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Part 7: EPUB3 Fixed-Layout Documents

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Partie 7: Documents à mise en page fixe EPUB3

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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.

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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*

EPUB 3 Fixed-Layout Documents

INFORMATIONAL DOCUMENT

NOTE: It is anticipated that this document will be superseded by forthcoming updates to Publications 3.0 [Publications30] and Content Documents 3.0 [ContentDocs30] that will incorporate the metadata properties and mechanisms separately defined herein.

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http://www.idpf.org/epub/fxl/epub-fxl-20120313.html

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Status of this Document

This is an IDPF Informational Document, produced by the IDPF EPUB working group and approved by the IDPF board of directors as of March 13, 2012. It may be updated, replaced, or rendered obsolete by other documents at any time.

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›Purpose and Scope

EPUB® documents, unlike print books or PDF files, are designed to change. The content flows, or reflows, to fit the screen and to fit the needs of the reader. The EPUB 3.0 Specification says that “content presentation should adapt to the user rather than the user having to adapt to a particular representation of content.”

But this principle doesn’t work for all types of documents. Sometimes content and design are so intertwined they cannot be separated. Any change in appearance risks changing the meaning, or losing all meaning. *Fixed-layout documents* give content creators greater control over presentation, when a reflowable EPUB is not suitable for the content.

This document, EPUB 3 Fixed-Layout Documents, defines a set of metadata properties to allow declarative expression of intended rendering behaviors of fixed-layout documents in the context of EPUB 3. It also defines mechanisms to express the intended rendering dimensions of fixed-layout XHTML and SVG [ContentDocs30] content, as well as bitmap images.

NOTE

EPUB 3 affords multiple mechanisms for representing fixed-layout content in EPUB 3 documents. When fixed-layout content is necessary, the author's choice of mechanism will depend on many factors including desired degree of precision, file size, accessibility, etc. This document does not attempt to dictate the author's choice of mechanism.

› Property Definitions

›The rendition:layout property

Name	`rendition:layout`
Description	Specifies whether the given Publication or spine item is reflowable or pre-paginated.
Value	`reflowable` | `pre-paginated`
Usage	Package Document `meta` element Package Document `itemref` element
Initial	In `meta`: reflowable In `itemref`: inherited from `meta`
Cardinality	In `metadata`: zero or one In `itemref`: zero or one

›Usage

When the `rendition:layout` property is specified on the Package Document `meta` element, it indicates that the paginated or reflowable layout style (refer to Allowed values below) applies globally for the given Publication (i.e. for all spine items).

As 'reflowable' is the initial value of this property in the `meta` usage context, this value must be assumed by Reading Systems as the global value if no `meta` element carrying this property occurs in the Package Document instance.

The `rendition:layout` property may also be specified locally on the Package Document spine `itemref` element, and will, in this case, override the global value for the given spine item. (Refer to Specifying name-value pairs on the spine itemref element for syntactical rules specific to local specification.)

›Allowed values

The following values are defined for use with the `rendition:layout` property:

reflowable
: The given spine item is not pre-paginated. Reading Systems may apply dynamic pagination when rendering this spine item.

pre-paginated
: The given spine item is pre-paginated. Reading Systems must produce exactly one page when rendering this spine item. (Refer to Content dimensions for rules regarding dimensional declarations.)

> NOTE
>
> Reading Systems typically restrict or deny the application of User or User Agent stylesheets to pre-paginated documents, since as a result of intrinsic properties of such documents, dynamic style changes are highly likely to have unintended consequences. Authors should take into account the negative impact on usability and accessibility that these restrictions have when choosing to use pre-paginated instead of reflowable content. Refer to Guideline 1.4 - Provide text configuration of the W3C User Agent Accessibility Guidelines for related information.

›The rendition:orientation property

Name	`rendition:orientation`
Description	Specifies which orientation(s) the Author intends for the given Publication or spine item to be rendered in.
Value	`landscape` | `portrait` | `auto`
Usage	Package Document `meta` element Package Document `itemref` element
Initial	In `meta`: auto In `itemref`: inherited from `meta`

Cardinality	In `metadata`: zero or one In `itemref`: zero or one

›Usage

When the `rendition:orientation` property is specified on the Package Document `meta` element, it indicates that the intended orientation applies globally for the given Publication (i.e. for all spine items).

As 'auto' is the initial value of this property in the `meta` usage context, this value must be assumed by Reading Systems as the global value if no `meta` element carrying this property occurs in the Package Document instance.

The `rendition:orientation` property may also be specified locally on the Package Document spine `itemref` element, and will, in this case, override the global value for the given spine item. (Refer to Specifying name-value pairs on the spine itemref element for syntactical rules specific to local specification.)

›Allowed values

The following values are defined for use with the `rendition:orientation` property:

landscape
: The given spine item is intended for landscape rendering.

portrait
: The given spine item is intended for portrait rendering.

auto
: The given spine item is not orientation constrained.

Reading Systems that support multiple orientations should, unless the given value is 'auto', convey the intended orientation to the user. The means by which the intent is conveyed is implementation-specific.

›The rendition:spread property

Name	`rendition:spread`
Description	Specifies the intended Reading System synthetic spread behavior for this Publication or spine item.
Value	`none` | `landscape` | `portrait` | `both` | `auto`
Usage	Package Document `meta` element Package Document `itemref` element
Initial	In `meta`: auto In `itemref`: inherited from `meta`
Cardinality	In `metadata`: zero or one In `itemref`: zero or one

›Usage

When the `rendition:spread` property is specified on the Package Document `meta` element, it indicates that the intended synthetic spread behavior applies globally for the given Publication (i.e. for all spine items).

As 'auto' is the initial value of this property in the `meta` usage context, this value must be assumed by Reading Systems as the global value if no `meta` element carrying this property occurs in the Package Document instance.

The `rendition:spread` property may also be specified locally on the Package Document spine `itemref` element, and will, in this case, override the global value for the given spine item. (Refer to Specifying name-value pairs on the spine itemref element for syntactical rules.)

›Allowed values

The following values are defined for use with the `rendition:spread` property, where *synthetic spread* is defined as *the rendering of two adjacent pages simultaneously on the device screen*:

none
: Reading Systems must not incorporate this spine item in a synthetic spread.

landscape
: Reading Systems should incorporate this spine item in a synthetic spread only when the device is in landscape orientation.

portrait
: Reading Systems should incorporate this spine item in a synthetic spread only when the device is in portrait orientation.

both
: Reading Systems should incorporate this spine item in a synthetic spread regardless of device orientation.

auto
: No explicit synthetic spread behavior is defined. Reading Systems may use synthetic spreads in specific or all device orientations as part of a display area utilization optimization process.

When synthetic spreads are used in the context of XHTML and SVG Content Documents, the dimensions given via viewport/viewBox metadata represents the size of one page in the spread.

> NOTE
>
> Refer to 3.4.12 The spine Element for information about declaration of global flow directionality using the `page-progression-direction` attribute and that of local page-progression-direction within content documents.
>
> Refer also to Issue 205 for discussions on forthcoming specifications of precedence rules for the `page-progression-direction` attribute and the `writing-mode` and `direction` properties within XHTML Content Documents.

›The page-spread-* properties

Names	`rendition:page-spread-center`
	and, as defined in [Publications30]
	`page-spread-left` *and* `page-spread-right`

Description	Specifies the forced placement of a Content Document in a synthetic spread

Usage	Package Document spine `itemref` element
Cardinality	Zero or one

When a Reading System is rendering synthetic spreads, the default behavior is to populate the spread, which conceptually consists of two adjacent viewports, by rendering the next Content Document in the next available unpopulated viewport, where the location of "next" is determined by the given page progression direction, or by local declarations within content documents. By providing one of the page-spread-* properties on the spine itemref element, the author can override this automatic population behavior by forcing the given Content Document to be placed in a particular viewport.

The `page-spread-left` and `page-spread-right` properties are defined in [Publications30]. This document defines one additional property, `rendition:page-spread-center`, which indicates that the synthetic spread mode should be overridden such that instead of two adjacent viewports, a single viewport must be used, and positioned at the center of the screen.

Note that the presence of `rendition:page-spread-center` does not change the viewport dimensions; in particular it does not indicate that a viewport with the size of the whole spread should be created. This is important so that the scale factor stays consistent between regular and center-spread pages.

The `page-spread-left`, `page-spread-right` and `rendition:page-spread-center` properties apply to both pre-paginated and reflowable content, and they only apply when the Reading System is creating synthetic spreads.

›Usage of rendition properties in the EPUB 3 Package Document

›Prefix Mapping

When the metadata properties defined in this document are included in an EPUB 3 Package Document, they must be mapped to the URI `http://www.idpf.org/vocab/rendition/#` using the `prefix` attribute, as defined in EPUB Publications 3.0 vocabulary association.

```
<package …  prefix="rendition: http://www.idpf.org/vocab/rendition/#">
    …
</package>
```

Implementors should note that future revisions of [Publications30] may establish the vocabulary represented by the URI `http://www.idpf.org/vocab/rendition/#` as a reserved vocabulary. In this case, the result will be that a) explicit mapping declaration using the `prefix` attribute will no longer be applicable, and b) the prefix 'rendition' will be reserved for this vocabulary. Future revisions of [Publications30] may also integrate the properties defined here into the Package Document default vocabulary. In this case the properties defined herein will be allowed to occur in Package Documents without a prefix.

Note that Package Documents may include additional proprietary metadata properties that pertain to layout expressions (refer to Vocabulary Association Mechanisms for further information on extensibility). Reading Systems must ignore such expressions if they conflict behaviorally with the property semantics defined in this document.

›Specifying name-value pairs on the spine itemref element

In the context of the properties defined in this document, and when specifying property name-value pairs in the `properties` attribute on the Package Document spine `itemref` element, the following syntax must be used.

The property name and value is concatenated into a single string using a *hyphen-minus* character (`U+002D`) as