PD ISO/IEC TS 30135-5:2014

BSI Standards Publication

Information technology — Digital publishing — EPUB3

Part 5: Media Overlay

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National foreword

This Published Document is the UK implementation of ISO/IEC TS 30135-5:2014.

The user's attention is drawn to the fact that the UK committee voted against this document at the enquiry stage. While considering the specification of EPUB to be technically sound, the committee had a number of concerns with the editorial quality of the specification, specifically the grouping of terms and definitions, the use of cross-references between parts, and the typographic layout of the document. The UK committee were concerned that this could present obstacles to interpretation by any user who had not participated in the development of EPUB and was unfamiliar with assumptions and interpretations made by other users.

The UK participation in its preparation was entrusted to Technical Committee ICT/-/1, Information systems co-ordination.

A list of organizations represented on this committee can be obtained on request to its secretary.

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Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
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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.

In other circumstances, particularly when there is an urgent market requirement for such documents, the joint technical committee may decide to publish an ISO/IEC Technical Specification (ISO/IEC TS), which represents an agreement between the members of the joint technical committee and is accepted for publication if it is approved by 2/3 of the members of the committee casting a vote.

An ISO/IEC TS is reviewed after three years in order to decide whether it will be confirmed for a further three years, revised to become an International Standard, or withdrawn. If the ISO/IEC TS is confirmed, it is reviewed again after a further three years, at which time it must either be transformed into an International Standard or be withdrawn.

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 TS 30135 series were prepared by Korean Agency for Technology and Standards (as KS X 6070 series) with International Digital Publishing Forum and were adopted, under a special “fast-track procedure”, by Joint Technical Committee ISO/IEC JTC 1, Information technology, in parallel with its approval by the national bodies of ISO and IEC.

ISO/IEC TS 30135 consists of the following parts, under the general title *Information technology — Document description and processing languages — EPUB 3:*

- *Part 1: Overview*
- *Part 2: Publications*
- *Part 3: Content Documents*
- *Part 4: Open Container Format*
- *Part 5: Media Overlay*
- *Part 6: Canonical Fragment Identifier*
- *Part 7: Fixed-Layout Documents*

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EPUB Media Overlays 3.0

Recommended Specification 11 October 2011

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http://www.idpf.org/epub/30/spec/epub30-mediaoverlays-20111011.html

Latest version

http://www.idpf.org/epub/30/spec/epub30-mediaoverlays.html

Previous version

http://www.idpf.org/epub/30/spec/epub30-mediaoverlays-20110908.html

A diff of changes from the previous draft is available at this link.

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

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Editors

Marisa DeMeglio, DAISY Consortium

Daniel Weck, DAISY Consortium

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1 Overview

1.1 Purpose and Scope

This section is informative

This specification, EPUB Media Overlays 3.0, defines a usage of [SMIL] (Synchronized Multimedia Integration Language), the Package Document, the EPUB® Style Sheet, and the EPUB Content Document for representation of audio synchronized with the EPUB Content Document.

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 [Publications30], which defines publication-level semantics and overarching conformance requirements for EPUB Publications.
- EPUB Content Documents 3.0 [ContentDocs30], which defines profiles of XHTML, SVG and CSS for use in the context of EPUB Publications.
- EPUB Open Container Format (OCF) 3.0 [OCF3], which defines a file format and processing model for encapsulating a set of related resources into a single-file (ZIP) EPUB Container.

1.2 Relationship to Other Specifications

This section is informative

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This specification relies on a subset of [SMIL], from which the EPUB Media Overlays elements and attributes defined in Media Overlay Document Definition are derived.

› 1.3 Terminology

EPUB Publication (or Publication)

A logical document entity consisting of a set of interrelated resources and packaged in an EPUB Container, as defined by this specification and its sibling specifications.

Publication Resource

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

With the exception of the Package Document itself, Publication Resources must be listed in the manifest [Publications30] and must be bundled in the EPUB container file unless specified otherwise in Publication Resource Locations [Publications30].

Examples of resources that are not Publication Resources include those identified by the Package Document link [Publications30] 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 [Publications30].

XHTML Content Document

An EPUB Content Document conforming to the profile of [HTML5] defined in XHTML Content Documents [ContentDocs30].

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 [ContentDocs30].

EPUB Navigation Document

A specialization of the XHTML Content Document, containing human- and machine-readable global navigation information, conforming to the constraints expressed in EPUB Navigation Documents [ContentDocs30].

Core Media Type

A set of Publication Resource types for which no fallback is required. Refer to Publication Resources [Publications30] for more information.

Package Document

A Publication Resource carrying bibliographical and structural metadata about the EPUB

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Publication, as defined in Package Documents [Publications30].

Manifest

A list of all Publication Resources that constitute the EPUB Publication.

Refer to manifest [Publications30] for more information.

Spine

An ordered list of Publication Resources, typically EPUB Content Documents, representing the default reading order of the Publication.

Refer to spine [Publications30] for more information.

Media Overlay Document

An XML document that associates the XHTML Content Document with pre-recorded audio narration in order to provide a synchronized playback experience, as defined in this specification.

Text-to-Speech (TTS)

The rendering of the textual content of an EPUB Publication 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 [ContentDocs30].

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.

EPUB Container (or Container)

The ZIP-based packaging and distribution format for EPUB Publications defined in [OCF3].

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

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.

› 1.4 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].

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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.

› 2 Media Overlay Document Definition

› 2.1 Introduction

This section is informative

Books featuring synchronized audio narration are found in mainstream e-books, educational tools and e-books formatted for persons with print disabilities. In EPUB 3, these types of books are created by using Media Overlay Documents to describe the timing for the pre-recorded audio narration and how it relates to the EPUB Content Document markup. The file format for Media Overlays is defined as a subset of SMIL, a W3C recommendation for representing synchronized multimedia information in XML.

The Media Overlays feature is designed to be transparent to EPUB Reading Systems that do not support the feature. The inclusion of Media Overlays in an EPUB Publication has no impact on the ability of Media Overlay-unaware Reading Systems to render that Publication as a "regular" EPUB Publication.

Although future versions of this specification may incorporate support for video media (e.g., synchronized text/sign-language books), this version supports only synchronizing audio media with the EPUB Content Document.

› 2.2 Content Conformance

A Media Overlay Document must meet all of the following criteria:

Document Properties

› It must meet the conformance constraints for XML documents defined in XML Conformance [Publications30].

› It must be valid to the Media Overlays schema as defined in Appendix A, *Media Overlays Schema* and conform to all content conformance constraints expressed in Media Overlay Document Definition.

› It must be authored to reflect the structure of the EPUB Content Document with which it is associated, as stated in Structure .

› Authors should avoid using scripts to control audio and video embedded in the EPUB Content Document, as stated in Embedded Audio and Video.

› It should use semantic markup where appropriate, as described in Semantic Inflection.

› It must be packaged with the EPUB Publication as shown in Packaging.

File Properties

› The Media Overlay Document filename should use the file extension `.smil`.

› 2.3 Reading System Conformance

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EPUB Reading System support for Media Overlays is optional. A Reading System that supports Media Overlays must meet the following criteria:

› It must process the Media Overlay Document in conformance with all Reading System conformance constraints expressed in Media Overlay Document Definition.

› It must support XHTML Content Documents, and it may support SVG Content Documents.

› It must render Media Overlay elements as described in Basic Playback.

› It must allow User navigation while a Media Overlay is being played, as discussed in Navigation.

› It must adhere to rules regarding referenced audio and video embedded in the EPUB Content Document, as stated in Embedded Audio and Video.

› Text-to-Speech (TTS)-capable Reading Systems should conform to Reading System Text-to-Speech Conformance Requirements [Publications30].

› It should offer the skippability and escapability features described in Skippability and Escapability.

A Reading System that does not support Media Overlays must meet the following criteria:

› It must ignore both the `media-overlay` attribute on manifest `item` elements and the manifest `item` elements where the `media-type` attribute value equals `application/smil+xml`.

› 2.4 Media Overlay Document Definition

All elements [XML] defined in this section are in the `http://www.w3.org/ns/SMIL` namespace [XMLNS] unless otherwise specified.

› 2.4.1 The `smil` Element

The `smil` element must be the root element of all Media Overlay Documents.

Element Name

`smil`

Usage

The `smil` element is the root element of the Media Overlay Document.

Attributes

`version` [required]

Specifies the version number of the [SMIL] specification to which the Media Overlay adheres.

This attribute must have the value `3.0` to indicate compliance with this version of the specification.

`id` [optional]

The ID [XML] of this element, which must be unique within the document scope.

`epub:prefix` [optional]

Declares additional metadata vocabulary prefixes.

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