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Document management — Portable Document FormatPDF 1.7 and 2.0 structure namespace inclusion in ISO 32000-2

Gestion de documents — Format de document portableInclusion de l'espace de noms de structure PDF 1.7 et 2.0 dans l'ISO 32000-2

Contents

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 ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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This document was prepared by Technical Committee ISO/TC 171, *ISO TC 171*, Subcommittee SC 2, *Document file formats, EDMS systems and authenticity of information*.

A list of all parts in the ISO 32005 series can be found on the ISO website.

Introduction

ISO 32000-2 introduced the mechanism for defining namespaces within a logically structured PDF document; identified two recognized namespaces for tagged PDF documents; and provided strict hierarchical inclusion rules for the standard structure namespace for PDF 2.0. However, ISO 32000-2 did not specify restrictions and inclusion rules for the standard structure namespace for PDF 1.7. This document extends the hierarchical inclusion rules to address both the standard structure namespace for PDF 2.0 and the standard structure namespace for PDF 1.7.

The primary purpose of this document is to extend the rules already defined within ISO 32000-2 to resolve any ambiguity.

Document management — Portable Document Format — PDF 1.7 and 2.0 structure namespace inclusion in ISO 32000-2

The PDF Association may maintain an ongoing series of application notes for guiding developers and users of this document. These application notes are available at https://www.pdfa.org/. The PDF Association will also retain copies of the specific non-ISO normative references of this document which are publicly available electronic documents.

Document management — Portable Document Format —

Part :
PDF 1.7 and 2.0 structure namespace inclusion in ISO 32000-2

1 Scope

This document specifies containment requirements for tagged PDF documents that use the PDF 1.7 namespace and the PDF 2.0 namespace. These containment requirements extend, and entirely comply with, the rules and provisions already specified for tagged PDF documents within ISO 32000-2:2020.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 32000-1:2008, *Document management — Portable document format — Part 1: PDF 1.7*

ISO 32000-2:2020, *Document management — Portable document format — Part 2: PDF 2.0*

PDF Declarations, *PDF Association, September 5, 2019*, https://www.pdfa.org/resource/pdf-declarations/

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org

3.1
interactive processor
processor (3.7) that requires or allows human interaction with the content and other objects contained in the document during the software's processing phase

Note 1 to entry: A file viewing tool is an example of an interactive processor; a raster image processor is an example of a processor that is not interactive.

3.2
PDF
Portable Document Format

file format defined in ISO 32000-2:2020

3.3
PDF 1.7 namespace
standard structure namespace for PDF 1.7

as defined in ISO 32000-1:2008

3.4
PDF 2.0 namespace
standard structure namespace for PDF 2.0

as defined in ISO 32000-2:2020

3.5
PDF 1.7 element
standard structure element type defined in the namespace for PDF 1.7

as defined in ISO 32000-1:2008

3.6
PDF 2.0 element
standard structure element type defined in the namespace for PDF 2.0

as defined in ISO 32000-2:2020

3.7
processor
software application that is able to read and process conforming files

3.8
unique PDF 1.7 element
standard structure element whose type is defined solely in the *PDF 1.7 namespace* (3.3)

3.9
writer
software application that is able to write conforming files

4   Notation

PDF operators, PDF keywords, the names of keys in PDF dictionaries, and other predefined names are written in bold sans serif font; operands of PDF operators or values of dictionary keys are written in italic font. Some names can also be used as values, depending on the context, and so the styling of the content will be context specific.

EXAMPLE 1   The *Default* value for the **TR2** key.

Token characters used to delimit objects and describe the structure of PDF files, as defined in ISO 32000-2:2020, 7.2.1, may be identified by their ISO/IEC 646 character name written in upper case in bold font followed by a parenthetic two digit hexadecimal character value with the suffix "h".

EXAMPLE 2   **CARRIAGE RETURN** (0Dh).

Text string characters, as defined by ISO 32000-2:2020, 7.9.2, may be identified by their ISO/IEC 10646 character name written in uppercase in bold font followed by a parenthetic four digit hexadecimal character code value with the prefix "U+".

EXAMPLE 3   **EN SPACE** (U+2002).

5   Declaration of conformance

This document defines additional requirements that are fully compliant with ISO 32000-2. As such, a PDF document can conform to all the requirements of ISO 32000-2 and the requirements defined in this document, retaining compliance with both standards. However, not all files which are compliant with ISO 32000-2 will be compliant with this document.

To enable interchange and to identify that a given PDF document conforms to the requirements defined in this document, that PDF document may include a PDF declaration of conformance with this document. When such

a PDF declaration is present, it shall conform to the requirements of the PDF Declarations specification. Such claim of conformance shall take the form described in Table 1.

Table 1 — Declaration of conformance to this document

Key	Type
URI identifier	http://pdfa.org/declarations#iso32005
Mandatory field(s)	none
Standard	ISO/TS 32005
Version	1
URI	https://www.pdfa.org/resource/ISO-32005/
Level	N/A
Technology Reliance	ISO 32000-2

EXAMPLE Conformance declaration for a PDF file conforming to this document:

```
<?xml version="1.0" encoding="utf-8"?>
<rdf:RDF xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#">
  <rdf:Description rdf:about="" xmlns:pdfd="http://pdfa.org/declarations/">
    <pdfd:declarations>
      <rdf:Bag>
        <!-- Declaration for conformity with standard "ISO 32005" -->
        <rdf:li rdf:parseType="Resource">
          <pdfd:conformsTo>http://pdfa.org/declarations#iso32005</pdfd:conformsTo>
        </rdf:li>
      </rdf:Bag>
    </pdfd:declarations>
  </rdf:Description>
</rdf:RDF>
```

Figure 1

6   Using the PDF 1.7 namespace with the PDF 2.0 namespace

6.1   General

ISO 32000-2 permits the use of both the PDF 1.7 namespace and the PDF 2.0 namespace but does not indicate how they are to be used together in the same document. The following clauses clarify this usage.

NOTE ISO 32000-2 does not restrict the interaction of the two namespaces.

PDF documents conforming to this document shall be versioned as PDF 2.0 using either the header or the value of the **Version** entry in the document's catalog dictionary (see ISO 32000-2:2020, 7.7.2).

6.2   PDF 1.7 as a standalone namespace

If all structure elements used in a given document are PDF 1.7 elements, either explicitly, through the default standard structure namespace or role mapped to an element in the default standard structure namespace, then the requirements of ISO 32000-1 shall be used for their inclusion. In such cases, the use of namespaces shall not be required and those structure elements are exempt from the provisions specified in 6.3, 6.4 and 6.5.

If any document has structure elements that use a namespace other than the PDF 1.7 namespace or the default standard structure namespace, then that document shall conform to the requirements specified in 6.3, 6.4 and 6.5.

6.3   Elements defined in both the PDF 1.7 and PDF 2.0 namespace

A subset of the PDF 1.7 elements and the PDF 2.0 elements are common between the two namespaces. All structure elements whose type is common to both the PDF 1.7 namespace and the PDF 2.0 namespace shall

use the PDF 2.0 namespace and follow the inclusion rules defined in ISO 32000-2:2020, Annex L, and in Clause 5 of this document (except as exempted by 6.2).

6.4   Elements defined solely in the PDF 2.0 namespace

PDF 2.0 elements shall explicitly declare their namespace using the PDF 2.0 namespace and may contain unique PDF 1.7 elements and PDF 2.0 elements, as defined in Clause 5.

NOTE   ISO 32000-2:2020, Annex M identifies the new elements that are solely defined for the PDF 2.0 namespace.

6.5   Elements defined solely in the PDF 1.7 namespace

6.5.1   General

Unique PDF 1.7 elements may be included in a document. When such structure elements are included (except as exempted in 6.2), those elements shall conform to the requirements defined in Clause 5 and may be children of PDF 2.0 elements and may include unique PDF 1.7 elements or PDF 2.0 elements.

NOTE   ISO 32000-2:2020, Annex M identifies the elements that are solely defined for the PDF 1.7 namespace.

6.5.2   Permitted PDF 1.7 element types

6.5.2.1   General

ISO 32000-2 does not directly define the element types outside of the PDF 2.0 namespace. Instead, it refers to the definition of those elements in ISO 32000-1. To ensure consistency, unique PDF 1.7 elements (except as exempted by 6.2) shall match the descriptions and follow the inclusion rules specified in Clause 5.

6.5.2.2   Grouping structure elements

The unique PDF 1.7 elements that are a grouping element type are defined in Table 2 and shall be the only PDF 1.7 namespace grouping elements permissible in a document (except as exempted by 6.2).

Table 2 — Standard structure types for unique PDF 1.7 grouping elements

Structure type	Description
Art	(Article) A relatively self-contained body of text constituting a single narrative or exposition. Articles should be disjoint; that is, they should not contain other articles as constituent elements.
BlockQuote	(Block quotation) A portion of content quoted from another source other than the surrounding content. NOTE 1 The **BlockQuote** structure element groups larger units of quoted content, see **Quote** (Table 3, "") for inline quotation. NOTE 2 The **BlockQuote** structure element differs from the **DocumentFragment** structure element, in that **DocumentFragment** implies unchanged and contiguous portions of another document, whereas **BlockQuote** often include modification or contextualization. **BlockQuote** is permitted to both contain or be a child of **DocumentFragment** (see Table 15). NOTE 3 The source for a **BlockQuote** can include content from the same document.
TOC	(Table of contents) A list made up of table of contents item entries (structure type **TOCI**) and/or other nested table of contents entries (**TOC**). A **TOC** entry that includes only **TOCI** entries represents a flat hierarchy. A **TOC** entry that includes other nested **TOC** entries (and possibly **TOCI** entries) represents a more complex hierarchy. Ideally, the hierarchy of a top-level **TOC** entry reflects the structure of the main body of the document.

Structure type	Description
	NOTE 4 Lists of figures and tables, as well as bibliographies, can be treated as tables of contents for purposes of the standard structure types. When parts of a **TOC** have descriptive text, that text shall use **Caption** to identify its purpose. When multiple parts of the **TOC** have descriptive text at the same level within that **TOC**, then **Part** shall be used to subdivide that **TOC** into the described (captioned) sub-parts, with each **Part** having its own **Caption**.
TOCI	(Table of contents item) An individual entry within a table of contents (**TOC**).
Index	(Index) A sequence of entries containing identifying text accompanied by reference elements (structure type **Reference**; see Table 3) that point out occurrences of the specified text in the main body of a document.
Private	(Private element) A grouping element containing private content belonging to the application producing it. The structural significance of this element type is unspecified and shall be determined entirely by the writer. Neither the **Private** element nor any of its descendants (including content) have defined semantic significance and may be ignored by processors, both when consuming the content and when exporting to other document formats.
NOTE: The definitions in this table are taken from ISO 32000-1, but have been updated for clarity.	

6.5.2.3   Inline-level structure elements

The unique PDF 1.7 elements that are an inline-level element type are defined in Table 3 and shall be the only PDF 1.7 namespace inline-level structure elements permissible in a document (except as exempted by Clause 6.2).

Table 3 — Standard structure types for unique PDF 1.7 inline-level structure elements

Structure type	Description
Quote	(Quotation) An inline portion of content quoted from another source other than the surrounding content. The quoted text should be contained inline within a single block-level unit of content. This differs from the block-level element **BlockQuote** (see Table 2), which consists of one or more complete paragraphs (or other elements presented as if they were complete paragraphs).
Note	(Note) An item of explanatory text, such as a footnote or an endnote, that is referred to from within the body of the document. It may have a label (structure type **Lbl**; see ISO 32000-2:2020, Table 368) as a child. The note may be included as a child of the structure element in the body text that refers to it, or it may be included elsewhere (such as in an endnotes section) and accessed by means of a reference (structure type **Reference**). Tagged PDF does not prescribe the placement of footnotes in the page content order. They may be either inline or at the end of the page, at the discretion of the conforming writer.
Reference	(Reference) A citation to content elsewhere in the document.
BibEntry	(Bibliography entry) A reference identifying the external source of some cited content. It may contain a label (structure type **Lbl**; see ISO 32000-2:2020, Table 368) as a child. Although a bibliography entry is likely to include component parts identifying the cited content's author, work, publisher, and so forth, no standard structure types are defined at this level of detail.
Code	(Code) A fragment of computer program text.
NOTE: The definitions in this	

Table 3 *(continued)*

Structure type	Description
table are taken from ISO 32000-1, but have been updated for clarity.	

6.6 Role mapping

Custom element types may be present in a document and shall have an explicitly defined namespace except as exempted by 6.2.

7 Attributes

7.1 General

ISO 32000-2 defines a mechanism for applying structure attributes to structure elements (see ISO 32000-2:2020, 14.7.6). While both ISO 32000-2 and ISO 32000-1 defined this mechanism, ISO 32000-2 extended it to additionally make use of namespaces (see ISO 32000-2:2020, Table 360). Clause 6 specifies the requirements for a file containing structure attributes.

7.2 Attribute owners

Attribute owners (see ISO 32000-2:2020, Table 376) identify sets of attributes that are available for use with structure elements. For each attribute, attribute owners also restrict the structure element type with which they may be used.

The attributes defined within the various attribute owners in ISO 32000-2 are a superset of those defined in ISO 32000-1. As such, regardless of whether a given structure element is a unique PDF 1.7 element or a PDF 2.0 element, that structure element may use any structure attribute defined in ISO 32000-2, as restricted by those attributes' definition.

7.3 Attribute namespaces

As an alternative to attribute owners, ISO 32000-2 defines a mechanism for identifying a namespace for a given set of attributes (see ISO 32000-2:2020, Table 360). Attribute objects identifying their owner as a namespace may occur on any structure element regardless of that structure element's namespace.

8 Parent-child relationships between the standard structure elements in the standard structure namespace for PDF 2.0 and PDF 1.7

8.1 General

ISO 32000-2 defines the standard structure element types within ISO 32000-2:2020, 14.8.4 and identifies the PDF 1.7 namespace and the PDF 2.0 namespace in ISO 32000-2:2020, 14.8.6. ISO 32000-2:2020, Annex L, specifies the requirements for hierarchical inclusion of the PDF 2.0 elements.

8.2 extends the rules for hierarchical inclusion[1] to both the PDF 2.0 elements and PDF 1.7 elements.

NOTE   A compact representation of the hierarchical inclusion rules defined in 8.2 can be found in Reference [1].

8.2 Hierarchical inclusion rules

This subclause defines the acceptable children of the standard structure elements defined in the PDF 1.7 namespace and the PDF 2.0 namespace. PDF 1.7 elements and PDF 2.0 elements shall not have child or parent PDF 1.7 elements or PDF 2.0 elements that are not explicitly listed in these tables.

The following tables provide these hiearchical inclusion rules:

— StructTreeRoot, [Table 5](#)

— Document, [Table 6](#)

— DocumentFragment, [Table 7](#)

— Part, [Table 8](#)

— Div, [Table 9](#)

— Art, [Table 10](#)

— Sect, [Table 11](#)

— TOC, [Table 12](#)

— TOCI, [Table 13](#)

— Aside, [Table 14](#)

— BlockQuote, [Table 15](#)

— NonStruct, [Table 16](#)

— Private, [Table 17](#)

— Title, [Table 18](#)

— Sub, [Table 19](#)

— P, [Table 20](#)

— Note, [Table 21](#)

— Code, [Table 22](#)

— Hn, [Table 23](#)

— H, [Table 24](#)

— Lbl, [Table 25](#)

— Em, [Table 26](#)

— Strong, [Table 27](#)

— Span, [Table 28](#)

— Quote, [Table 29](#)

— Link, [Table 30](#)

— Reference, [Table 31](#)

— Annot, [Table 32](#)

— Form, [Table 33](#)

— Ruby, [Table 34](#)

— RB, [Table 35](#)

— RT, [Table 36](#)

— RP, [Table 37](#)

— Warichu, [Table 38](#)

— WT, [Table 39](#)

— WP, [Table 40](#)

— FENote, [Table 41](#)

— Index, [Table 42](#)

— L, [Table 43](#)

— LI, [Table 44](#)

— LBody, [Table 45](#)

— BibEntry, [Table 46](#)

— Table, [Table 47](#)

— TR, [Table 48](#)

— TH, [Table 49](#)

— TD, [Table 50](#)

— THead, [Table 51](#)

— TBody, [Table 52](#)

— TFoot, [Table 53](#)

— Caption, [Table 54](#)

— Figure, [Table 55](#)

— Formula, [Table 56](#)

— Artifact, [Table 57](#)

NOTE 1   The hierarchical rules defined in this clause describe the elements that are permissible as children of each structure type. However, further contextual restrictions are described in Clause 5 and ISO 32000-2:2020, 14.8 "Tagged PDF".

NOTE 2   The hierarchical rules included in this subclause extend those found in ISO 32000-2:2020, Annex L, and can be considered complete for all elements permitted by this document. These extensions pertain to unique PDF 1.7 elements and their interaction with other PDF 1.7 elements and PDF 2.0 elements. These requirements fully conform to those found in ISO 32000-2 and associated errata for PDF 2.0 elements.

These containment requirements shall also apply to structure elements that are role mapped into the PDF 2.0 namespace or PDF 1.7 namespace (except as exempted by [6.2](#)). [Table 4](#) provides a legend for use in interpreting the tables found in [8.2](#).

Table 4 — Legend for valid usage of structure types

Value	Valid usage relative to other standard structure types
ø	shall not occur
ø*	shall not occur unless the parent element is used as a grouping level element
0..n	may be a child element with one or several occurrences, but is not required to be present
1..n	shall be present as a child element with one or several occurrences
0..1	may occur, but not more than once

Table 4 *(continued)*

Value	Valid usage relative to other standard structure types
‡	for containment rules, refer to the respective structure element type's description
[a]	for specific provisions when and how these structure elements or content can be contained inside a **Ruby** structure element, see ISO 32000-2:2020, 14.8.4.7.3
[b]	for specific provisions when and how these structure elements or content can be contained inside a **Warichu** structure element, see ISO 32000-2:2020, 14.8.4.7.3
NOTE 1 StructTreeRoot refers to the structure tree root dictionary (see "ISO 32000-2:2020, Table 354 — Entries in the structure tree root") and is not the name of a structure element.	
NOTE 2 A content item refers to page content (see ISO 32000-2:2020, 14.8.2 "Tagged PDF and page content") or PDF objects (see ISO 32000-2:2020, 14.7 "PDF objects as content items") and does not refer to the name of a structure element type.	

Table 5 — The parent-child relationships for the StructTreeRoot structure element

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
1	Document		

Table 6 — The parent-child relationships for the Document structure element

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
0..n	Document	1	StructTreeRoot
0..n	DocumentFragment	0..n	Document
0..n	Part	0..n	DocumentFragment
0..n	Art	‡	Part
0..n	Div	‡	Div
0..n	Sect	0..n	Aside
0..n	TOC	0..n	BlockQuote
0..n	Aside	‡	NonStruct
0..n	BlockQuote	0..n	Private
0..n	NonStruct	0..n	Artifact
0..n	Private		
0..n	P		
0..n	Note		
0..n	Code		
0..n	Hn		
0..1	H		
0..n	Title		
0..n	Link		
0..n	Annot		
0..n	Form		
0..n	FENote		
0..n	Index		
0..n	L		
0..n	Table		
0..n	Figure		
0..n	Formula		
0..n	Artifact		

Table 7 — The parent-child relationships for the DocumentFragment structure element

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
0..n	Document	0..n	Document

Table 7 *(continued)*

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
0..n	DocumentFragment	0..n	DocumentFragment
0..n	Part	‡	Part
0..n	Art	‡	Div
0..n	Div	0..n	Art
0..n	Sect	0..n	Sect
0..n	TOC	0..n	Aside
0..n	Aside	0..n	BlockQuote
0..n	BlockQuote	‡	NonStruct
0..n	NonStruct	0..n	Private
0..n	Private	∅*	Note
0..n	P	∅*	Code
0..n	Note	∅*	Link
0..n	Code	∅*	Annot
0..n	Hn	∅*	FENote
0..1	H	∅*	Caption
0..n	Title	0..n	Artifact
0..n	Link		
0..n	Annot		
0..n	Form		
0..n	FENote		
0..n	Index		
0..n	L		
0..n	Table		
0..n	Figure		
0..n	Formula		
0..n	Artifact		

Table 8 — The parent-child relationships for the Part structure element

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
‡	Document	0..n	Document
‡	DocumentFragment	0..n	DocumentFragment
‡	Part	‡	Part
‡	Art	‡	Div
‡	Div	0..n	Art
‡	Sect	0..n	Sect
‡	TOC	0..n	TOC
‡	TOCI	0..n	Aside
‡	Aside	0..n	BlockQuote
‡	BlockQuote	‡	NonStruct
‡	NonStruct	0..n	Private
‡	Private	0..n	Title
‡	P	0..n	Note
‡	Note	0..n	Code
‡	Code	∅*	Link
‡	Hn	∅*	Annot
‡	H	∅*	Form
‡	Title	0..n	FENote
‡	Sub	0..n	Index

Table 8 *(continued)*

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
‡	Lbl	0..n	LBody
‡	Link	0..n	BibEntry
‡	Reference	0..n	Caption
‡	Annot	0..n	Figure
‡	Form	0..n	Formula
‡	FENote	0..n	Artifact
‡	Index		
‡	L		
‡	BibEntry		
‡	Table		
‡	Caption		
‡	Figure		
‡	Formula		
‡	Artifact		

Table 9 — The parent-child relationships for the Div structure element

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
‡	Document	0..n	Document
‡	DocumentFragment	0..n	DocumentFragment
‡	Part	‡	Part
‡	Art	‡	Div
‡	Div	0..n	Art
‡	Sect	0..n	Sect
‡	TOC	0..n	TOCI
‡	TOCI	0..n	Aside
‡	Aside	0..n	BlockQuote
‡	BlockQuote	‡	NonStruct
‡	NonStruct	0..n	Private
‡	Private	0..n	Title
‡	P	0..n	Note
‡	Note	0..n	Code
‡	Code	0..n	Link
‡	Hn	0..n	Annot
‡	H	0..n	Form
‡	Title	0..n	FENote
‡	Sub	0..n	Index
‡	Lbl	0..n	LI
‡	Em	0..n	LBody
‡	Strong	0..n	BibEntry
‡	Span	0..n	TH
‡	Quote	0..n	TD
‡	Link	0..n	Caption
‡	Reference	0..n	Figure
‡	Annot	0..n	Formula
‡	Form	0..n	Artifact
‡	Ruby		
‡	RB		
‡	RT		

Table 9 *(continued)*

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
‡	RP		
‡	Warichu		
‡	WT		
‡	WP		
‡	FENote		
‡	Index		
‡	L		
‡	LI		
‡	LBody		
‡	BibEntry		
‡	Table		
‡	TR		
‡	TH		
‡	TD		
‡	THead		
‡	TBody		
‡	TFoot		
‡	Caption		
‡	Figure		
‡	Formula		
‡	Artifact		

Table 10 — The parent-child relationships for the Art structure element

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
0..n	DocumentFragment	0..n	Document
0..n	Part	0..n	DocumentFragment
0..n	Div	‡	Part
0..n	Sect	‡	Div
0..n	TOC	0..n	Sect
0..n	Aside	0..n	Aside
0..n	BlockQuote	0..n	BlockQuote
0..n	NonStruct	‡	NonStruct
0..n	Private	0..n	Private
0..n	P	0..n	Note
0..n	Note	0..n	Code
0..n	Code	0..n	Link
0..n	Hn	0..n	Annot
0..1	H	0..n	FENote
0..n	Title	0..n	LBody
0..n	Lbl	0..n	TH
0..n	Link	0..n	TD
0..n	Annot	0..n	Caption
0..n	Form	0..n	Figure
0..n	FENote	0..n	Artifact
0..n	Index		
0..n	L		
0..n	Table		
0..1	Caption		

Table 10 *(continued)*

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
0..n	Figure		
0..n	Formula		
0..n	Artifact		

Table 11 — The parent-child relationships for the Sect structure element

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
0..n	DocumentFragment	0..n	Document
0..n	Part	0..n	DocumentFragment
0..n	Art	‡	Part
0..n	Div	‡	Div
0..n	Sect	0..n	Art
0..n	TOC	0..n	Sect
0..n	Aside	0..n	Aside
0..n	BlockQuote	0..n	BlockQuote
0..n	NonStruct	‡	NonStruct
0..n	Private	0..n	Private
0..n	P	0..n	Note
0..n	Note	0..n	Code
0..n	Code	0..1	Hn
0..n	Hn	0..1	H
0..1	H	0..n	Link
0..n	Title	0..n	Annot
0..n	Lbl	0..n	FENote
0..n	Link	0..n	Index
0..n	Annot	0..n	LBody
0..n	Form	0..n	TH
0..n	FENote	0..n	TD
0..n	Index	0..n	Caption
0..n	L	0..n	Figure
0..n	Table	0..n	Artifact
0..n	Caption		
0..n	Figure		
0..n	Formula		
0..n	Artifact		

Table 12 — The parent-child relationships for the TOC structure element

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
0..n	Part	0..n	Document
0..n	TOC	0..n	DocumentFragment
0..n	TOCI	‡	Part
0..n	NonStruct	‡	Div
0..n	Private	0..n	Art
0..1	Caption	0..n	Sect
0..n	Artifact	0..n	TOC
		0..n	TOCI
		0..n	Aside
		0..n	BlockQuote
		‡	NonStruct

Table 12 *(continued)*

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
		0..n	Private
		0..n	Artifact

Table 13 — The parent-child relationships for the TOCI structure element

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
0..n	Div	‡	Part
0..n	TOC	‡	Div
0..n	NonStruct	0..n	TOC
0..n	Private	‡	NonStruct
0..n	P	0..n	Private
0..n	Lbl	0..n	Artifact
0..n	Reference		
0..n	Artifact		

Table 14 — The parent-child relationships for the Aside structure element

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
0..n	Document	0..n	Document
0..n	DocumentFragment	0..n	DocumentFragment
0..n	Part	‡	Part
0..n	Art	‡	Div
0..n	Div	0..n	Art
0..n	Sect	0..n	Sect
0..n	TOC	‡	NonStruct
0..n	BlockQuote	0..n	Private
0..n	NonStruct	0..n	Title
0..n	Private	0..n	Note
0..n	P	0..n	Code
0..n	Note	∅*	Link
0..n	Code	∅*	Annot
0..n	Hn	0..n	FENote
0..1	H	0..n	LBody
0..n	Lbl	0..n	Caption
0..n	Link	0..n	Figure
0..n	Reference	0..n	Formula
0..n	Annot	0..n	Artifact
0..n	Form		
0..n	FENote		
0..n	Index		
0..n	L		
0..n	Table		
0..1	Caption		
0..n	Figure		
0..n	Formula		
0..n	Artifact		
0..n	content item		

Table 15 — The parent-child relationships for the BlockQuote structure element

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
0..n	Document	0..n	Document
0..n	DocumentFragment	0..n	DocumentFragment
0..n	Part	‡	Part
0..n	Art	‡	Div
0..n	Div	0..n	Art
0..n	Sect	0..n	Sect
0..n	TOC	0..n	Aside
0..n	BlockQuote	0..n	BlockQuote
0..n	NonStruct	‡	NonStruct
0..n	Private	0..n	Private
0..n	P	0..n	Note
0..n	Note	0..n	Code
0..n	Code	∅*	Link
0..n	Hn	∅*	Annot
0..1	H	0..n	FENote
0..n	Lbl	0..n	LBody
0..n	Link	0..n	Caption
0..n	Reference	0..n	Figure
0..n	Annot	0..n	Formula
0..n	Form	0..n	Artifact
0..n	FENote		
0..n	Index		
0..n	L		
0..n	Table		
0..1	Caption		
0..n	Figure		
0..n	Formula		
0..n	Artifact		
0..n	content item		

Table 16 — The parent-child relationships for the NonStruct structure element

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
‡	Document	0..n	Document
‡	DocumentFragment	0..n	DocumentFragment
‡	Part	‡	Part
‡	Art	‡	Div
‡	Div	0..n	Art
‡	Sect	0..n	Sect
‡	TOC	0..n	TOC
‡	TOCI	0..n	TOCI
‡	Aside	0..n	Aside
‡	BlockQuote	0..n	BlockQuote
‡	NonStruct	‡	NonStruct
‡	Private	0..n	Private
‡	P	0..n	Title
‡	Note	0..n	Sub
‡	Code	0..n	P

Table 16 *(continued)*

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
‡	Hn	0..n	Note
‡	H	0..n	Code
‡	Title	0..n	Hn
‡	Sub	0..n	H
‡	Lbl	0..n	Lbl
‡	Em	0..n	Em
‡	Strong	0..n	Strong
‡	Span	0..n	Span
‡	Quote	0..n	Quote
‡	Link	0..n	Link
‡	Reference	0..n	Reference
‡	Annot	0..n	Annot
‡	Form	0..n	Form
‡	Ruby	0..n	Ruby
‡	RB	0..n	RB
‡	RT	0..n	RT
‡	RP	0..n	RP
‡	Warichu	0..n	Warichu
‡	WT	0..n	WT
‡	WP	0..n	WP
‡	FENote	0..n	FENote
‡	Index	0..n	Index
‡	L	0..n	L
‡	LI	0..n	LI
‡	LBody	0..n	LBody
‡	BibEntry	0..n	BibEntry
‡	Table	0..n	Table
‡	TR	0..n	TR
‡	TH	0..n	TH
‡	TD	0..n	TD
‡	THead	0..n	THead
‡	TBody	0..n	TBody
‡	TFoot	0..n	TFoot
‡	Caption	0..n	Caption
‡	Figure	0..n	Figure
‡	Formula	0..n	Formula
‡	Artifact	0..n	Artifact
‡	content item		

Table 17 — The parent-child relationships for the Private structure element

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
0..n	Document	0..n	Document
0..n	DocumentFragment	0..n	DocumentFragment
0..n	Part	‡	Part
0..n	Art	‡	Div
0..n	Div	0..n	Art
0..n	Sect	0..n	Sect
0..n	TOC	0..n	TOC

Table 17 *(continued)*

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
0..n	TOCI	0..n	TOCI
0..n	Aside	0..n	Aside
0..n	BlockQuote	0..n	BlockQuote
0..n	NonStruct	‡	NonStruct
0..n	Private	0..n	Private
0..n	P	0..n	Title
0..n	Note	0..n	Sub
0..n	Code	0..n	P
0..n	Hn	0..n	Note
0..n	H	0..n	Code
0..n	Title	0..n	Hn
0..n	Sub	0..n	H
0..n	Lbl	0..n	Lbl
0..n	Em	0..n	Em
0..n	Strong	0..n	Strong
0..n	Span	0..n	Span
0..n	Quote	0..n	Quote
0..n	Link	0..n	Link
0..n	Reference	0..n	Reference
0..n	Annot	0..n	Annot
0..n	Form	0..n	Form
0..n	Ruby	0..n	Ruby
0..n	RB	0..n	RB
0..n	RT	0..n	RT
0..n	RP	0..n	RP
0..n	Warichu	0..n	Warichu
0..n	WT	0..n	WT
0..n	WP	0..n	WP
0..n	FENote	0..n	FENote
0..n	Index	0..n	Index
0..n	L	0..n	L
0..n	LI	0..n	LI
0..n	LBody	0..n	LBody
0..n	BibEntry	0..n	BibEntry
0..n	Table	0..n	Table
0..n	TR	0..n	TR
0..n	TH	0..n	TH
0..n	TD	0..n	TD
0..n	THead	0..n	THead
0..n	TBody	0..n	TBody
0..n	TFoot	0..n	TFoot
0..n	Caption	0..n	Caption
0..n	Figure	0..n	Figure
0..n	Formula	0..n	Formula
0..n	Artifact	0..n	Artifact
0..n	content item		

Table 18 — The parent-child relationships for the Title structure element

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
0..n	Part	0..n	Document
0..n	Div	0..n	DocumentFragment
0..n	Aside	‡	Part
0..n	NonStruct	‡	Div
0..n	Private	0..n	Art
0..n	P	0..n	Sect
0..n	Note	‡	NonStruct
0..n	Code	0..n	Private
0..n	Lbl	∅*	Link
0..n	Em	∅*	Annot
0..n	Strong	0..n	Artifact
0..n	Span		
0..n	Quote		
0..n	Link		
0..n	Reference		
0..n	Annot		
0..n	Form		
0..n	Ruby		
0..n	Warichu		
0..n	FENote		
0..n	L		
0..n	BibEntry		
0..n	Table		
0..1	Caption		
0..n	Figure		
0..n	Formula		
0..n	Artifact		
0..n	content item		

Table 19 — The parent-child relationships for the Sub structure element

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
0..n	NonStruct	‡	Part
0..n	Private	‡	Div
0..n	Note	‡	NonStruct
0..n	Code	0..n	Private
0..n	Lbl	0..n	P
0..n	Em	0..n	Note
0..n	Strong	0..n	Code
0..n	Span	0..n	Hn
0..n	Quote	0..n	H
0..n	Link	0..n	Lbl
0..n	Reference	0..n	Em
0..n	Annot	0..n	Strong
0..n	Form	0..n	Span
0..n	Ruby	0..n	Quote
0..n	Warichu	0..n	Link
0..n	FENote	0..n	Annot

Table 19 *(continued)*

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
0..n	L	0..n	RB
0..n	BibEntry	0..n	RT
0..n	Figure	0..n	RP
0..n	Formula	0..n	WT
0..n	Artifact	0..n	WP
0..n	content item	0..n	FENote
		0..n	LBody
		0..n	Caption
		∅*	Figure
		0..n	Formula
		0..n	Artifact

Table 20 — The parent-child relationships for the P structure element

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
0..n	NonStruct	0..n	Document
0..n	Private	0..n	DocumentFragment
0..n	Note	‡	Part
0..n	Code	‡	Div
0..n	Sub	0..n	Art
0..n	Lbl	0..n	Sect
0..n	Em	0..n	TOCI
0..n	Strong	0..n	Aside
0..n	Span	0..n	BlockQuote
0..n	Quote	‡	NonStruct
0..n	Link	0..n	Private
0..n	Reference	0..n	Title
0..n	Annot	0..n	Note
0..n	Form	0..n	Code
0..n	Ruby	∅*	Link
0..n	Warichu	∅*	Annot
0..n	FENote	0..n	FENote
0..n	L	0..n	Index
0..n	BibEntry	0..n	LBody
0..n	Table	0..n	BibEntry
0..n	Figure	0..n	TH
0..n	Formula	0..n	TD
0..n	Artifact	0..n	Caption
0..n	content item	0..n	Figure
		0..n	Formula
		0..n	Artifact

Table 21 — The parent-child relationships for the Note structure element

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
∅*	DocumentFragment	0..n	Document
0..n	Part	0..n	DocumentFragment
0..n	Art	‡	Part
0..n	Div	‡	Div
0..n	Sect	0..n	Art

Table 21 *(continued)*

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
0..n	Aside	0..n	Sect
0..n	BlockQuote	0..n	Aside
0..n	NonStruct	0..n	BlockQuote
0..n	Private	‡	NonStruct
0..n	P	0..n	Private
0..n	Note	0..n	Title
0..n	Code	0..n	Sub
0..n	Sub	0..n	P
0..n	Lbl	0..n	Note
0..n	Em	0..n	Code
0..n	Strong	0..n	Hn
0..n	Span	0..n	H
0..n	Quote	0..n	Lbl
0..n	Link	0..n	Em
0..n	Reference	0..n	Strong
0..n	Annot	0..n	Span
0..n	Form	0..n	Quote
0..n	Ruby	0..n	Link
0..n	Warichu	0..n	Reference
0..n	FENote	0..n	Annot
0..n	Index	0..n	Form
0..n	L	0..n	FENote
0..n	BibEntry	0..n	Index
0..n	Table	0..n	LBody
0..1	Caption	0..n	BibEntry
0..n	Figure	0..n	TH
0..n	Formula	0..n	TD
0..n	Artifact	0..n	Caption
0..n	content item	0..n	Figure
		0..n	Formula
		0..n	Artifact

Table 22 — The parent-child relationships for the Code structure element

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
∅*	DocumentFragment	0..n	Document
0..n	Part	0..n	DocumentFragment
0..n	Art	‡	Part
0..n	Div	‡	Div
0..n	Sect	0..n	Art
0..n	Aside	0..n	Sect
0..n	BlockQuote	0..n	Aside
0..n	NonStruct	0..n	BlockQuote
0..n	Private	‡	NonStruct
0..n	P	0..n	Private
0..n	Note	0..n	Title
0..n	Code	0..n	Sub
0..n	Sub	0..n	P
0..n	Lbl	0..n	Note

Table 22 *(continued)*

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
0..n	Em	0..n	Code
0..n	Strong	0..n	Hn
0..n	Span	0..n	H
0..n	Quote	0..n	Lbl
0..n	Link	0..n	Em
0..n	Reference	0..n	Strong
0..n	Annot	0..n	Span
0..n	Form	0..n	Quote
0..n	Ruby	0..n	Link
0..n	Warichu	0..n	Annot
0..n	FENote	∅*	Form
0..n	Index	0..n	FENote
0..n	L	0..n	LBody
0..n	BibEntry	0..n	TH
0..n	Table	0..n	TD
0..1	Caption	0..n	Caption
0..n	Figure	0..n	Figure
0..n	Formula	0..n	Formula
0..n	Artifact	0..n	Artifact
0..n	content item		

Table 23 — The parent-child relationships for the Hn structure element

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
0..1	Sect	0..n	Document
0..n	NonStruct	0..n	DocumentFragment
0..n	Private	‡	Part
0..n	Note	‡	Div
0..n	Code	0..n	Art
0..n	Sub	0..n	Sect
0..n	Lbl	0..n	Aside
0..n	Em	0..n	BlockQuote
0..n	Strong	‡	NonStruct
0..n	Span	0..n	Private
0..n	Quote	∅*	Link
0..n	Link	∅*	Annot
0..n	Reference	0..n	Index
0..n	Annot	0..n	LBody
0..n	Form	0..n	TH
0..n	Ruby	0..n	TD
0..n	Warichu	0..n	Caption
0..n	FENote	0..n	Figure
0..n	BibEntry	0..n	Formula
0..n	Figure	0..n	Artifact
0..n	Formula		
0..n	Artifact		
0..n	content item		

Table 24 — The parent-child relationships for the H structure element

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
0..1	Sect	0..1	Document
0..n	NonStruct	0..1	DocumentFragment
0..n	Private	‡	Part
0..n	Note	‡	Div
0..n	Code	0..1	Art
0..n	Sub	0..1	Sect
0..n	Lbl	0..1	Aside
0..n	Em	0..1	BlockQuote
0..n	Strong	‡	NonStruct
0..n	Span	0..n	Private
0..n	Quote	∅*	Link
0..n	Link	∅*	Annot
0..n	Reference	0..n	Index
0..n	Annot	0..1	LBody
0..n	Form	0..1	TH
0..n	Ruby	0..1	TD
0..n	Warichu	0..1	Caption
0..n	FENote	0..1	Figure
0..n	BibEntry	0..1	Formula
0..n	Figure	0..1	Artifact
0..n	Formula		
0..n	Artifact		
0..n	content item		

Table 25 — The parent-child relationships for the Lbl structure element

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
0..n	NonStruct	‡	Part
0..n	Private	‡	Div
0..n	Note	0..n	Art
0..n	Code	0..n	Sect
0..n	Sub	0..n	TOCI
0..n	Em	0..n	Aside
0..n	Strong	0..n	BlockQuote
0..n	Span	‡	NonStruct
0..n	Quote	0..n	Private
0..n	Link	0..n	Title
0..n	Reference	0..n	Sub
0..n	Annot	0..n	P
0..n	Form	0..n	Note
0..n	Ruby	0..n	Code
0..n	Warichu	0..n	Hn
0..n	FENote	0..n	H
0..n	BibEntry	0..n	Em
0..n	Figure	0..n	Strong
0..n	Formula	0..n	Span
0..n	Artifact	0..n	Quote
0..n	content item	0..n	Link

Table 25 *(continued)*

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
		0..n	Reference
		0..n	Annot
		0..n	Form
		0..n	FENote
		0..n	LI
		0..n	BibEntry
		0..n	TH
		0..n	TD
		0..n	Caption
		0..n	Figure
		0..n	Formula
		0..n	Artifact

Table 26 — The parent-child relationships for the Em structure element

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
0..n	NonStruct	‡	Div
0..n	Private	‡	NonStruct
0..n	Note	0..n	Private
0..n	Code	0..n	Title
0..n	Sub	0..n	Sub
0..n	Lbl	0..n	P
0..n	Em	0..n	Note
0..n	Strong	0..n	Code
0..n	Span	0..n	Hn
0..n	Quote	0..n	H
0..n	Link	0..n	Lbl
0..n	Reference	0..n	Em
0..n	Annot	0..n	Strong
0..n	Form	0..n	Span
0..n	Ruby	0..n	Quote
0..n	Warichu	0..n	Link
0..n	FENote	0..n	Reference
0..n	BibEntry	0..n	Annot
0..n	Figure	0..n	RB
0..n	Formula	0..n	RT
0..n	Artifact	0..n	RP
0..n	content item	0..n	WT
		0..n	WP
		0..n	FENote
		0..n	LBody
		0..n	BibEntry
		0..n	TH
		0..n	TD
		0..n	Caption
		0..n	Figure
		0..n	Formula
		0..n	Artifact

Table 27 — The parent-child relationships for the Strong structure element

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
0..n	NonStruct	‡	Div
0..n	Private	‡	NonStruct
0..n	Note	0..n	Private
0..n	Code	0..n	Title
0..n	Sub	0..n	Sub
0..n	Lbl	0..n	P
0..n	Em	0..n	Note
0..n	Strong	0..n	Code
0..n	Span	0..n	Hn
0..n	Quote	0..n	H
0..n	Link	0..n	Lbl
0..n	Reference	0..n	Em
0..n	Annot	0..n	Strong
0..n	Form	0..n	Span
0..n	Ruby	0..n	Quote
0..n	Warichu	0..n	Link
0..n	FENote	0..n	Reference
0..n	BibEntry	0..n	Annot
0..n	Figure	0..n	RB
0..n	Formula	0..n	RT
0..n	Artifact	0..n	RP
0..n	content item	0..n	WT
		0..n	WP
		0..n	FENote
		0..n	LBody
		0..n	BibEntry
		0..n	TH
		0..n	TD
		0..n	Caption
		0..n	Figure
		0..n	Formula
		0..n	Artifact

Table 28 — The parent-child relationships for the Span structure element

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
0..n	NonStruct	‡	Div
0..n	Private	‡	NonStruct
0..n	Note	0..n	Private
0..n	Code	0..n	Title
0..n	Sub	0..n	Sub
0..n	Lbl	0..n	P
0..n	Em	0..n	Note
0..n	Strong	0..n	Code
0..n	Span	0..n	Hn
0..n	Quote	0..n	H
0..n	Link	0..n	Lbl
0..n	Reference	0..n	Em

Table 28 *(continued)*

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
0..n	Annot	0..n	Strong
0..n	Form	0..n	Span
0..n	Ruby	0..n	Quote
0..n	Warichu	0..n	Link
0..n	FENote	0..n	Reference
0..n	BibEntry	0..n	Annot
0..n	Figure	0..n	RB
0..n	Formula	0..n	RT
0..n	Artifact	0..n	RP
0..n	content item	0..n	WT
		0..n	WP
		0..n	FENote
		0..n	LBody
		0..n	BibEntry
		0..n	TH
		0..n	TD
		0..n	Caption
		0..n	Figure
		0..n	Formula
		0..n	Artifact

Table 29 — The parent-child relationships for the Quote structure element

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
0..n	NonStruct	‡	Div
0..n	Private	‡	NonStruct
0..n	Note	0..n	Private
0..n	Code	0..n	Title
0..n	Sub	0..n	Sub
0..n	Lbl	0..n	P
0..n	Em	0..n	Note
0..n	Strong	0..n	Code
0..n	Span	0..n	Hn
0..n	Quote	0..n	H
0..n	Link	0..n	Lbl
0..n	Reference	0..n	Em
0..n	Annot	0..n	Strong
0..n	Form	0..n	Span
0..n	Ruby	0..n	Quote
0..n	Warichu	0..n	Link
0..n	FENote	0..n	Annot
0..n	BibEntry	0..n	RB
0..n	Figure	0..n	RT
0..n	Formula	0..n	RP
0..n	Artifact	0..n	WT
0..n	content item	0..n	WP
		0..n	FENote
		0..n	LBody
		0..n	TH

Table 29 *(continued)*

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
		0..n	TD
		0..n	Caption
		0..n	Figure
		0..n	Formula
		0..n	Artifact

Table 30 — The parent-child relationships for the Link structure element

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
∅*	DocumentFragment	0..n	Document
∅*	Part	0..n	DocumentFragment
0..n	Art	‡	Part
0..n	Div	‡	Div
0..n	Sect	0..n	Art
∅*	Aside	0..n	Sect
∅*	BlockQuote	0..n	Aside
0..n	NonStruct	0..n	BlockQuote
0..n	Private	‡	NonStruct
∅*	P	0..n	Private
0..n	Note	0..n	Title
0..n	Code	0..n	Sub
∅*	Hn	0..n	P
∅*	H	0..n	Note
∅*	Title	0..n	Code
0..n	Sub	0..n	Hn
0..n	Lbl	0..n	H
0..n	Em	0..n	Lbl
0..n	Strong	0..n	Em
0..n	Span	0..n	Strong
0..n	Quote	0..n	Span
0..n	Reference	0..n	Quote
0..n	Annot	0..n	Reference
∅*	Form	0..n	Annot
0..n	Ruby	0..n	RB
0..n	Warichu	0..n	RT
0..n	FENote	0..n	RP
∅*	L	0..n	WT
0..n	BibEntry	0..n	WP
∅*	Table	0..n	FENote
∅*	Caption	0..n	LBody
0..n	Figure	0..n	BibEntry
0..n	Formula	0..n	TH
0..n	Artifact	0..n	TD
0..n	content item	0..n	Caption
		0..n	Figure
		0..n	Formula
		0..n	Artifact

Table 31 — The parent-child relationships for the Reference structure element

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
0..n	NonStruct	‡	Part
0..n	Private	‡	Div
0..n	Note	0..n	TOCI
0..n	Lbl	0..n	Aside
0..n	Em	0..n	BlockQuote
0..n	Strong	‡	NonStruct
0..n	Span	0..n	Private
0..n	Link	0..n	Title
0..n	Annot	0..n	Sub
0..n	FENote	0..n	P
0..n	BibEntry	0..n	Note
0..n	Figure	0..n	Code
0..n	Artifact	0..n	Hn
0..n	content item	0..n	H
		0..n	Lbl
		0..n	Em
		0..n	Strong
		0..n	Span
		0..n	Quote
		0..n	Link
		∅*	Annot
		∅*	Form
		0..n	RB
		0..n	RT
		0..n	RP
		0..n	WT
		0..n	WP
		0..n	FENote
		0..n	Index
		0..n	LBody
		0..n	BibEntry
		0..n	TH
		0..n	TD
		0..n	Caption
		0..n	Figure
		0..n	Formula
		0..n	Artifact

Table 32 — The parent-child relationships for the Annot structure element

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
∅*	DocumentFragment	0..n	Document
∅*	Part	0..n	DocumentFragment
0..n	Art	‡	Part
0..n	Div	‡	Div
0..n	Sect	0..n	Art
∅*	Aside	0..n	Sect
∅*	BlockQuote	0..n	Aside

Table 32 *(continued)*

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
0..n	NonStruct	0..n	BlockQuote
0..n	Private	‡	NonStruct
∅*	P	0..n	Private
0..n	Note	0..n	Title
0..n	Code	0..n	Sub
∅*	Hn	0..n	P
∅*	H	0..n	Note
∅*	Title	0..n	Code
0..n	Sub	0..n	Hn
0..n	Lbl	0..n	H
0..n	Em	0..n	Lbl
0..n	Strong	0..n	Em
0..n	Span	0..n	Strong
0..n	Quote	0..n	Span
0..n	Link	0..n	Quote
∅*	Reference	0..n	Link
0..n	Annot	0..n	Reference
∅*	Form	0..n	Annot
0..n	Ruby	0..n	RB
0..n	Warichu	0..n	RT
0..n	FENote	0..n	RP
∅*	L	0..n	WT
0..n	BibEntry	0..n	WP
∅*	Table	0..n	FENote
∅*	Caption	0..n	Index
0..n	Figure	0..n	LBody
0..n	Formula	0..n	BibEntry
0..n	Artifact	0..n	TH
0..n	content item	0..n	TD
		0..n	Caption
		0..n	Figure
		0..n	Formula
		0..n	Artifact

Table 33 — The parent-child relationships for the Form structure element

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
∅*	Part	0..n	Document
0..n	Div	0..n	DocumentFragment
0..n	NonStruct	‡	Part
0..n	Private	‡	Div
0..n	Note	0..n	Art
∅*	Code	0..n	Sect
0..n	Lbl	0..n	Aside
∅*	Reference	0..n	BlockQuote
0..n	FENote	‡	NonStruct
∅*	L	0..n	Private
0..n	BibEntry	0..n	Title
∅*	Table	0..n	Sub

Table 33 *(continued)*

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
0..1	Caption	0..n	P
∅*	Figure	0..n	Note
∅*	Formula	0..n	Code
0..n	Artifact	0..n	Hn
0..n	content item	0..n	H
		0..n	Lbl
		0..n	Em
		0..n	Strong
		0..n	Span
		0..n	Quote
		∅*	Link
		∅*	Annot
		0..n	RB
		0..n	RT
		0..n	RP
		0..n	WT
		0..n	WP
		0..n	FENote
		0..n	LBody
		0..n	TH
		0..n	TD
		0..n	Caption
		0..n	Figure
		0..n	Formula
		0..n	Artifact

Table 34 — The parent-child relationships for the Ruby structure element

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
0..n	NonStruct	‡	Div
0..n	Private	‡	NonStruct
[a]	RB	0..n	Private
[a]	RT	0..n	Title
[a]	RP	0..n	Sub
0..n	content item	0..n	P
		0..n	Note
		0..n	Code
		0..n	Hn
		0..n	H
		0..n	Lbl
		0..n	Em
		0..n	Strong
		0..n	Span
		0..n	Quote
		0..n	Link
		0..n	Annot
		0..n	FENote
		0..n	LBody
		0..n	TH

Table 34 *(continued)*

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
		0..n	TD
		0..n	Caption
		0..n	Figure
		0..n	Formula
		0..n	Artifact

Table 35 — The parent-child relationships for the RB structure element

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
0..n	NonStruct	‡	Div
0..n	Private	‡	NonStruct
0..n	Sub	0..n	Private
0..n	Em	[a]	Ruby
0..n	Strong	0..n	Artifact
0..n	Span		
0..n	Quote		
0..n	Link		
0..n	Reference		
0..n	Annot		
0..n	Form		
0..n	Artifact		
‡	content item		

Table 36 — The parent-child relationships for the RT structure element

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
0..n	NonStruct	‡	Div
0..n	Private	‡	NonStruct
0..n	Sub	0..n	Private
0..n	Em	[a]	Ruby
0..n	Strong	0..n	Artifact
0..n	Span		
0..n	Quote		
0..n	Link		
0..n	Reference		
0..n	Annot		
0..n	Form		
0..n	Artifact		
‡	content item		

Table 37 — The parent-child relationships for the RP structure element

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
0..n	NonStruct	‡	Div
0..n	Private	‡	NonStruct
0..n	Sub	0..n	Private
0..n	Em	[a]	Ruby
0..n	Strong	0..n	Artifact
0..n	Span		
0..n	Quote		

Table 37 *(continued)*

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
0..n	Link		
0..n	Reference		
0..n	Annot		
0..n	Form		
0..n	Artifact		
‡	content item		

Table 38 — The parent-child relationships for the Warichu structure element

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
0..n	NonStruct	‡	Div
0..n	Private	‡	NonStruct
[b]	WT	0..n	Private
[b]	WP	0..n	Title
0..n	content item	0..n	Sub
		0..n	P
		0..n	Note
		0..n	Code
		0..n	Hn
		0..n	H
		0..n	Lbl
		0..n	Em
		0..n	Strong
		0..n	Span
		0..n	Quote
		0..n	Link
		0..n	Annot
		0..n	FENote
		0..n	LBody
		0..n	TH
		0..n	TD
		0..n	Caption
		0..n	Figure
		0..n	Formula
		0..n	Artifact

Table 39 — The parent-child relationships for the WT structure element

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
0..n	NonStruct	‡	Div
0..n	Private	‡	NonStruct
0..n	Sub	0..n	Private
0..n	Em	[b]	Warichu
0..n	Strong	0..n	Artifact
0..n	Span		
0..n	Quote		
0..n	Link		
0..n	Reference		
0..n	Annot		
0..n	Form		

Table 39 *(continued)*

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
0..n	Artifact		
‡	content item		

Table 40 — The parent-child relationships for the WP structure element

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
0..n	NonStruct	‡	Div
0..n	Private	‡	NonStruct
0..n	Sub	0..n	Private
0..n	Em	[b]	Warichu
0..n	Strong	0..n	Artifact
0..n	Span		
0..n	Quote		
0..n	Link		
0..n	Reference		
0..n	Annot		
0..n	Form		
0..n	Artifact		
‡	content item		

Table 41 — The parent-child relationships for the FENote structure element

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
∅*	DocumentFragment	0..n	Document
0..n	Part	0..n	DocumentFragment
0..n	Art	‡	Part
0..n	Div	‡	Div
0..n	Sect	0..n	Art
0..n	Aside	0..n	Sect
0..n	BlockQuote	0..n	Aside
0..n	NonStruct	0..n	BlockQuote
0..n	Private	‡	NonStruct
0..n	P	0..n	Private
0..n	Note	0..n	Title
0..n	Code	0..n	Sub
0..n	Sub	0..n	P
0..n	Lbl	0..n	Note
0..n	Em	0..n	Code
0..n	Strong	0..n	Hn
0..n	Span	0..n	H
0..n	Quote	0..n	Lbl
0..n	Link	0..n	Em
0..n	Reference	0..n	Strong
0..n	Annot	0..n	Span
0..n	Form	0..n	Quote
0..n	Ruby	0..n	Link
0..n	Warichu	0..n	Reference
0..n	FENote	0..n	Annot
0..n	Index	0..n	Form
0..n	L	0..n	FENote

Table 41 *(continued)*

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
0..n	BibEntry	0..n	Index
0..n	Table	0..n	LBody
∅*	Caption	0..n	BibEntry
0..n	Figure	0..n	TH
0..n	Formula	0..n	TD
0..n	Artifact	0..n	Caption
0..n	content item	0..n	Figure
		0..n	Formula
		0..n	Artifact

Table 42 — The parent-child relationships for the Index structure element

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
0..n	Part	0..n	Document
0..n	Div	0..n	DocumentFragment
0..n	Sect	‡	Part
0..n	NonStruct	‡	Div
0..n	Private	0..n	Art
0..n	P	0..n	Sect
0..n	Note	0..n	Aside
0..n	Hn	0..n	BlockQuote
0..n	H	‡	NonStruct
0..n	Reference	0..n	Private
0..n	Annot	0..n	Note
0..n	FENote	0..n	Code
0..n	L	0..n	FENote
0..n	Table	0..n	LBody
0..1	Caption	0..n	TH
0..n	Figure	0..n	TD
0..n	Formula	0..n	Caption
0..n	Artifact	0..n	Figure
		0..n	Formula
		0..n	Artifact

Table 43 — The parent-child relationships for the L structure element

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
0..n	NonStruct	0..n	Document
0..n	Private	0..n	DocumentFragment
0..n	L	‡	Part
0..n	LI	‡	Div
0..1	Caption	0..n	Art
0..n	Artifact	0..n	Sect
		0..n	Aside
		0..n	BlockQuote
		‡	NonStruct
		0..n	Private
		0..n	Title
		0..n	Sub
		0..n	P

Table 43 *(continued)*

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
		0..n	Note
		0..n	Code
		∅*	Link
		∅*	Annot
		∅*	Form
		0..n	FENote
		0..n	Index
		0..n	L
		0..n	LBody
		0..n	TH
		0..n	TD
		0..n	Caption
		0..n	Figure
		0..n	Formula
		0..n	Artifact

Table 44 — The parent-child relationships for the LI structure element

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
0..n	Div	‡	Div
0..n	NonStruct	‡	NonStruct
0..n	Private	0..n	Private
0..n	Lbl	0..n	L
0..n	LBody	0..n	Artifact
0..n	Artifact		
0..n	content item		

Table 45 — The parent-child relationships for the LBody structure element

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
0..n	Part	‡	Div
0..n	Art	‡	NonStruct
0..n	Div	0..n	Private
0..n	Sect	0..n	LI
0..n	Aside	0..n	Artifact
0..n	BlockQuote		
0..n	NonStruct		
0..n	Private		
0..n	P		
0..n	Note		
0..n	Code		
0..n	Hn		
0..1	H		
0..n	Sub		
0..n	Em		
0..n	Strong		
0..n	Span		
0..n	Quote		
0..n	Link		
0..n	Reference		

Table 45 *(continued)*

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
0..n	Annot		
0..n	Form		
0..n	Ruby		
0..n	Warichu		
0..n	FENote		
0..n	Index		
0..n	L		
0..n	BibEntry		
0..n	Table		
0..1	Caption		
0..n	Figure		
0..n	Formula		
0..n	Artifact		
0..n	content item		

Table 46 — The parent-child relationships for the BibEntry structure element

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
0..n	Part	‡	Part
0..n	Div	‡	Div
0..n	NonStruct	‡	NonStruct
0..n	Private	0..n	Private
0..n	P	0..n	Title
0..n	Note	0..n	Sub
0..n	Lbl	0..n	P
0..n	Em	0..n	Note
0..n	Strong	0..n	Code
0..n	Span	0..n	Hn
0..n	Link	0..n	H
0..n	Reference	0..n	Lbl
0..n	Annot	0..n	Em
0..n	FENote	0..n	Strong
0..n	Figure	0..n	Span
0..n	Artifact	0..n	Quote
0..n	content item	0..n	Link
		0..n	Reference
		0..n	Annot
		0..n	Form
		0..n	FENote
		0..n	LBody
		0..n	TH
		0..n	TD
		0..n	Caption
		0..n	Figure
		0..n	Formula
		0..n	Artifact

Table 47 — The parent-child relationships for the Table structure element

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
0..n	NonStruct	0..n	Document
0..n	Private	0..n	DocumentFragment
0..n	TR	‡	Part
0..1	THead	‡	Div
0..n	TBody	0..n	Art
0..1	TFoot	0..n	Sect
0..1	Caption	0..n	Aside
0..n	Artifact	0..n	BlockQuote
		‡	NonStruct
		0..n	Private
		0..n	Title
		0..n	P
		0..n	Note
		0..n	Code
		∅*	Link
		∅*	Annot
		∅*	Form
		0..n	FENote
		0..n	Index
		0..n	LBody
		0..n	TH
		0..n	TD
		0..n	Caption
		0..n	Figure
		0..n	Formula
		0..n	Artifact

Table 48 — The parent-child relationships for the TR structure element

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
0..n	NonStruct	‡	Div
0..n	Private	‡	NonStruct
0..n	TH	0..n	Private
0..n	TD	0..n	Table
0..n	Artifact	0..n	THead
		0..n	TBody
		0..n	TFoot
		0..n	Artifact

Table 49 — The parent-child relationships for the TH structure element

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
0..n	Art	‡	Div
0..n	Div	‡	NonStruct
0..n	Sect	0..n	Private
0..n	NonStruct	0..n	TR
0..n	Private	0..n	Artifact
0..n	P		
0..n	Note		

Table 49 *(continued)*

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
0..n	Code		
0..n	Hn		
0..1	H		
0..n	Lbl		
0..n	Em		
0..n	Strong		
0..n	Span		
0..n	Quote		
0..n	Link		
0..n	Reference		
0..n	Annot		
0..n	Form		
0..n	Ruby		
0..n	Warichu		
0..n	FENote		
0..n	Index		
0..n	L		
0..n	BibEntry		
0..n	Table		
0..n	Figure		
0..n	Formula		
0..n	Artifact		
0..n	content item		

Table 50 — The parent-child relationships for the TD structure element

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
0..n	Art	‡	Div
0..n	Div	‡	NonStruct
0..n	Sect	0..n	Private
0..n	NonStruct	0..n	TR
0..n	Private	0..n	Artifact
0..n	P		
0..n	Note		
0..n	Code		
0..n	Hn		
0..1	H		
0..n	Lbl		
0..n	Em		
0..n	Strong		
0..n	Span		
0..n	Quote		
0..n	Link		
0..n	Reference		
0..n	Annot		
0..n	Form		
0..n	Ruby		
0..n	Warichu		
0..n	FENote		

Table 50 *(continued)*

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
0..n	Index		
0..n	L		
0..n	BibEntry		
0..n	Table		
0..n	Figure		
0..n	Formula		
0..n	Artifact		
0..n	content item		

Table 51 — The parent-child relationships for the THead structure element

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
0..n	NonStruct	‡	Div
0..n	Private	‡	NonStruct
0..n	TR	0..n	Private
0..n	Artifact	0..1	Table
		0..n	Artifact

Table 52 — The parent-child relationships for the TBody structure element

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
0..n	NonStruct	‡	Div
0..n	Private	‡	NonStruct
0..n	TR	0..n	Private
0..n	Artifact	0..n	Table
		0..n	Artifact

Table 53 — The parent-child relationships for the TFoot structure element

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
0..n	NonStruct	‡	Div
0..n	Private	‡	NonStruct
0..n	TR	0..n	Private
0..n	Artifact	0..1	Table
		0..n	Artifact

Table 54 — The parent-child relationships for the Caption structure element

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
∅*	DocumentFragment	‡	Part
0..n	Part	‡	Div
0..n	Art	0..1	Art
0..n	Div	0..n	Sect
0..n	Sect	0..1	TOC
0..n	Aside	0..1	Aside
0..n	BlockQuote	0..1	BlockQuote
0..n	NonStruct	‡	NonStruct
0..n	Private	0..n	Private
0..n	P	0..1	Title
0..n	Note	0..1	Note

Table 54 *(continued)*

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
0..n	Code	0..1	Code
0..n	Hn	∅*	Link
0..1	H	∅*	Annot
0..n	Sub	0..1	Form
0..n	Lbl	∅*	FENote
0..n	Em	0..1	Index
0..n	Strong	0..1	L
0..n	Span	0..1	LBody
0..n	Quote	0..1	Table
0..n	Link	0..1	Figure
0..n	Reference	0..1	Formula
0..n	Annot	0..1	Artifact
0..n	Form		
0..n	Ruby		
0..n	Warichu		
0..n	FENote		
0..n	Index		
0..n	L		
0..n	BibEntry		
0..n	Table		
0..n	Figure		
0..n	Formula		
0..n	Artifact		
0..n	content item		

Table 55 — The parent-child relationships for the Figure structure element

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
0..n	Part	0..n	Document
0..n	Art	0..n	DocumentFragment
0..n	Div	‡	Part
0..n	Sect	‡	Div
0..n	Aside	0..n	Art
0..n	BlockQuote	0..n	Sect
0..n	NonStruct	0..n	Aside
0..n	Private	0..n	BlockQuote
0..n	P	‡	NonStruct
0..n	Note	0..n	Private
0..n	Code	0..n	Title
0..n	Hn	0..n	Sub
0..1	H	0..n	P
∅*	Sub	0..n	Note
0..n	Lbl	0..n	Code
0..n	Em	0..n	Hn
0..n	Strong	0..n	H
0..n	Span	0..n	Lbl
0..n	Quote	0..n	Em
0..n	Link	0..n	Strong
0..n	Reference	0..n	Span

Table 55 *(continued)*

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
0..n	Annot	0..n	Quote
0..n	Form	0..n	Link
0..n	Ruby	0..n	Reference
0..n	Warichu	0..n	Annot
0..n	FENote	∅*	Form
0..n	Index	0..n	FENote
0..n	L	0..n	Index
0..n	BibEntry	0..n	LBody
0..n	Table	0..n	BibEntry
0..1	Caption	0..n	TH
0..n	Figure	0..n	TD
0..n	Formula	0..n	Caption
0..n	Artifact	0..n	Figure
0..n	content item	0..n	Formula
		0..n	Artifact

Table 56 — The parent-child relationships for the Formula structure element

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
0..n	Part	0..n	Document
0..n	Div	0..n	DocumentFragment
0..n	Aside	‡	Part
0..n	BlockQuote	‡	Div
0..n	NonStruct	0..n	Art
0..n	Private	0..n	Sect
0..n	P	0..n	Aside
0..n	Note	0..n	BlockQuote
0..n	Code	‡	NonStruct
0..n	Hn	0..n	Private
0..1	H	0..n	Title
0..n	Sub	0..n	Sub
0..n	Lbl	0..n	P
0..n	Em	0..n	Note
0..n	Strong	0..n	Code
0..n	Span	0..n	Hn
0..n	Quote	0..n	H
0..n	Link	0..n	Lbl
0..n	Reference	0..n	Em
0..n	Annot	0..n	Strong
0..n	Form	0..n	Span
0..n	Ruby	0..n	Quote
0..n	Warichu	0..n	Link
0..n	FENote	0..n	Annot
0..n	Index	∅*	Form
0..n	L	0..n	FENote
0..n	BibEntry	0..n	Index
0..n	Table	0..n	LBody
0..1	Caption	0..n	TH
0..n	Figure	0..n	TD

Table 56 *(continued)*

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
0..n	Formula	0..n	Caption
0..n	Artifact	0..n	Figure
0..n	content item	0..n	Formula
		0..n	Artifact

Table 57 — The parent-child relationships for the Artifact structure element

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
0..n	Document	0..n	Document
0..n	DocumentFragment	0..n	DocumentFragment
0..n	Part	‡	Part
0..n	Art	‡	Div
0..n	Div	0..n	Art
0..n	Sect	0..n	Sect
0..n	TOC	0..n	TOC
0..n	TOCI	0..n	TOCI
0..n	Aside	0..n	Aside
0..n	BlockQuote	0..n	BlockQuote
0..n	NonStruct	‡	NonStruct
0..n	Private	0..n	Private
0..n	P	0..n	Title
0..n	Note	0..n	Sub
0..n	Code	0..n	P
0..n	Hn	0..n	Note
0..1	H	0..n	Code
0..n	Title	0..n	Hn
0..n	Sub	0..n	H
0..n	Lbl	0..n	Lbl
0..n	Em	0..n	Em
0..n	Strong	0..n	Strong
0..n	Span	0..n	Span
0..n	Quote	0..n	Quote
0..n	Link	0..n	Link
0..n	Reference	0..n	Reference
0..n	Annot	0..n	Annot
0..n	Form	0..n	Form
0..n	Ruby	0..n	RB
0..n	RB	0..n	RT
0..n	RT	0..n	RP
0..n	RP	0..n	WT
0..n	Warichu	0..n	WP
0..n	WT	0..n	FENote
0..n	WP	0..n	Index
0..n	FENote	0..n	L
0..n	Index	0..n	LI
0..n	L	0..n	LBody
0..n	LI	0..n	BibEntry
0..n	LBody	0..n	Table
0..n	BibEntry	0..n	TR

Table 57 *(continued)*

Child Occurrences	Child Structure Type	Parent Occurrences	Parent Structure Type
0..n	Table	0..n	TH
0..n	TR	0..n	TD
0..n	TH	0..n	THead
0..n	TD	0..n	TBody
0..n	THead	0..n	TFoot
0..n	TBody	0..n	Caption
0..n	TFoot	0..n	Figure
0..1	Caption	0..n	Formula
0..n	Figure	0..n	Artifact
0..n	Formula		
0..n	Artifact		
0..n	content item		

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