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Partie 1: Aperçu général

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Foreword

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This document was prepared by the World Wide Web Consortium (W3C) (as EPUB 3 Overview) 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 3 Overview

Recommended Specification 26 June 2014

THIS VERSION

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

LATEST VERSION

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

PREVIOUS VERSION

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

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

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This document is informative

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› 1 Introduction

› 1.1 Overview

The EPUB® specification is a distribution and interchange format standard for digital publications and documents. EPUB defines a means of representing, packaging and encoding structured and semantically enhanced Web content — including HTML5, CSS, SVG and other resources — for distribution in a single-file format.

EPUB 3, the third major release of the standard, consists of a set of four specifications, each defining an important component of an overall EPUB Publication:

- 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 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.

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EPUB has been widely adopted as the format for digital books (eBooks), and these new specifications significantly increase the format's capabilities in order to better support a wider range of publication requirements, including complex layouts, rich media and interactivity, and global typography features. The expectation is that EPUB 3 will be utilized for a broad range of content, including books, magazines and educational, professional and scientific publications.

This document provides a starting point for content authors and software developers wishing to understand these specifications. It consists entirely of informative overview material, including a roadmap to the four building-block specification documents that compose EPUB 3.

Another informative document, EPUB 3 Changes from EPUB 2.0.1 [EPUB3Changes], describes changes in EPUB 3 from the previous version, but is intended primarily for Authors and EPUB Reading System vendors migrating from EPUB 2.0.1 to EPUB 3 and for those who anticipate supporting both versions.

› 1.2 Roadmap

This section provides an overview of the EPUB 3 specifications by explaining in brief the components of an EPUB Publication. Links to additional information within this document and to the specifications are included.

An EPUB Publication, at its most basic level, is a bundled collection of resources that can be reliably and predictably ingested by an EPUB Reading System in order to render its contents to a User. Each EPUB Publication consists of one or renderings of its content, called Renditions.

Some of the resources in the EPUB Container facilitate the discovery and processing of the Renditions, while others make up the content of the source publication. The latter, EPUB Content Documents, are described in Content Documents and are fully defined in [ContentDocs301].

An EPUB Publication's resources are typically bundled for distribution as a ZIP-based archive with the file extension `.epub`. As conformant ZIP archives, EPUB Publications can be unzipped by many software programs, simplifying both their production and consumption. The container format is introduced in Container and defined in [OCF301].

The container format not only provides a means of determining that the zipped content represents an EPUB Publication (the `mimetype` file), but also provides a universally-named directory of informative resources (`/META-INF`). Key among these is the `container.xml` file, which directs Reading Systems to the root files of the available Renditions of the EPUB Publication (their Package Documents).

The Package Document is itself a kind of centralized information source for a given Rendition, storing metadata about the specific work expressed by the Rendition, providing an exhaustive list of resources and defining a default reading order. The Package Document is introduced in Package Document and defined in [Publications301].

The preceding components of an EPUB Publication are not new to EPUB 3, and will be familiar to anyone who has worked with EPUB Publications before, although they have been changed and enhanced in this version. A new core addition to EPUB 3, however, is the Media Overlay Document, which defines a means of synchronizing text and audio playback for a given Rendition. The Overlay Document is introduced in Multimedia and defined in [MediaOverlays301].

The following example shows the resources a minimal single-Rendition "Hello World" EPUB Publication might contain:

```
mimetype
META-INF/container.xml
```

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```
Content/HelloWorld.opf
Content/HelloWorld.xhtml
```

While conceptually simple, an EPUB Publication is more than just a collection of HTML pages and dependent assets in a ZIP package as represented in this example. The following sections of this document delve into more detail about the primary features and functionality that EPUB Publications provide to enhance the reading experience.

› 2 Features

This section covers the major features of EPUB, including important components and topics that apply to the process of authoring EPUB Publications as a whole.

› 2.1 Package Document

Each Rendition of an EPUB Publication includes a single Package Document, which specifies all the resources required to render that Rendition. The Package Document also defines a reading order for linear consumption, and associates metadata and navigation information for the Rendition.

The Package Document represents a significant improvement on a typical Web site. A Web site, for example, embeds references to its resources within its content, which, while a simple and flexible means of identifying resources, makes it difficult to enumerate all the resources required to render it. In addition, there is no standard way for a Web site to define that a sequence of pages make up a larger publication, which is precisely what EPUB's `spine` [Publications301] element does (i.e., it provides an external declarative means to explicitly specify navigation through a collection of documents). Finally, the Package Document defines a standard way to represent metadata globally applicable to a collection of pages.

The Package Document also includes a `collection` [Publications301] element, which allows grouping of logically-related Publication Resources. This element exists to enable the development of specialized content identification, processing and rendering features, such as the ability to define embedded preview content, or assemble an index or dictionary from its constituent XHTML Content Documents.

The Package Document and other Rendition-specific constructs are specified in [Publications301].

› 2.2 Navigation

› 2.2.1 Reading Order

A key concept of EPUB is that an EPUB Publication consists of multiple resources that can be completely navigated and consumed by a person or program *in some specific order*.

Many types of publication have an obvious reading order, or logical progression through their content. A novel is an example of a highly sequential document — it typically has a beginning, middle and end — but not all publications are so ordered: a cookbook or collection of photographic images might be considered to be more like a database. All documents do, however, have at least one logical ordering

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of all their top-level content items, whether by date, topic, location or some other criteria (e.g., a cookbook is typically ordered by type of recipe).

Each Rendition of an EPUB Publication defines at least one such logical ordering of all its top-level content (the spine [Publications301]), as well as a declarative table of contents (the EPUB Navigation Document [ContentDocs301]). EPUB Publications make these data structures available in a machine-readable way *external* to the content, simplifying their discovery and use.

EPUB Publications are not limited to the linear ordering of their contents, nor do they preclude linking in arbitrary ways — just like the Web, EPUB Publications are built on hypertext — but the basic consumption and navigation can be reliably accomplished in a way that is not true for a set of HTML pages.

› 2.2.2 Navigation Document

Each Rendition of an EPUB Publication contains a special XHTML Content Document called the EPUB Navigation Document, which uses the HTML5 `nav` element to define human- and machine-readable navigation information.

The Navigation Document supersedes the NCX document [OPS2], and the inclusion of NCX documents is only recommended for forward compatibility in older Reading Systems. The Navigation Document, while maintaining the baseline accessibility and navigation support and features of the NCX, introduces new functionality and rendering features to enhance navigation for all Users. Prime among these are better support for internationalization (as an XHTML5 document itself, the Navigation Document natively supports ruby annotations) and support for embedded grammars (MathML and SVG can be included within navigation links).

As XHTML Content Documents, Navigation Documents also provide a flexible means of tailoring the navigation display using CSS and the hidden attribute [ContentDocs301] while not impacting access to information for accessible Reading Systems.

The structure and semantics of Navigation Documents are defined in EPUB Navigation Documents [ContentDocs301] .

› 2.3 Linking

The new EPUB Canonical Fragment Identifier (epubcfi) Specification [EPUBCFI] defines a standardized method for linking into an EPUB Publication.

Required support for this scheme in Reading Systems means that EPUB now has an interoperable linking mechanism, one that can, for example, facilitate the sharing of bookmarks and reading locations across devices.

› 2.4 Metadata

EPUB Publications provide a rich array of options for adding metadata. Each Rendition's Package Document includes a dedicated metadata section [Publications301] for general information about the EPUB Publication, allowing titles, authors, identifiers and other information about the EPUB Publication to be easily accessed. It also provides the means to attach complete bibliographic records using the link element [Publications301] .

The Package Document also allows a Unique Identifier to be established for the EPUB Publication using the unique-identifier attribute [Publications301] . The required last-modified date in the Package

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