet the conformance constraints for XML documents defined in <u>XML Conformance</u> [Publications301].

> It MUST be an [HTML5] document that conforms to the XHTML syntax.

> For all document constructs used that are defined by [HTML5], it MUST conform to the conformance criteria defined for those constructs in that specification, unless explicitly overridden in <u>HTML5 Deviations and Constraints</u>.

> It MAY include extensions to the [HTML5] grammar as defined in <u>HTML5 Extensions</u>, and MUST conform to all content conformance constraints defined therein.

File Properties

> The XHTML Content Document filename **SHOULD** use the file extension .xhtml.

NOTE

All Publication Resources referenced from an XHTML Content Document must conform to the constraints for Publication Resources defined in <u>EPUB Publication — Content Conformance</u> [Publications301]

> 2.1.2 Reading System Conformance

A conformant EPUB Reading System MUST meet all of the following criteria for processing XHTML Content Documents:

> Unless explicitly defined by this specification or its <u>sibling specifications</u> as overridden, it <u>MUST</u> process XHTML Content Documents using semantics defined by the [HTML5] specification and honor any applicable User Agent conformance constraints expressed therein.

> It MUST meet all Reading System conformance criteria defined in HTML5 Extensions.

> It MUST recognize and adapt behaviorally to the constraints defined in <u>HTML5 Deviations and</u> <u>Constraints</u>.

 It MUST meet the Reading System conformance criteria defined in <u>Scripted Content Documents</u> — <u>Reading System Conformance</u>.

It MUST support visual rendering of XHTML Content Documents as defined in <u>EPUB Style</u> <u>Sheets — Reading System Conformance</u>.

> It SHOULD recognize embedded ARIA markup and support exposure of any given ARIA roles, states and properties to platform accessibility APIs [VA]-ARIA].

> 2.1.3 HTML5 Extensions

This section defines EPUB 3 <u>XHTML</u> Content Document extensions to the underlying [HTML5] document model.

> 2.1.3.1 Semantic Markup

> 2.1.3.1.1 Semantic Inflection

> 2.1.3.1.1.1 Introduction

This section is informative

Semantic inflection is the process of attaching additional meaning about the specific purpose and/or nature an element plays in an <u>XHTML</u> Content Document. In the context of <u>EPUB</u> Publications, the <u>epub:type</u> attribute is typically used to express domain-specific semantics, with the inflection(s) it carries complementing the underlying [HTML5] host vocabulary. The applied semantics always refine the meaning of their containing elements, never override their nature (e.g., the attribute can be used

to indicate a **section** is a chapter in a work, but cannot be used to turn **p** elements into list items to avoid proper list structures).

Semantic metadata is not intended for human consumption; it instead provides a controlled way for Reading Systems and other User Agents to learn more about the structure and content of a document, providing them the opportunity to enhance the reading experience for Users.

This specification defines a method for semantic inflection using *the attribute axis*: instead of adding new XML elements to the XHTML Content Document vocabulary, the **epub:type** attribute can be appended to existing elements to inflect the desired semantics. A mechanism to identify external vocabularies that provide controlled values for the attributes is also defined.

> 2.1.3.1.1.2 The epub:type Attribute

The **epub:type** attribute inflects semantics on the element on which it appears. Its value is one or more space-separated terms stemming from external vocabularies associated with the document instance, as defined in <u>Vocabulary Association</u>.

The inflected semantic MUST express a subclass of the semantic of the carrying element. In the case of semantically neutral elements (such as [HTML5] <u>div</u> and <u>span</u>), the inflected semantic MUST NOT attach a meaning that is already conveyed by an existing element (e.g., that a <u>div</u> represents a paragraph or section). Reading Systems MUST <u>ignore inflected semantics</u> that conflict with the carrying element.

As the [HTML5] head element is a metadata container for a document, structural semantics expressed on this element or any descendant of it have no meaning. Reading Systems MUST ignore such semantics.

ISO/IEC 23736-3:2020

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f7104e7ae9d1/iso-iec-23736-3-2020

The epub:type attribute is intended to be functionally equivalent to the W3C Role Attribute [Role], but with restrictions as specified in <u>Vocabulary Association</u>. The IDPF's intent is to harmonize this attribute with W3C mechanisms for semantic inflection in a future major revision of the specification.

Attribute Name

NOTE

type

Namespace

http://www.idpf.org/2007/ops

Usage

<u>Global attribute</u>. MAY be specified on all elements.

Value

A space-separated list of <u>property</u> [Publications301] values, with restrictions as defined in <u>Vocabulary Association</u>.