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Blue Book Appendix

CHLexML

Data Standard for the Representation of Swiss Law Texts

Technical XML Reference

Version: 1.0 (CHLexML Schema 1.0)

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About The Swiss Legislation Data Standard

CHLexML is the answer to the growing desire to develop a structural framework for the storage, transmission and representation of Swiss law texts. By "Swiss" we mean that the standard covers Confederation laws as well as the many different styles of laws produced by the cantons. This particular goal has been pursued by involving experts from the Federal Office of Justice, the Federal Chancellery, the Federal Supreme Court of Switzerland, and experts representing the cantons.

The CHLexML standards documentation comprises the following documents, called books:

- *Elektronischer Datenstandard für Erlasstexte*[1] (Blue Book). Introduces the CHLexML data standard by providing hints and illustrations to the practical user. Contains many examples that show how to transform real-world norm texts into CHLexML. This document is available in German, French and Italian.
- *Data Standard for the Representation of Swiss Law Texts (Blue Book Appendix).* A technical handbook for XML programmers (this document). Available in English only.

The entire standard documentation can be found on the Internet. See http://www.chlexml.ch.

About This Document

CHLexML is a data standard for the representation of Swiss law texts. This document is a technical appendix to the CHLexML Blue Book (German title: *Elektronischer Standard für Erlasstexte*). It is considered an integral part of the CHLexML standards documentation by addressing programmers and integration engineers.

This document is solely available in English.

How to Use This Document

This document is basically a collection of data sheets for each of the XML tags that you may find in a CHLexML document. It does not explain the concepts behind the schema, nor how to apply the standard in practice. It is strongly recommended to read the Blue Book (German title: *Elektronischer Standard für Erlasstexte*) prior to this one. Only then will you be able to find the information in this document comprehensive.

Important Technical Note

The XML schema expresses a number of integrity constraints, some of which use an Xpath notation that can cause schema validation errors with some XML parsers.

Some of the constraints in the published version of the XML schema are commented out. They will have no effect unless you uncomment them. Uncommenting may be useful only if your XML parser validates XML instance documents correctly in the presence of constraint expressions.

The XML schema has been tested against a number of XML parsers. Some worked fine while others failed. It is recommended that you check carefully with your parser prior to uncommenting the constraints.

[1] German title

XML Schema – Hierarchical Overview

The following is a simplified overview of the XML schema including the type definitions. Italics are used for variables and sub-trees that are optional, bracketed arrows refer to the type definition of a variable or node. Numbers in parentheses are used to tell look-alike XML tags from each other.

```
norm
     editorsNotes

     normMetadata [à normMetadataType]

     normContents [à structureType]

     normTail
          signatures
               signature [à textType1]
          applications
               application [à textType3]
          restrictions
                    restriction [à textType1]
          annotations
               annotation [à textType1]
          appendices
               appendix
                    appendixReference
                         description
                         comment [à commentType]
                         appendixContent
                                appendixNormID
                                appendixLink [à linkType]
                    appendixDocument [à textType3]

     normComments
          normComment
               commentReferenced
               commentNumber
               commentText [à textType6]

     history [à historyType]
```

articleMetadataType :=
articleForm
articleNumber
number
comment [**à** commentType]
articleHeaders
articleHeader [**à** textType1]
relation [**à** relationType]

---

articleType :=
articleMetadata [**à** articleMetadataType]
articleBody
articleText [**à** partType]

---

authorityType :=
designations
designation

---

authorType :=
supranational [**à** authorityType]
ch [**à** authorityType]
canton [**à** authorityType]
commune
short
bfs
text1
text2
other

---

commentType :=
commentReferencing
number
origin

---

historyType :=
info
dateForce
dateVersion
publication [**à** publicationType]
normNumber
number
comment
ingress
normMetadata
headers
abbreviations
shortTitles
type
authors
dateAdoption
dateAdoptionChange
dateForce
dateLastChange
dateAbrogation
structures
structure
articles
article
signatures
application
restrictions
annotations

```
      appendices
      previousHistory [à historyType]
```

---

ingressType :=

```
      ingressText [à textType4]
```

---

linkType :=

```
      linkID
      uri
      details
            journal
            yearOrNumber
            page
      type
      role
      semantics
      text
```

---

listType :=

```
      li
```

---

normMetadataType :=

```
      normNumber
            collection
            normID
            number
            comment [à commentType]
      headers
            header
                  appendixText
                  headerText
      abbreviations
            abbreviation
      shortTitles
            title
      type
      authors
            author [à authorType]
      dates
            dateAdoption
            dateAdoptionChange
            dateForce
            dateLastChange
            dateVersion
            dateValidUntil
            dateAbrogation
      ingress [à ingressType]
      firstPublication [à publicationType]
```

---

partMetadataType :=

```
      partNumber
      typeOfPart
      partHeaders [à textType1]
```

---

partType :=
partMetadata [à partMetadataType]
partTexts
partText [à textType1]
transitory [à textType5]
subparts
articleText [à partType]

---

pictureDetailType :=
picture
link [à linkType]

---

pictureType :=
pictureLow [à pictureDetailType]
pictureHigh [à pictureDetailType]
description

---

publicationType :=
journalText
link [à linkType]

---

relationType :=
source
link [à linkType]

---

structureType :=
structure
structureKind
structureLevel
structureContents
structureContent
structureOrder
structureText [à textType2]
normTexts
article [à articleType]
subStructure
normContents [à structureType]

---

tableType :=
tableContent
row
cell [à textType3]
description

---

textType1 :=
mixedText [à textType3]

---

textType2 :=
relation [à relationType]
format
break
comment [à commentType]
subTitle

---

textType3 :=
relation [**à** relationType]
format
break
tab
illustration [**à** pictureType]
comment [**à** commentType]
xhtml
list [**à** listType]
table [**à** tableType]

---

textType4 :=
authorityDescription
basis [**à** textType5]
formal

---

textType5 :=
relation [**à** relationType]
comment [**à** commentType]

---

textType6 :=
relation [**à** relationType]
comment [**à** commentType]
break

---

cantonType := restriction of xs:token
languageType := restriction of xs:token
pictureNotationType := xs:Name

How to Read the XML Reference Data Sheets

The XML Reference comprises a data sheet for each XML tag defined in the schema.

`<XML-tag>`	
`Schema Type Information`	
`Appearances (document Paths), if applicable`	
Element Data Type	XML schema data type
Children	Child nodes of the tag, if any
Attributes	Attributes of the tag, if any
Semantics	Meaning in terms of the business
Schema Rules	Consistency requirements expressed in the schema
Business Rules	Consistency requirements not expressed in the schema
Dependencies	Dependencies to other tags, variables or circumstances
Errors Raised	Errors and warnings that may be triggered by this element
Example	Example usage (XML snippet)
Remarks	Comments from the designers

Conventions about data sheet titles

Some of the XML-tags appear in different locations within the same document, possibly carrying different meanings. In fact such tags are not the same. For these look-alike tags a number is used in parentheses to distinguish one from another, for example `<type> (1)`, `<type> (2)`, and so on.

XML paths

The appearances (grey column) are expressed as element paths, very much like the "fully qualified path names" of files. Slashes are used to separate the hierarchical levels, e.g.

`norm/normMetadata/authors/author/supranational`

structureType, partType and historyType are recursive concepts, i.e. they can contain an element of their own type. The path of such an element is specified using the following grammar:

```
pathA/ {pathB/}* pathC
```

can mean:

```
pathA/pathC  or
pathA/pathB/pathC  or
pathA/pathB/pathB/pathC  or
pathA/pathB/pathB/pathB/pathC  and so on.
```

XML Reference Data Sheets

Document Main Structure

Element structure	norm *editorsNotes* normMetadata [à normMetadataType] normContents [à structureType] *normTail* *signatures* signature [à textType1] *applications* application [à textType3] *restrictions* restriction [à textType1] *annotations* annotation [à textType1] *appendices* appendix appendixReference description *comment* [à commentType] *appendixContent* appendixNormID appendixLink [à linkType] appendixDocument [à textType3] *normComments* normComment commentReferenced *commentNumber* commentText [à textType6] *history* [à historyType]
Description	The norm tag marks the beginning of a law text description. The norm root element contains the following sub-elements: • normMetadata – accompanying information about the norm • normContents – the structured norm • normTail – including the appendices • normComments – including footnotes and comments • history – information about earlier versions and how the current version was derived from them.
Important notes	

<norm>	
norm/ (the root element)	
Element Data Type	
Children	<editorsNotes> <normMetadata> <normContents> <normTail> <normComments> <history>
Attributes	
Semantics	This is the document's root element.
Schema Rules	Mandatory.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	Identity integrity constraints are defined here: **Uniqueness of article identifiers and part identifiers** Unique attribute: **ID** Used to identify text (of type partType) by a unique number within the scope of the document. **Uniqueness of link identifiers** Unique element: **linkID** Used to identify links (of type linkType) by a unique number within the scope of the document. **Uniqueness of comments** Unique element: **commentReferenced** Unique attribute: **commentReferencing** Assures that for each comment referencing, i.e. a footnote, there is actually a comment (the comment referenced) in norm/normContents.

<editorsNotes>	
norm/editorsNotes	
Element Data Type	xs:string
Children	
Attributes	
Semantics	Information and hints provided by the editor concerning the current CHLexML document. Think of it as release notes.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	<editorsNotes> **Artikel 18 ist ausser Kraft. Dies wurde im Erlasstext lediglich durch eine Fussnote vermerkt!** </editorsNotes>
Remarks	

<normMetadata> (1)	
norm/normMetadata	
Element Data Type	normMetadataType
Children	<normNumber> <headers> <abbreviations> <shortTitles> <type> <authors> <dates> <ingress> <firstPublication>
Attributes	
Semantics	Information about the norm. With the exception of ingress and headers this information contains no actual norm text.
Schema Rules	Mandatory.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<normContents>	
norm/normContents	
Element Data Type	structureType
Children	<structure> <subStructure>
Attributes	
Semantics	The norm's structure expressed as a possibly recursive set of structureType trees.
Schema Rules	Mandatory.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<normTail>	
norm/normTail	
Element Data Type	
Children	<signatures> <restrictions> <annotations> <appendices> <applications>
Attributes	
Semantics	A text at the end that does not belong to the norm as such. It consists of signatures (persons having authorized the norm), restrictions (clauses that express some sort of reservation), annotations (text not belonging to the norm but printed anyway), applications (to explain the scope of the norm), and the appendices.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<signatures> (1)	
norm/normTail/signatures	
Element Data Type	
Children	<signature>
Attributes	
Semantics	The norm's signatures. Most of the time, signatures are names and titles of people who have authorized the norm.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<signature>	
norm/normTail/signatures/signature	
Element Data Type	textType1
Children	<mixedText>
Attributes	
Semantics	A particular signature.
Schema Rules	Mandatory, unbound occurrence.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<restrictions> (1)	
norm/normTail/restrictions	
Element Data Type	
Children	<restriction>
Attributes	
Semantics	Restrictions and reservations applicable to the norm.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<restriction>	
norm/normTail/restrictions/restriction	
Element Data Type	textType1
Children	<mixedText>
Attributes	
Semantics	A particular restriction.
Schema Rules	Mandatory, unbound occurrence.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<annotations> (1)	
norm/normTail/annotations	
Element Data Type	
Children	<annotation>
Attributes	
Semantics	The norm's annotations. Usually text that is not an integral part of the norm but nevertheless printed.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<annotation>	
norm/normTail/annotations/annotation	
Element Data Type	textType1
Children	<mixedText>
Attributes	
Semantics	A particular annotation.
Schema Rules	Mandatory, unbound occurrence.
Business Rules	
Dependencies	
Errors Raised	
Example	<annotation> <mixedText> **angenommen in der Volksabstimmung vom 3. Juni 1983** <mixedText> </annotation>
Remarks	

<appendices> (1)	
norm/normTail/appendices	
Element Data Type	
Children	<appendix>
Attributes	
Semantics	Text within the norm document or in a separate location that serves to provide relevant information that the norm text refers to.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<appendix>	
norm/normTail/appendices/appendix	
Element Data Type	
Children	<appendixReference> <appendixDocument>
Attributes	**lang** (optional, languageType **à** enumeration {de, fr, it, rm, en})
Semantics	The two child nodes represent the different styles of an appendix. An appendix can be either a separately located document or the reproduction of a text that goes as an integral part of the norm.
Schema Rules	Mandatory, unbound occurrence. Child nodes appendixReference and appendixDocument are mutually exclusive.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<appendixReference>	
norm/normTail/appendices/appendix/appendixReference	
Element Data Type	
Children	<description> <comment> <appendixContent>
Attributes	
Semantics	Reference to a separately located document.
Schema Rules	Mandatory. Mutually exclusive with norm/normTail/appendices/appendix/appendixDocument.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<description> (1)	
`norm/normTail/appendices/appendix/appendixReference/description`	
Element Data Type	xs:string
Children	
Attributes	
Semantics	Textual description – a title or summary – of an (externally located) appendix.
Schema Rules	Mandatory.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<comment> (1)	
norm/normTail/appendices/appendix/appendixReference/comment	
Element Data Type	commentType
Children	<commentReferencing> <number> <origin>
Attributes	
Semantics	A footnote marker.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<appendixContent>

`norm/normTail/appendices/appendix/appendixReference/appendixContent`

Element Data Type	
Children	`<appendixNormID>` `<appendixLink>`
Attributes	
Semantics	If the referenced appendix belongs to the same norm compendium, appendixNormID points to that document. Otherwise, the referenced appendix specifies a fully external document.
Schema Rules	Optional. Child nodes appendixNormID and appendixLink are mutually exclusive.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<appendixNormID>	
`norm/normTail/appendices/appendix/appendixReference/appendixContent/appendixNormID`	
Element Data Type	xs:token
Children	
Attributes	
Semantics	Identifies a document that belongs to the same compendium as the norm.
Schema Rules	Mandatory. Mutually exclusive with `norm/normTail/appendices/appendixReference/appendixContent/appendixLink`
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<appendixLink>	
norm/normTail/appendices/appendix/appendixReference/appendixContent/appendixLink	
Element Data Type	linkType
Children	<linkID> <uri> <details> <type> <role> <semantics> <text>
Attributes	
Semantics	Identifies an external document.
Schema Rules	Mandatory. Mutually exclusive with norm/normTail/appendices/appendixReference/appendixContent/appendixNormID
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<appendixDocument>	
norm/normTail/appendices/appendix/appendixDocument	
Element Data Type	textType3
Children	<relation> <format> <break> <tab> <illustration> <comment> <xhtml> <list> <table>
Attributes	
Semantics	The representation of an appendix text.
Schema Rules	Mandatory. Mutually exclusive with norm/normTail/appendices/appendix/appendixReference.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<applications>	
norm/normTail/applications	
Element Data Type	
Children	<application>
Attributes	
Semantics	The domain of application of the norm (international norm specifying other nations that adopted it, or a national norm specifying cantons that adopted it, and so on).
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<application> (1)	
norm/normTail/applications/application	
Element Data Type	textType1
Children	<mixedText>
Attributes	
Semantics	A particular notice about the application of the norm.
Schema Rules	Mandatory, unbound occurrence.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<normComments>	
norm/normComments	
Element Data Type	
Children	<normComment>
Attributes	
Semantics	This is where all comment texts reside.
Schema Rules	Optional,.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<normComment>	
norm/normComments/normComment	
Element Data Type	
Children	<commentReferenced> <commentNumber> <commentText>
Attributes	
Semantics	A particular comment.
Schema Rules	Mandatory, unbound occurrence.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	No lang attribute here. Instead, each comment number is extended by a lang attribute and uniquely identifiable.

<commentReferenced>	
norm/normComments/normComment/commentReferenced	
Element Data Type	xs:int
Children	
Attributes	
Semantics	Unique identifier of the comment within the scope of this document. Used to unambiguously tie a footnote marker (of type commentType) in the norm's text to the actual comment text.
Schema Rules	Mandatory.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	An identity constraint assures that for each commentReferenced element there is actually content available for it.

<commentNumber>	
norm/normComments/normComment/commentNumber	
Element Data Type	xs:token
Children	
Attributes	
Semantics	A number visible to the reader of a document. Can be assigned automatically during the generation of a text for printing or viewing or it can be explicit (in which case the number would never change).
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<commentText>	
norm/normComments/normComment/commentText	
Element Data Type	textType6
Children	<relation> <comment> <break>
Attributes	
Semantics	The actual text of the comment.
Schema Rules	Mandatory.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<history>	
norm/history	
Element Data Type	historyType
Children	<info> <normNumber> <ingress> <normMetadata> <structures> <articles> <signatures> <application> <restriction> <annotations> <appendices> <previousHistory>
Attributes	
Semantics	A record of the relevant changes with respect to the previous version or edition.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

articleMetadataType

Type structure	**articleMetadataType :=** articleForm *articleNumber* number *comment* [**à** commentType] *articleHeaders* articleHeader [**à** textType1] *relation* [**à** relationType]
Description	articleMetadataType specifies the contents of metadata to an article.
Important notes	The elements below the articleMetadataType root node are specified as a sequence; you will have to preserve the order of appearance of the elements according to the definition in the schema.
Attributes	**ID** (mandatory, xs:token) Assures that an instance of articleMetadataType is uniquely identified throughout the document. The identity constraint serves to render ID unique all over the universe of all documents.

Appearances

```
norm/normContents/ {substructure/normContents/}* structure/normTexts/article/articleMetadata
```

<articleForm>	
articleMetadataType/articleForm	
Element Data Type	xs:token
Children	
Attributes	
Semantics	Specifies the visible string (or character) used to denote a new article. Examples are: "Artikel", "Art.", "§".
Schema Rules	Mandatory.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	The element is required (mandatory). However, there are cases in which articles are not introduced by a string like this. In such a case, you must provide articleForm anyway but leave it empty.

<articleNumber>	
articleMetadataType/articleNumber	
Element Data Type	
Children	<number> <comment>
Attributes	
Semantics	The article's visible number, e.g. "44" or "65 bis."
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	The element is optional because there are norms in which articles are not numbered.

<number> (1)	
articleMetadataType/articleNumber/number	
Element Data Type	Extension of xs:token
Children	
Attributes	**quiet** (optional) if it's there: suppress articleNumber if it's not there: show articleNumber
Semantics	The actual number.
Schema Rules	Mandatory.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	The element is optional because there are norms in which articles are not numbered.

<comment> (2)	
articleMetadataType/articleNumber/comment	
Element Data Type	commentType

Children	`<commentReferencing>`
	`<number>`
	`<origin>`

Attributes	
Semantics	Article numbers can contain a footnote marker.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<articleHeaders>	
articleMetadataType/articleHeaders	
Element Data Type	
Children	`<articleHeader>`
Attributes	
Semantics	The title of the article.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	This element is optional because there are articles which do not have a title. See *Schweizerisches Obligationenrecht*, for instance.

<articleHeader>	
articleMetadataType/articleHeaders/articleHeader	
Element Data Type	textType1
Children	`<mixedText>`
Attributes	
Semantics	The article's title in a specific language.
Schema Rules	Mandatory, unbound occurrence.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<relation> (1)	
articleMetadataType/relation	
Element Data Type	relationType
Children	<source> <link>
Attributes	
Semantics	relation is a reference to some other norm (or parts thereof).
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

articleType

Type structure	**articleType :=** articleMetadata [**à** articleMetadataType] articleBody articleText [**à** partType]
Description	articleType specifies the structure of an article. An article is comprised of metadata (data about the article), and the article's text.
Important notes	The elements below the articleType root node are specified as a sequence; you will have to preserve the order of appearance of the elements according to the definition in the schema.

Appearances

```
norm/normContents/ {substructure/normContents/}* structure/normTexts/article
```

<articleMetadata>	
articleType/articleMetadata	
Element Data Type	articleMetadataType
Children	<articleForm> <articleNumber> <articleHeaders> <relation>
Attributes	**ID** (mandatory, xs:token) Assures that the current article is uniquely identified throughout the document by a number. Note that the attribute is defined in the articleMetadataType definition, not the articleMetadata tag definition.
Semantics	
Schema Rules	Mandatory.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<articleBody>	
articleType/articleBody	
Element Data Type	
Children	<articleText>
Attributes	
Semantics	The article's content, made of different parts.
Schema Rules	Mandatory.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<articleText> (1)	
articleType/articleBody/articleText	
Element Data Type	partType
Children	<partMetadata> <partTexts> <transitory> <subparts>
Attributes	**lang** (optional, languageType **à** enumeration {de, fr, it, rm, en})
Semantics	The article's text.
Schema Rules	Mandatory, unbound occurrence.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

authorityType

Type structure	**authorityType :=** designations designation
Description	authorityType is used by authorType in order to specify an authority.
Important notes	

Appearances

```
norm/normMetadata/authors/author/supranational
norm/normMetadata/authors/author/ch
norm/normMetadata/authors/author/canton
```

<designations>	
authorityType/designations	
Element Data Type	
Children	<designation>
Attributes	
Semantics	The name of a public authority.
Schema Rules	Mandatory.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<designation>	
authorityType/designations/designation	
Element Data Type	
Children	
Attributes	**lang** (optional, languageType **à** enumeration {de, fr, it, rm, en})
Semantics	The name of an authority, e.g. "Eidg. Wettbewerbskommission". More than one name may be assigned, possibly in various languages.
Schema Rules	Mandatory, unbound occurrence.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

authorType

Type structure	**authorType :=** supranational [**à** authorityType] ch [**à** authorityType] canton [**à** authorityType] commune short bfs text1 *text2* other
Description	The author of the norm.
Important notes	

Appearances

norm/normMetadata/authors/author

<supranational>	
authorType/supranational	
Element Data Type	authorityType
Children	<designations>
Attributes	
Semantics	International consortium, i.e. "UN" or "EU"
Schema Rules	Mandatory.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<ch>	
authorType/ch	
Element Data Type	authorityType
Children	<designations>
Attributes	
Semantics	The Swiss confederation.
Schema Rules	Mandatory.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<canton>	
authorType/canton	
Element Data Type	Extension of authorityType
Children	<designations>
Attributes	**short** (mandatory, cantonType **à** enumeration {ZH, BE, LU, UR, SZ, OW, NW, ZG, GL, SG, TG, SH, GR, AG, AI, AR, SO, BS, BL, JU, NE, VD, GE, VS, TI, FR})
Semantics	One of the Swiss cantons.
Schema Rules	Mandatory.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<commune>	
authorType/commune	
Element Data Type	
Children	<short> <bfs> <text1> <text2>
Attributes	
Semantics	A Swiss municipality (a city).
Schema Rules	Mandatory.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<short>	
authorType/commune/short	
Element Data Type	cantonType
Children	
Attributes	
Semantics	The municipality's canton.
Schema Rules	Mandatory.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	cantonType **à** enumeration {ZH, BE, LU, UR, SZ, OW, NW, ZG, GL, SG, TG, SH, GR, AG, AI, AR, SO, BS, BL, JU, NE, VD, GE, VS, TI, FR})

<bfs>	
authorType/commune/bfs	
Element Data Type	xs:token
Children	
Attributes	
Semantics	The municipality's unique number as issued by the Swiss Federal Statistical Office.
Schema Rules	Mandatory.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<text1>	
authorType/commune/text1	
Element Data Type	xs:token
Children	
Attributes	
Semantics	Free text. Use to specify the name of the municipality in conformance to the Swiss Federal Statistical Office's notation.
Schema Rules	Mandatory.
Business Rules	
Dependencies	
Errors Raised	
Example	<text1>**Murten**</text1>
Remarks	

<text2>	
authorType/commune/text2	
Element Data Type	xs:token
Children	
Attributes	
Semantics	Free text. Use to the name of the municipality in another official language, if applicable.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	<text1>**Morat**</text1>
Remarks	

<other>	
authorType/other	
Element Data Type	xs:token
Children	
Attributes	
Semantics	Reserved for purposes that are not specified.
Schema Rules	Mandatory.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

commentType

Type structure	**commentType :=** commentReferencing *number* *origin*
Description	commentType is used to introduce a "footnote marker" in the norm's text.
Important notes	The elements below the commentType root node are specified as a sequence; you will have to preserve the order of appearance of the elements according to the definition in the schema.

Appearances

norm/normMetadata/normNumber/comment

norm/normMetadata/ingress/comments/comment

norm/normMetadata/ingress/ingressContent/ingressText/basis/comment

norm/normContents/ **{subStructure/normContents/}*** structure/structureContents/structureContent/structureText/comment

norm/normContents/ **{substructure/normContents/}*** structure/normTexts/article/articleMetadata/articleHeaders/articleHeader/mixedText/comment

norm/normContents/ **{substructure/normContents/}*** structure/normTexts/article/articleMetadata/articleNumber/comment

norm/normContents/ **{subStructure/normContents/}*** structure/normTexts/article/articleBody/articleText/ **{subparts/articleText/}*** partTexts/partText/table/tableContent/row/cell/comment

norm/normContents/ **{subStructure/normContents/}*** structure/normTexts/article/articleBody/articleText/ **{subparts/articleText/}*** partTexts/partText/characters/comment

norm/normContents/ **{subStructure/normContents/}*** structure/normTexts/article/articleBody/articleText/ **{subparts/articleText/}*** partMetadata/partHeaders/mixedText/comment

norm/normContents/ **{subStructure/normContents/}*** structure/normTexts/article/articleBody/articleText/ **{subparts/articleText/}*** transitory/comment

norm/normTail/signatures/signature/mixedText/comment

norm/normTail/restrictions/restriction/mixedText/comment

norm/normTail/annotations/annotation/mixedText/comment

norm/normTail/applications/application/mixedText/comment

norm/normTail/appendices/appendix/appendixReference/comment

norm/normTail/appendices/appendix/appendixDocument/comment

norm/normComments/normComment/commentText/comment

<commentReferencing>	
commentType/commentReferencing	
Element Data Type	xs:int
Children	
Attributes	
Semantics	Refers to a comment located in the norm/normComments section. It is the comment having this identifier in its commentReferenced element.
Schema Rules	Mandatory.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	An identity constraint assures that for each commentReferencing element there is actually content available for it.

<number> (2)	
commentType/number	
Element Data Type	xs:token
Children	
Attributes	
Semantics	Use any character suitable to specify the comment number (or footnote number) as it shall appear on screen or on paper.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<origin>	
commentType/origin	
Element Data Type	restriction of xs:token
Children	
Attributes	
Semantics	The originator of the comment, either the author or the publisher.
Schema Rules	Optional.
Business Rules	Use the following abbreviations when documenting the origin of a comment A = author, editor of the normative text P = publisher O = other (unspecified)
Dependencies	
Errors Raised	
Example	
Remarks	

historyType

Type structure	**historyType :=** info dateForce dateVersion *publication* [à publicationType] normNumber *number* *comment* *ingress* *normMetadata* *headers* *abbreviations* *shortTitles* *type* *authors* *dateAdoption* *dateForce* *dateLastChange* *dateAbrogation* *structures* structure *articles* article *signatures* *application* *restrictions* *annotations* *appendices* *previousHistory* [à historyType]
Description	historyType contains the relevant information about the changes that occurred in a document. The norm/history section contains information about an older version or edition of the same norm. It does not tell anything about the current editon or version (the rest of the document does that). historyType is a self-referencing structure, it can contain an element of its own type, previousHistory. If you dig down into all previousHistory elements recursively, you actually unfold the document's chain of historical change information by rewinding all previous editions and versions one by one. You can thus find out what changes were applied to the norm at a specific point in time. A new **edition** (German: "Fassung") of a norm is the result of a *major change*, e.g. the cancellation of an article or the introduction of a new chapter. This is normally initiated by the author of the norm. A new **version** of a norm is the result of a *minor change*, like fixing a typo. Can be initiated by the author or the publisher. See also normMetadata/dates/dateForce, normMetadata/dates/dateVersion and normMetadata/dates/dateLastChange.
Important notes	The elements below the historyType root node are specified as a sequence: you will have to preserve the order of appearance of the elements according to the definition in the schema.

Appearances

norm/history/ **{previousHistory/}***

<info>	
historyType/info	
Element Data Type	
Children	<dateForce> <dateVersion> <publication>
Attributes	
Semantics	Identifies the edition and version of the norm from which the changes in norm/history are being reported. Most probably the version just before the current one.
Schema Rules	Mandatory.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<dateForce> (1)	
historyType/info/dateForce	
Element Data Type	xs:date
Children	
Attributes	
Semantics	Point in time of the commencement of the norm.
Schema Rules	Mandatory.
Business Rules	
Dependencies	Should be equal to normMetadata/dates/dateForce of the referenced edition or version.
Errors Raised	
Example	
Remarks	This should not change over the histories.

<dateVersion> (1)	
historyType/info/dateVersion	
Element Data Type	xs:date
Children	
Attributes	
Semantics	Point in time when the version change occurred.
Schema Rules	Mandatory.
Business Rules	
Dependencies	Should be equal to normMetadata/dates/dateVersion as stored in the referenced edition or version of the norm. If this is the first version of a new edition, then dateVersion and dateLastChange should be equal.
Errors Raised	
Example	
Remarks	

<publication>	
historyType/info/publication	
Element Data Type	publicationType
Children	<journal> <link>
Attributes	**lang** (optional, languageType **à** enumeration {de, fr, it, rm, en})
Semantics	The date when the norm was published.
Schema Rules	Optional.
Business Rules	
Dependencies	Should be equal to normMetadata/dates/dateVersion as stored in the referenced edition or version of the norm.
Errors Raised	
Example	
Remarks	Publication is mandatory with a new edition. It is optional with a new version.

<normNumber> (1)	
historyType/normNumber	
Element Data Type	
Children	<number> <comment>
Attributes	
Semantics	Indicates that normNumber was changed, either the number itself or a comment to the number.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<number> (3)	
historyType/normNumber/number	
Element Data Type	
Children	
Attributes	**historyChange** (mandatory **à** enumeration {insert, modify, delete}) **oldNumber** (mandatory **à** xs:token)
Semantics	norm/normMetadata/normNumber/number was changed. This is NOT the norms unique identifier but the number which is used in the compendium. It may change from time to time. This is considered a minor change.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	A minor change.

<comment> (3)	
historyType/normNumber/comment	
Element Data Type	
Children	
Attributes	**historyChange** (mandatory **à** enumeration {insert, modify, delete})
Semantics	At least one of the footnotes (comments) was changed (norm/normMetadata/normNumber/comment was changed).
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	A minor change.

<ingress> (1)	
historyType/ingress	
Element Data Type	
Children	
Attributes	**historyChange** (mandatory **à** enumeration {insert, modify, delete})
Semantics	The ingress (norm/normMetadata/ingress) was changed.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<normMetadata> (2)	
historyType/normMetadata	
Element Data Type	
Children	<headers> <abbreviations> <shortTitles> <type> <authors> <dateAdoption> <dateForce> <dateLastChange> <dateAbrogation>
Attributes	
Semantics	
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<headers> (1)	
historyType/normMetadata/headers	
Element Data Type	
Children	
Attributes	**historyChange** (mandatory **à** enumeration {insert, modify, delete})
Semantics	At least one of the headers in norm/normMetadata/headers was changed.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	Considered a minor change.

<abbreviations> (1)	
historyType/normMetadata/abbreviations	
Element Data Type	
Children	
Attributes	**historyChange** (mandatory **à** enumeration {insert, modify, delete})
Semantics	At least one of the abbreviations of the norm (in norm/normMetadata/abbreviations) was changed.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	Considered a minor change.

<shortTitles> (1)	
historyType/normMetadata/shortTitles	
Element Data Type	
Children	
Attributes	**historyChange** (mandatory **à** enumeration {insert, modify, delete})
Semantics	At least one of norm/normMetadata/shortTitles/titles was changed.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	Considered a minor change.

<type> (1)	
historyType/normMetadata/type	
Element Data Type	
Children	
Attributes	**historyChange** (mandatory **à** enumeration {insert, modify, delete})
Semantics	The document's type classification in norm/normMetadata/type was changed.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	Considered a minor change.

<authors> (1)	
historyType/normMetadata/authors	
Element Data Type	
Children	
Attributes	**historyChange** (mandatory **à** enumeration {insert, modify, delete}) **historyImpact** (mandatory **à** enumeration {minor, major})
Semantics	A change in the authorship in norm/normMetadata/authors.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<dateAdoption> (1)	
historyType/normMetadata/dateAdoption	
Element Data Type	
Children	
Attributes	**historyChange** (mandatory **à** enumeration {insert, modify, delete})
Semantics	norm/normMetadata/dates/dateAdoption was changed.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	dateAdoption should not be changed unless the date was in error or there was a typo. Otherwise the document would represent a new norm. It is therefore considered a minor change.

<dateAdoptionChange> (1)	
historyType/normMetadata/dateAdoptionChange	
Element Data Type	
Children	
Attributes	**historyChange** (mandatory **à** enumeration {insert, modify, delete})
Semantics	norm/normMetadata/dates/dateAdoptionChange was changed.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	Changing dateAdoptionChange is an indication that the norm has passed its final legislation some time after it was adopted. This normally happens when the adoption has happened retroactively.

<dateForce> (2)	
historyType/normMetadata/dateForce	
Element Data Type	
Children	
Attributes	**historyChange** (mandatory **à** enumeration {insert, modify, delete})
Semantics	norm/normMetadata/dates/dateForce was changed.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	A change in dateForce can only mean the correction of a typo. It is therefore considered a minor change.

<dateLastChange> (1)	
historyType/normMetadata/dateLastChange	
Element Data Type	
Children	
Attributes	**historyChange** (mandatory **à** enumeration {insert, modify, delete})
Semantics	norm/normMetadata/dates/dateLastChange was changed. The reason is probably the correction of a typo.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	Always a minor change.

<dateAbrogation> (1)	
historyType/normMetadata/dateAbrogation	
Element Data Type	
Children	
Attributes	**historyChange** (mandatory **à** enumeration {insert, modify, delete})
Semantics	norm/normMetadata/dates/dateAbrogation was changed.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	Considered a minor change. Either a correction of a typo or the first introduction of the dateAbrogation date, in which case the insertion is purely editorial.

<structures>	
historyType/structures	
Element Data Type	
Children	`<structure>`
Attributes	
Semantics	Indicates the presence of changes of titles or even the entire structure.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<structure> (1)	
historyType/structures/structure	
Element Data Type	
Children	
Attributes	**historyChange** (mandatory **à** enumeration {insert, modify, delete}) **historyImpact** (mandatory **à** enumeration {minor, major}) **id** (mandatory **à** internal identifier of the changed structure)
Semantics	Used to specify a change in the structure or in a title (or many titles).
Schema Rules	Mandatory.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	There is no indication of the structural level involved. However, the structural element in which the change occurred is identified by the id attribute.

<articles>	
historyType/articles	
Element Data Type	
Children	`<article>`
Attributes	
Semantics	Indicates the presence of changes in an article or parts thereof.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<article>	
historyType/articles/article	
Element Data Type	
Children	
Attributes	**historyChange** (mandatory **à** enumeration {insert, modify, delete}) **historyImpact** (mandatory **à** enumeration {minor, major}) **id1** (mandatory **à** internal identifier of the changed structure) **id2** (optional **à** internal identifier of the changed structure)
Semantics	Use id1 to specify the article. Use id2 to specify in detail the part of the article that was changed. If not provided, the change is assumed to affect the entire article.
Schema Rules	Mandatory.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	By means of the attributes id1 and id2, you can either emphasize that the change is affecting the article as a whole (no id2 provided) or you can point to a smaller-grained part of text within that article (using id2 in addition). id2 is expected to point to one of the sub-structures of an article (of type partType).

<signatures> (2)	
historyType/signatures	
Element Data Type	
Children	
Attributes	**historyChange** (mandatory **à** enumeration {insert, modify, delete}) **historyImpact** (mandatory **à** enumeration {minor, major})
Semantics	Some of the signatures have been altered, viz. norm/normTail/signatures was changed.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<application> (2)	
historyType/application	
Element Data Type	
Children	
Attributes	**historyChange** (mandatory **à** enumeration {insert, modify, delete}) **historyImpact** (mandatory **à** enumeration {minor, major})
Semantics	There is a change in the domain of application (either nations or cantons involved in the norm). norm/normTail/application was changed.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<restrictions> (2)	
historyType/restrictions	
Element Data Type	
Children	
Attributes	**historyChange** (mandatory **à** enumeration {insert, modify, delete}) **historyImpact** (mandatory **à** enumeration {minor, major})
Semantics	At least one of the norm's restrictions have changed. norm/normTail/restrictions was changed.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<annotations> (2)	
historyType/annotations	
Element Data Type	
Children	
Attributes	**historyChange** (mandatory **à** enumeration {insert, modify, delete}) **historyImpact** (mandatory **à** enumeration {minor, major})
Semantics	At least one of the annotations has been changed or a new annotation added. norm/normTail/annotations was changed.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	annotations are comments (footnotes) that are not an integral part of the norm, but nevertheless displayed or printed.

<appendices> (2)	
historyType/appendices	
Element Data Type	
Children	
Attributes	**historyChange** (mandatory **à** enumeration {insert, modify, delete}) **historyImpact** (mandatory **à** enumeration {minor, major})
Semantics	There is a change with the appendices (removal, addition, replacement, correction, update, …) norm/normTail/appendices was changed.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<previousHistory>	
historyType/previousHistory	
Element Data Type	historyType
Children	<info> <normNumber> <ingress> <normMetadata> <structures> <articles> <signatures> <application> <restrictions> <annotations> <appendices> <previousHistory>
Attributes	
Semantics	A copy of the norm/history section of the version or edition before the one that contains the previousHistory element.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	You can drill down the previousHistory section and find out about the changes that occurred to the norm at a specific point in time. § norm/history: Information about the changes to the norm that have lead to the current version or edition § norm/history/previousHistory: Information about the changes to the norm that have lead to the previous version or edition § norm/history/previousHistory/previousHistory: Information about the changes to the norm that have lead to the version or edition just before the previous one § and so on

ingressType

Type structure	**ingressType :=** ingressText [**à** textType4]
Description	ingressType specifies the contents of the ingress of a norm.
Important notes	

Appearances

```
norm/normMetadata/ingress
```

<ingressText>	
ingressType/ingressContent/ingressText	
Element Data Type	Extension of textType4
Children	<authorityDescription> <basis> <formal>
Attributes	**lang** (optional, languageType **à** enumeration {de, fr, it, rm, en})
Semantics	The ingress text in a specific language. textType4 is especially well suited for representing the ingress.
Schema Rules	Mandatory, unbound occurrence.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

linkType

Type structure	**linkType :=** linkID *uri* *details* journal yearOrNumber page *type* *role* *semantics* *text*
Description	The terminology of a link is somewhat different in CHLexML from the pure URL-centric view. Links in CHLexML are used to point to outside documents – they may be used for the bi-directional linking of norms.
Important notes	The elements below the linkType root node are specified as a sequence; you will have to preserve the order of appearance of the elements according to the definition in the schema.

For appearances of the linkType element, see the following page.

Appearances

norm/normMetadata/ingress/ingressContent/ingressText/basis/relation/link

norm/normMetadata/firstPublication/link

norm/normTail/signatures/signature/mixedText/relation/link

norm/normTail/signatures/signature/mixedText/illustration/picture[Low|High]/link

norm/normTail/restrictions/restriction/mixedText/relation/link

norm/normTail/restrictions/restriction/mixedText/illustration/picture[Low|High]/link

norm/normTail/annotations/annotation/mixedText/relation/link

norm/normTail/annotations/annotation/mixedText/illustration/picture[Low|High]/link

norm/normTail/applications/application/mixedText/relation/link

norm/normTail/applications/application/mixedText/illustration/picture[Low|High]/link

norm/normTail/appendices/appendix/appendixReference/appendixContent/appendixLink

norm/normTail/appendices/appendix/appendixDocument/relation/link

norm/normTail/appendices/appendix/appendixDocument/illustration/picture[Low|High]/link

norm/normContents/ **{substructure/normContents/}*** structure/normTexts/article/articleMetadata/articleHeaders/articleHeader/mixedText/illustration/picture[Low|High]/link

norm/normContents/ **{subStructure/normContents/}*** structure/normTexts/article/articleMetadata/relation/link

norm/normContents/ **{substructure/normContents/}*** structure/normTexts/article/articleMetadata/articleHeaders/articleHeader/mixedText/relation/link

norm/normContents/ **{subStructure/normContents/}*** structure/normTexts/article/articleBody/articleText/ **{subparts/articleText/}*** partTexts/partText/table/tableContent/row/cell/illustration/picture[Low|High]/link

norm/normContents/ **{subStructure/normContents/}*** structure/normTexts/article/articleBody/articleText/ **{subparts/articleText/}*** partTexts/partText/characters/illustration/picture[Low|High]/link

norm/normContents/ **{subStructure/normContents/}*** structure/normTexts/article/articleBody/articleText/ **{subparts/articleText/}*** partMetadata/partHeaders/mixedText/illustration/picture[Low|High]/link

norm/normContents/ **{subStructure/normContents/}*** structure/normTexts/article/articleBody/articleText/ **{subparts/articleText/}*** transitory/relation/link

norm/normContents/ **{subStructure/normContents/}*** structure/normTexts/article/articleBody/articleText/ **{subparts/articleText/}*** partTexts/partText/table/tableContent/row/cell/relation/link

norm/normContents/ **{subStructure/normContents/}*** structure/normTexts/article/articleBody/articleText/ **{subparts/articleText/}*** partTexts/partText/characters/relation/link

norm/normContents/ **{subStructure/normContents/}*** structure/normTexts/article/articleBody/articleText/ **{subparts/articleText/}*** partMetadata/partHeaders/mixedText/relation/link

norm/normContents/ **{subStructure/normContents/}*** /structure/structureContents/structureContent/structureText/relation/link

norm/normComments/normComment/commentContent/commentText/relation/link

norm/history/ **{previousHistory/}*** info/publication/link

<linkID>	
linkType/linkID	
Element Data Type	xs:int
Children	
Attributes	
Semantics	A document-wide unique identification of that specific link.
Schema Rules	Mandatory.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	The identity constraint imposed on the linkID element identifies links by a unique number within the scope of the document.

<uri>	
linkType/uri	
Element Data Type	Extension of xs:anyURI
Children	
Attributes	**lang** (optional, languageType **à** enumeration {de, fr, it, rm, en})
Semantics	Used to store an internet address. Use the lang attribute to separate URIs of different languages from each other.
Schema Rules	Optional, unbound occurrence.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<details>	
linkType/details	
Element Data Type	
Children	<journal> <yearOrNumber> <page>
Attributes	
Semantics	Details that might allow to reconstruct the link by means of the information in the child nodes.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<journal>	
linkType/details/journal	
Element Data Type	xs:token
Children	
Attributes	
Semantics	Indicate the publication or compendium in which the linked entity is located.
Schema Rules	Mandatory.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<yearOrNumber>	
linkType/details/yearOrNumber	
Element Data Type	xs:token
Children	
Attributes	
Semantics	Either a specific year or the number of a publication, whichever is applicable. Consider it as information in a second level, <journal> being the first level.
Schema Rules	Mandatory.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<page>	
linkType/details/page	
Element Data Type	xs:token
Children	
Attributes	
Semantics	The page number used for the publication specified by journal and yearOrNumber.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<type> (2)	
linkType/type	
Element Data Type	xs:token
Children	
Attributes	
Semantics	Information about the type of relation that the document has to the one specified in the link. The linked document could be the legal basis, a glossary, a publication, and so on.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<role>	
linkType/role	
Element Data Type	xs:token
Children	
Attributes	
Semantics	Reserved for later usage.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<semantics>	
linkType/semantics	
Element Data Type	xs:token
Children	
Attributes	
Semantics	Reserved for later usage.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<text>	
linkType/text	
Element Data Type	xs:string
Children	
Attributes	**lang** (optional, languageType **à** enumeration {de, fr, it, rm, en})
Semantics	Used to provide a short description of the link to the user, i.e. a tooltip in a hypertext link.
Schema Rules	Optional, unbound occurrence.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

listType

Type structure	**listType :=** li [**à** textType3]
Description	listType is used to represent bulleted and non-bulleted lists. As each list item (li) is, in turn, a textType3, nested lists (lists having more than one level of indentation) can easily be built.
Important notes	

Appearances

norm/normTail/appendices/appendix/appendixDocument/list

norm/normTail/norm/normTail/restrictions/restriction/mixedText/list

norm/normTail/norm/normTail/signatures/signature/mixedText/list

norm/normTail/norm/normTail/annotations/annotation/mixedText/list

norm/normTail/norm/normTail/applications/application/mixedText/list

norm/normContents/ **{substructure/normContents/}*** structure/normTexts/article/articleMetadata/articleHeaders/articleHeader/mixedText/list

norm/normContents/ **{subStructure/normContents/}*** structure/normTexts/article/articleBody/articleText/ **{subparts/articleText/}*** partMetadata/partHeaders/mixedText/list

norm/normContents/ **{subStructure/normContents/}*** structure/normTexts/article/articleBody/articleText/ **{subparts/articleText/}*** partTexts/partText/mixedText/table/tableContent/row/cell/list

ADD {/li/list}* **to each appearance**.

** **	
listType/li	
Element Data Type	textType3
Children	<relation> <format> <break> <tab> <illustration> <comment> <xhtml> <list> <table>
Attributes	**type** (mandatory, restricted xs:token {ol, ul, dl}) ol=ordered list, ul=unordered bulleted list, dl=unordered non-bulleted list
Semantics	A list item.
Schema Rules	Mandatory, unbound occurrence.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

normMetadataType

Type structure	**normMetadataType :=** normNumber collection normID number *comment* [**à** commentType] *headers* header *appendixText* *headerText* *abbreviations* abbreviation shortTitles title type authors author [**à** authorType] dates dateAdoption *dateForce* *dateLastChange* *dateVersion* *dateValidUntil* *dateAbrogation* *ingress* [**à** ingressType] *firstPublication* [**à** publicationType]
Description	normMetadataType specifies information which is related to the document and normally not visible in the document's printout except for the "ingress" section and some of the dates.
Important notes	The elements below the normMetadataType root node are specified as a sequence; you will have to preserve the order of appearance of the elements according to the definition in the schema.

Appearances

norm/normMetadata

<normNumber> (2)	
normMetadataType/normNumber	
Element Data Type	
Children	<collection> <normID> <number> <comment>
Attributes	
Semantics	The norm's internal and external identification.
Schema Rules	Mandatory.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<collection>	
normMetadataType/normNumber/collection	
Element Data Type	xs:token
Children	
Attributes	
Semantics	Identifies the compendium (collection) to which the norm belongs.
Schema Rules	Mandatory.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	Examples of compendiums are: CH, SG, NE. Each compendium has got its own identifier.

<normID>	
normMetadataType/normNumber/normID	
Element Data Type	xs:token
Children	
Attributes	
Semantics	The norm's unique identifier within the scope of the systematic compendium (of the Swiss Federation or a canton). This can be considered a technical identifier; it will not change over time but remain stable.
Schema Rules	Mandatory.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<number> (4)	
normMetadataType/normNumber/number	
Element Data Type	xs:token
Children	
Attributes	
Semantics	The norm's visible number. It may be unique at some point in time and become obsolete or ambiguous at another point in time. Should not be considered a technical unique identifier.
Schema Rules	Mandatory.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	Not necessarily a unique number. For example, appendices and other documents may have the same number as the principal norm.

<comment> (4)	
normMetadataType/normNumber/comment	
Element Data Type	commentType
Children	<commentReferencing> <number> <origin>
Attributes	
Semantics	A footnote marker located near the norm number.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<headers> (2)	
normMetadataType/headers	
Element Data Type	
Children	<header>
Attributes	
Semantics	Heading information that usually is located at the beginning of the norm's title, e.g. "Appendix 15", "Translation", "Original Text".
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<header>	
normMetadataType/headers/header	
Element Data Type	
Children	`<appendixText>` `<headerText>`
Attributes	**lang** (optional, languageType **à** enumeration {de, fr, it, rm, en})
Semantics	A header in this context is either the indication of an appendix or a prologue. It can read differently in different languages.
Schema Rules	Mandatory, unbound occurrence.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<appendixText>	
normMetadataType/headers/header/appendixText	
Element Data Type	Extension of xs:token
Children	
Attributes	**sort** (xs:int)
Semantics	Text that appears before or above the actual appendix title. The sort attribute is used to specify the order in which the list of appendices is printed.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<headerText>	
normMetadataType/headers/header/headerText	
Element Data Type	xs:token
Children	
Attributes	
Semantics	A "prologue" to the norm's title, like "Translation" or "Original Text".
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<abbreviations> (2)	
normMetadataType/abbreviations	
Element Data Type	
Children	`<abbreviation>`
Attributes	
Semantics	The norm's abbreviations or acronyms, like "OR", "ZGB" and so on.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<abbreviation>	
normMetadataType/abbreviations/abbreviation	
Element Data Type	Extension of xs:token
Children	
Attributes	**lang** (optional, languageType **à** enumeration {de, fr, it, rm, en})
Semantics	One of the norm's abbreviations, e.g. "OR", "ZGB", and so on.
Schema Rules	Mandatory.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<shortTitles> (2)	
normMetadataType/shortTitles	
Element Data Type	
Children	`<title>`
Attributes	
Semantics	A shorter form of the norm's title.
Schema Rules	Mandatory.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	You must provide at least one short title. If there is no useful short title you should insert the documents full title (repeat the norm title).

<title>	
normMetadataType/shortTitles/title	
Element Data Type	Extension of xs:token
Children	
Attributes	**lang** (optional, languageType **à** enumeration {de, fr, it, rm, en})
Semantics	One of the possibly many short titles in a specific language.
Schema Rules	Mandatory, unbound occurrence.
Business Rules	
Dependencies	
Errors Raised	
Example	`<title>`**Obligationenrecht**`</title>`
Remarks	

<type> (3)	
normMetadataType/type	
Element Data Type	xs:token
Children	
Attributes	
Semantics	Specifies the type (or class) of a norm. Examples are "constitutional", "report", "annex", "correspondence", "communiqué", and so on.
Schema Rules	Mandatory.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<authors> (1)	
normMetadataType/authors	
Element Data Type	
Children	<author>
Attributes	
Semantics	The originator(s) of the norm. There can be many.
Schema Rules	Mandatory.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<author>	
normMetadataType/authors/author	
Element Data Type	authorType
Children	<supranational> <ch> <canton> <commune> <other>
Attributes	
Semantics	Specifies one particular author.
Schema Rules	Mandatory, unbound occurrence.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<dates>	
normMetadataType/dates	
Element Data Type	
Children	<dateAdoption> <dateAdoptionChange> <dateForce> <dateLastChange> <dateVersion> <dateValidUntil> <dateAbrogation>
Attributes	
Semantics	The dates of relevant events that apply to the norm.
Schema Rules	Mandatory.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	There are two kinds of events, each having a different effect on the norm. Major changes are changes to the content or to another part of high importance. A major change always results in a **new edition** of the norm. When a new edition is released, dateLastChange is updated and dateVersion is set to dateLastChange. Minor changes are editorial in nature (typos, for instance) and do not affect the validity of the norm at all. They result in a change of the **version** within an edition. When a new version is released, dateVersion is updated and dateLastChange left unchanged. Hence, editions and versions a hierarchical representations of major and minor change events that were applied to the norm at certain points in time. An example edition/version history of a norm might look like this: 1.1.2008 Edition 1 / Version 01 1.7.2008 Edition 1 / Version 02 1.10.2008 Edition 1 / Version 03 1.1.2010 Edition 2 / Version 01

<dateAdoption> (1)	
normMetadataType/dates/dateAdoption	
Element Data Type	xs:date
Children	
Attributes	
Semantics	The date on which the norm was adopted. In some cases, a norm can have multiple adoption dates, like a contract.
Schema Rules	Mandatory, unbound occurrence.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<dateAdoptionChange> (2)	
normMetadataType/dates/dateAdoptionChange	
Element Data Type	xs:dateTime
Children	
Attributes	
Semantics	A point in time when the edition of the norm, although it was already adopted, has finally passed legislation. Use dateAdoptionChange when the norm is adopted retroactively.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<dateForce> (3)	
normMetadataType/dates/dateForce	
Element Data Type	xs:dateTime
Children	
Attributes	
Semantics	The point in time when the norm was brought into effect for the first time.
Schema Rules	Optional.
Business Rules	
Dependencies	In all versions of the first edition, dateForce and dateLastChange are the same.
Errors Raised	
Example	
Remarks	In rare cases the norm is effective to a particular group at some point in time and to another group at another point in time. An example of this is the federal personnel law (Bundespersonalgesetz). The CHLexML standard does not cover this situation. It allows for only one dateForce element.

<dateLastChange> (2)	
normMetadataType/dates/dateLastChange	
Element Data Type	xs:date
Children	
Attributes	
Semantics	The date on which the current edition of the norm was brought into effect. Every new edition of a norm has got its own dateLastChange value.
Schema Rules	Optional.
Business Rules	
Dependencies	In the first editon of a norm, dateLastChange and dateForce are the same for all versions.
Errors Raised	
Example	
Remarks	Do not change this value when applying a minor change to the document.

<dateVersion> (2)	
normMetadataType/dates/dateVersion	
Element Data Type	xs:date
Children	
Attributes	
Semantics	The date on which minor changes were applied to the current version of this edition. Minor changes always lead to a new version, not a new edition.
Schema Rules	Optional.
Business Rules	
Dependencies	If this is the first version of a (new) edition, then dateLastChange=dateVersion.
Errors Raised	
Example	
Remarks	

<dateValidUntil>	
normMetadataType/dates/dateValidUntil	
Element Data Type	xs:date
Children	
Attributes	
Semantics	If managed in retrospect, the edition/version of the norm at hand was valid until the date specified here.
Schema Rules	Optional.
Business Rules	
Dependencies	The edition specified in this document was valid from dateLastChange until dateValidUntil.
Errors Raised	
Example	
Remarks	When editing the current edition, you normally do not know how long the norm will be in effect. dateValidUntil is meant to be used in a document describing a terminated norm. This may be useful for historical research in the future.

<dateAbrogation> (2)	
normMetadataType/dates/dateAbrogation	
Element Data Type	xs:dateTime
Children	
Attributes	
Semantics	The date of abrogation of a norm.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	In rare cases the norm's abrogation affects different groups of individuals to different points in time, making the abrogation a stepwise process. CHLexML cannot handle that kind of abrogation procedure.

<ingress> (2)	
normMetadataType/ingress	
Element Data Type	ingressType
Children	`<ingressText>`
Attributes	
Semantics	The document's ingress.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<firstPublication>	
normMetadataType/firstPublication	
Element Data Type	publicationType
Children	<journalText> <link>
Attributes	**lang** (optional, languageType **à** enumeration {de, fr, it, rm, en})
Semantics	The first publication in the official gazette. In the SR compendium of laws, this is usually printed as a footnote (comment) with no footnote number.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

partMetadataType

Type structure	**partMetadataType :=** partNumber typeOfPart *partHeaders* [**à** textType1]
Description	partMetadataType contains the metadata applicable to a paragraph or alinea in an article.
Attributes	**ID** (mandatory, xs:token) Assures that an instance of articleMetadataType is uniquely identified throughout the document. The identity constraint serves to render ID unique all over the universe of all documents.
Important notes	The elements below the partMetadataType root node are specified as a sequence; you will have to preserve the order of appearance of the elements according to the definition in the schema.

Appearances

norm/normContents/ **{subStructure/normContents/}*** structure/normTexts/article/articleBody/ articleText/ **{subparts/articleText/}*** partMetadata

<partNumber>	
partMetadataType/partNumber	
Element Data Type	Extension of xs:token
Children	
Attributes	**quiet** (optional) if it is there: suppress partNumber for printing if it is not there: show partNumber for printing
Semantics	Paragraphs (so called "alineas") in an article are usually numbered. This eases the referencing of an alinea in another norm. Using the quiet attribute, the printing of the number can be suppressed.
Schema Rules	Mandatory.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	There are norm texts in which the paragraphs are not numbered for printing.

<typeOfPart>	
partMetadataType/typeOfPart	
Element Data Type	xs:token
Children	
Attributes	
Semantics	Specifiies the editorial type of the alinea, e.g. a listing.
Schema Rules	Mandatory.
Business Rules	As a convention, use "A" for paragraphs (alineas), "C" for characters, "N" for numbers, "L" for listings, and "O" for other types.
Dependencies	
Errors Raised	
Example	
Remarks	

<partHeaders>	
partMetadataType/partHeaders	
Element Data Type	textType1
Children	`<mixedText>`
Attributes	
Semantics	Paragraphs (alineas) in an article normally do not have a heading of their own. However, in rare cases, they can have one, like in an international contract, for instance.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

partType

Type structure	**partType :=** partMetadata [**à** partMetadataType] partTexts partText [**à** textType1] *transitory* [**à** textType5] *subparts* articleText [**à** partType]
Description	partType specifies the content and structure of a paragraph (or alinea) in an article.
Attributes	**lang** (optional, languageType **à** enumeration {de, fr, it, rm, en})
Important notes	The elements below the partType root node are specified as a sequence; you will have to preserve the order of appearance of the elements according to the definition in the schema.

Appearances

norm/normContents/ **{subStructure/normContents/}*** structure/normTexts/article/articleBody/ articleText/ **{subparts/articleText/}***

<partMetadata>	
partType/partMetadata	
Element Data Type	partMetadataType
Children	<partNumber> <typeOfPart> <partHeaders>
Attributes	**ID** (mandatory, xs:token) Assures that an instance of partMetadataType is uniquely identified throughout the document by a number. Note that the attribute is a part of the definition of the partMetadataType, not the partMetadata tag.
Semantics	The metadata applicable to a paragraph (alinea) in an article.
Schema Rules	Mandatory.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<partTexts>	
partType/partTexts	
Element Data Type	
Children	<partText>
Attributes	
Semantics	The actual content, represented by possibly many "parts" (the partText elements).
Schema Rules	Mandatory.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<partText>	
partType/partTexts/partText	
Element Data Type	textType1
Children	`<mixedText>`
Attributes	**lang** (optional, languageType **à** enumeration {de, fr, it, rm, en})
Semantics	In general, a part text is a mix of freely structured text with text in tables.
Schema Rules	Mandatory, unbound occurrence.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<transitory>	
partType/transitory	
Element Data Type	textType5
Children	`<relation>` `<comment>`
Attributes	
Semantics	Specifies the transitional regulations expressed in this alinea, if any.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<subparts>	
partType/subparts	
Element Data Type	
Children	`<articleText>`
Attributes	
Semantics	Alineas can be divided into yet smaller pieces of text, so called sub parts.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<articleText> (2)	
partType/subparts/articleText	
Element Data Type	partType

Children	`<partMetadata>`
	`<partTexts>`
	`<transitory>`
	`<subparts>`

Attributes	**lang** (optional, languageType **à** enumeration {de, fr, it, rm, en})
Semantics	Each sub-part of an alinea is a fully qualified partType.
Schema Rules	Mandatory.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	This is a recursive application of the partType type. In very rare cases, the structure of an alinea differs from one language to another (see OR 1033, for example). It is recommended to use comments (footnotes) instead of another layer of (lower-level) alineas in such a situation, as CHLexML cannot handle diverging structures induced by a language in another way.

pictureDetailType

Type structure	**pictureDetailType :=** picture link [**à** linkType]
Description	pictureDetailType specifies the technical elements of a picture used for illustration in a norm text.
Important notes	

Appearances

norm/normTail/signatures/signature/mixedText/illustration/picture[Low|High]

norm/normTail/restrictions/restriction/mixedText/illustration/picture[Low|High]

norm/normTail/annotations/annotation/mixedText/illustration/picture[Low|High]

norm/normTail/applications/application/mixedText/illustration/picture[Low|High]

norm/normTail/appendices/appendix/appendixDocument/illustration/picture[Low|High]

norm/normContents/ **{substructure/normContents/}*** structure/normTexts/article/articleMetadata/articleHeaders/articleHeader/mixedText/illustration/picture[Low|High]

norm/normContents/ **{subStructure/normContents/}*** structure/normTexts/article/articleBody/articleText/ **{subparts/articleText/}*** partTexts/partText/table/tableContent/row/cell/illustration/picture[Low|High]

norm/normContents/ **{subStructure/normContents/}*** structure/normTexts/article/articleBody/articleText/ **{subparts/articleText/}*** partTexts/partText/characters/illustration/picture[Low|High]

norm/normContents/ **{subStructure/normContents/}*** structure/normTexts/article/articleBody/articleText/ **{subparts/articleText/}*** partMetadata/partHeaders/mixedText/illustration/picture[Low|High]

<picture>	
pictureDetailType/picture	
Element Data Type	Extension of xs:base64Binary
Children	
Attributes	**fmt** (restriction of pictureNotationType / restriction of xs:Name) fmt specifies the technical format of the picture. It is recommended to use well-known abbreviations, like JPEG, GIF, and so on.
Semantics	Bytes of memory that represent the picture.
Schema Rules	Mandatory choice with `pictureDetailType/link`
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	Use either <picture> or <link> to specify the picture. Using <picture> the image is specified as the contents of a pics-file.

<link> (1)	
pictureDetailType/link	
Element Data Type	linkType

Children	`<linkID>`
	`<uri>`
	`<details>`
	`<type>`
	`<role>`
	`<semantics>`
	`<text>`

Attributes	
Semantics	A link where to find the picture.
Schema Rules	Mandatory choice with `pictureDetailType/picture`
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	Use either <picture> or <link> to specify the picture. Using <link> the image is specified as being stored elsewhere.

pictureType

Type structure	**pictureType :=** *pictureLow* [**à** pictureDetailType] *pictureHigh* [**à** pictureDetailType] *description*
Description	pictureType specifies an illustration to be used in a norm text.
Important notes	The elements below the pictureType root node are specified as a sequence; you will have to preserve the order of appearance of the elements according to the definition in the schema.

Appearances

```
norm/normTail/signatures/signature/mixedText/illustration
norm/normTail/restrictions/restriction/mixedText/illustration
norm/normTail/annotations/annotation/mixedText/illustration
norm/normTail/applications/application/mixedText/illustration
norm/normTail/appendices/appendix/appendixDocument/illustration

norm/normContents/ {substructure/normContents/}* structure/normTexts/article/articleMetadata/
articleHeaders/articleHeader/mixedText/illustration
norm/normContents/ {subStructure/normContents/}* structure/normTexts/article/articleBody/
articleText/ {subparts/articleText/}* partTexts/partText/table/tableContent/row/cell/
illustration
norm/normContents/ {subStructure/normContents/}* structure/normTexts/article/articleBody/
articleText/ {subparts/articleText/}* partTexts/partText/characters/illustration
norm/normContents/ {subStructure/normContents/}* structure/normTexts/article/articleBody/
articleText/ {subparts/articleText/}* partMetadata/partHeaders/mixedText/illustration
```

<pictureLow>	
pictureType/pictureLow	
Element Data Type	pictureDetailType
Children	<picture> <link>
Attributes	
Semantics	A low resolution picture for web usage.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<pictureHigh>	
pictureType/pictureHigh	
Element Data Type	pictureDetailType
Children	<picture> <link>
Attributes	
Semantics	A high resolution picture for printing.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<description> (2)	
pictureType/description	
Element Data Type	xs:string
Children	
Attributes	
Semantics	Content of a tooltip of the picture.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	This is useful for the visually handicapped.

publicationType

Type structure	**publicationType :=** journalText *link [* **à** *linkType]*
Description	publicationType specifies where a text has been published.
Attributes	**lang** (optional, languageType **à** enumeration {de, fr, it, rm, en})
Important notes	The elements below the publicationType root node are specified as a sequence; you will have to preserve the order of appearance of the elements according to the definition in the schema.

Appearances

```
norm/normMetadata/firstPublication
norm/history/ {previousHistory/}* info/publication
```

<journalText>	
publicationType/journal	
Element Data Type	xs:token
Children	
Attributes	
Semantics	The journal or gazette where this text (or norm) was published.
Schema Rules	Mandatory.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	Example publication location: "AS 2001 665"

<link> (2)	
publicationType/link	
Element Data Type	linkType

Children	`<linkID>`
	`<uri>`
	`<details>`
	`<type>`
	`<role>`
	`<semantics>`
	`<text>`

Attributes	
Semantics	A link to a location where this text (or norm) was published.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

relationType

Type structure	**relationType :=** source *link* [**à** linkType]
Description	relationType specifies a reference to another text, e.g. a citation.
Important notes	The elements below the relationType root node are specified as a sequence; you will have to preserve the order of appearance of the elements according to the definition in the schema.

Appearances

```
norm/normMetadata/ingress/ingressContent/ingressText/basis/relation

norm/normComments/normComment/commentContent/commentText/relation

norm/normTail/signatures/signature/mixedText/relation
norm/normTail/restrictions/restriction/mixedText/relation
norm/normTail/annotations/annotation/mixedText/relation
norm/normTail/applications/application/mixedText/relation
norm/normTail/appendices/appendix/appendixDocument/relation

norm/normContents/ {subStructure/normContents/}* /structure/structureContents/
structureContent/structureText/relation
norm/normContents/ {subStructure/normContents/}* structure/normTexts/article/articleMetadata/
relation
norm/normContents/ {substructure/normContents/}* structure/normTexts/article/articleMetadata/
articleHeaders/articleHeader/mixedText/relation
norm/normContents/ {subStructure/normContents/}* structure/normTexts/article/articleBody/
articleText/ {subparts/articleText/}* transitory/relation
norm/normContents/ {subStructure/normContents/}* structure/normTexts/article/articleBody/
articleText/ {subparts/articleText/}* partTexts/partText/table/tableContent/row/cell/relation
norm/normContents/ {subStructure/normContents/}* structure/normTexts/article/articleBody/
articleText/ {subparts/articleText/}* partTexts/partText/characters/relation
norm/normContents/ {subStructure/normContents/}* structure/normTexts/article/articleBody/
articleText/ {subparts/articleText/}* partMetadata/partHeaders/mixedText/relation
```

<source>	
relationType/source	
Element Data Type	xs:token
Children	
Attributes	
Semantics	The source being referenced.
Schema Rules	Mandatory.
Business Rules	
Dependencies	
Errors Raised	
Example	`<source>`**`RO 1991 846`**`</source>`
Remarks	

<link> (3)	
relationType/link	
Element Data Type	linkType

Children	`<linkID>`
	`<uri>`
	`<details>`
	`<type>`
	`<role>`
	`<semantics>`
	`<text>`

Attributes	
Semantics	A link to the referenced source, if applicable.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

structureType

Type structure	**structureType :=** structure structureKind structureLevel structureContents structureContent *structureOrder* structureText [**à** textType2] *normTexts* article [**à** articleType] *subStructure* normContents [**à** structureType]
Description	structureType represents the basic concept to subdivide a norm into smaller structural pieces. structureTypes are nested as often as necessary to reflect the textual structure of a norm.
Important notes	The elements below the structureType root node and the structureType/structure node are specified as a sequence; you will have to preserve the order of appearance of the elements according to the definition in the schema.

Appearances

norm/normContents/ **{subStructure/normContents/}***

<structure> (2)	
structureType/structure	
Element Data Type	
Children	<structureKind> <structureLevel> <structureContents> <normTexts>
Attributes	
Semantics	This is the basic structural element to specify the hierarchical levelling of texts in a norm.
Schema Rules	Mandatory.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<structureKind>	
structureType/structure/structureKind	
Element Data Type	Restriction of xs:token **à** Enumeration {N, R, M, A}
Children	
Attributes	
Semantics	There are four kinds of titles: N = Normal R = marginal title ("Randtitel") M = Major title of the norm ("Haupttitel") A = finalisation title ("Schlusstitel")
Schema Rules	Mandatory.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<structureLevel>	
structureType/structure/structureLevel	
Element Data Type	Restriction of xs:byte
Children	
Attributes	
Semantics	The level of nesting of the structure. Theoretically, this information can be computed from the number of nested substructures in the element's path.
Schema Rules	Mandatory.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<structureContents>	
structureType/structure/structureContents	
Element Data Type	
Children	`<structureContent>`
Attributes	**ID** (mandatory, xs:int) Assures that each structureContents element is uniquely identified throughout the document by a number.
Semantics	Text describing the heading, if any, related to the structural level at hand.
Schema Rules	Mandatory.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<structureContent>	
structureType/structure/structureContents/structureContent	
Element Data Type	
Children	<structureOrder> <structureText>
Attributes	**lang** (optional, languageType **à** enumeration {de, fr, it, rm, en})
Semantics	The actual content of the structural level. There can be many because of the different languages.
Schema Rules	Mandatory, unbound occurrence.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<structureOrder>	
structureType/structure/structureContents/structureContent/ structureOrder	
Element Data Type	xs:token
Children	
Attributes	
Semantics	Printable text used as a nomenclature of the structural level at hand.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	structureOrder specifies printable text that is used as a nomenclature of a specific structural level. Examples: "Abschnitt 1", "Erstes Kapitel".

<structureText>	
structureType/structure/structureContents/structureContent/structureText	
Element Data Type	textType2
Children	<relation> <format> <break> <comment> <subTitle>
Attributes	
Semantics	The actual heading of the structure.
Schema Rules	Mandatory.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	structureText is the actual heading of the structural level. It can contain text formatting information.

<normTexts>	
structureType/structure/normTexts	
Element Data Type	
Children	<article>
Attributes	
Semantics	This is where the norm text goes.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<article>	
structureType/structure/normTexts/article	
Element Data Type	articleType
Children	<articleMetadata> <articleBody>
Attributes	
Semantics	At a certain structural level in a norm, the articles appear. Articles are a structure which is described in a separate type definition (using articleType).
Schema Rules	Mandatory, unbound occurrence.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<subStructure>	
structureType/subStructure	
Element Data Type	
Children	<normContents>
Attributes	
Semantics	In an norm, the structural levels are nested using the structureType. Each time a new (lower level) structure appears, subStructure is used to hold its data.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<normContents>	
structureType/subStructure/normContents	
Element Data Type	structureType
Children	<structure> <substructure>
Attributes	
Semantics	A new structure, one level below the current one.
Schema Rules	Mandatory, unbound occurrence.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

tableType

Type structure	**tableType :=** tableContent row cell [**à** textType3] *description*
Description	tableType is used to specify text that appears in tables.
Important notes	The elements below the tableType root node are specified as a sequence; you will have to preserve the order of appearance of the elements according to the definition in the schema.

Appearances

norm/normTail/signatures/signature/mixedText/table {/tableContent/row/cell/table}*

norm/normTail/restrictions/restriction/mixedText/table {/tableContent/row/cell/table}*

norm/normTail/annotations/annotation/mixedText/table {/tableContent/row/cell/table}*

norm/normTail/applications/application/mixedText/table {/tableContent/row/cell/table}*

norm/normTail/appendices/appendix/appendixDocument/table {/tableContent/row/cell/table}*

norm/normContents/ **{substructure/normContents/}*** structure/normTexts/article/articleMetadata/articleHeaders/articleHeader/mixedText/table {/tableContent/row/cell/table}*

norm/normContents/ **{subStructure/normContents/}*** structure/normTexts/article/articleBody/articleText/ **{subparts/articleText/}*** partMetadata/partHeaders/mixedText/table {/tableContent/row/cell/table}*

norm/normContents/ **{subStructure/normContents/}*** structure/normTexts/article/articleBody/articleText/ **{subparts/articleText/}*** partTexts/partText/mixedText/table {/tableContent/row/cell/table}*

<tableContent>	
tableType/tableContent	
Element Data Type	
Children	<row>
Attributes	
Semantics	This is where the text goes.
Schema Rules	Mandatory.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<row>	
tableType/tableContent/row	
Element Data Type	
Children	<cell>
Attributes	**rowType** (optional, restriction of xs:token **à** enumeration {header, data})
Semantics	A row can contain any number of cells. The rowType attribute tells whether the row is a heading.
Schema Rules	Mandatory, unbound occurrence.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<cell>	
tableType/tableContent/row/cell	
Element Data Type	textType3
Children	<relation> <format> <break> <tab> <illustration> <comment> <xhtml> <list> <table>
Attributes	**span** (optional, xs:int) The number of columns that the cell spans.
Semantics	The cell contains the actual table text.
Schema Rules	
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<description> (3)	
tableType/description	
Element Data Type	xs:string
Children	
Attributes	
Semantics	Use as a tooltip for explanations about the table.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	This is useful for the visually handicapped.

textType1

Type structure	**textType1 :=** mixedText [**à** textType3]
Description	textType is used to write headings and other elements of the norm text. It contains a sequence of mixedText elements (of type textType3).
Important notes	

Appearances

```
norm/normTail/signatures/signature/
norm/normTail/restrictions/restriction
norm/normTail/annotations/annotation
norm/normTail/applications/application


norm/normContents/ {substructure/normContents/}* structure/normTexts/article/articleMetadata/
articleHeaders/articleHeader
norm/normContents/ {subStructure/normContents/}* structure/normTexts/article/articleBody/
articleText/ {subparts/articleText/}* partMetadata/partHeaders
norm/normContents/ {subStructure/normContents/}* structure/normTexts/article/articleBody/
articleText/ {subparts/articleText/}* partTexts/partText
```

<mixedText>	
textType1/mixedText	
Element Data Type	Extension of textType3
Children	<relation> <format> <break> <tab> <illustration> <comment> <xhtml> <list> <table>
Attributes	**lang** (optional, languageType **à** enumeration {de, fr, it, rm, en})
Semantics	A container of text elements.
Schema Rules	Mandatory, unbound occurrence.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

textType2

Type structure	**textType2 :=** relation [**à** relationType] format break comment [**à** commentType] subTitle
Description	textType2 is used to specify the title or heading of a structure.
Important notes	textType2 is a mixed type. This type allows to write formatted text *as defined by the authors*.

Appearances

```
norm/normContents/ {subStructure/normContents/}* structure/structureContents/
structureContent/structureText
```

<relation> (2)	
textType2/relation	
Element Data Type	relationType
Children	<source> <link>
Attributes	
Semantics	relation is a reference to some other norm (or parts thereof). Used to specify the norms to which the current text (or part of a text) refers.
Schema Rules	Mandatory choice.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<format> (1)	
textType2/format	
Element Data Type	Extension of xs:string
Children	
Attributes	**grp** (formatAttributGroup): *style* (optional, restriction of xs:token **à** enumeration {n, i, b, bi}) n=normal, i=italic, b=bold, bi=bold italic *capitals* (optional, xs:boolean, true=use capitalised letter font) *upper* (optional, xs:boolean, true=superscript) *under* (optional, xs:boolean, true=subscript) *underline* (optional, xs:boolean, true=underline)
Semantics	Special string formatting options.
Schema Rules	Mandatory choice.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<break> (1)	
textType2/break	
Element Data Type	none
Children	
Attributes	**type** (mandatory, restriction of xs:token **à** {pagebreak, columnbreak, line})
Semantics	A page break, a column break or a line break.
Schema Rules	Mandatory choice.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<comment> (5)	
textType2/comment	
Element Data Type	commentType

Children	`<commentReferencing>`
	`<number>`
	`<origin>`

Attributes	
Semantics	A footnote marker.
Schema Rules	Mandatory choice.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<subTitle>	
textType2/subTitle	
Element Data Type	xs:token
Children	
Attributes	
Semantics	Use to denote a subtitle of the norm.
Schema Rules	Mandatory choice.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	Sometimes, such a subtitle is written on a separate line, using a smaller font.

textType3

Type structure	**textType3 :=** relation [**à** relationType] format break tab illustration [**à** pictureType] comment [**à** commentType] xhtml list [**à** listType] table [**à** tableType]
Description	textType3 is used to write formatted norm text.
Important notes	textType3 is a mixed type. It allows to write formatted text *as defined by the authors*. The table element contains a circular definition of the tableType data type, which, in turn, contains textType3.

Appearances

norm/normTail/appendices/appendix/appendixDocument

norm/normTail/restrictions/restriction/mixedText

norm/normTail/signatures/signature/mixedText

norm/normTail/annotations/annotation/mixedText

norm/normTail/applications/application/mixedText

norm/normContents/ **{substructure/normContents/}*** structure/normTexts/article/articleMetadata/articleHeaders/articleHeader/mixedText

norm/normContents/ **{subStructure/normContents/}*** structure/normTexts/article/articleBody/articleText/ **{subparts/articleText/}*** partMetadata/partHeaders/mixedText

norm/normContents/ **{subStructure/normContents/}*** structure/normTexts/article/articleBody/articleText/ **{subparts/articleText/}*** partTexts/partText/mixedText

ADD {/table/tableContent/row/cell}* **to each appearance above**.

<relation> (3)	
textType3/relation	
Element Data Type	relationType
Children	<source> <link>
Attributes	
Semantics	relation is a reference to some other norm (or parts thereof). Used to specify the norms to which the current text (or part of a text) refers.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<format> (2)	
textType3/format	
Element Data Type	Extension of xs:string
Children	
Attributes	**grp** (formatAttributGroup): *style* (optional, restriction of xs:token **à** enumeration {n, i, b, bi}) n=normal, i=italic, b=bold, bi=bold italic *capitals* (optional, xs:boolean, true=use capitalised letter font) *upper* (optional, xs:boolean, true=superscript) *under* (optional, xs:boolean, true=subscript) *underline* (optional, xs:boolean, true=underline)
Semantics	Special string formatting options.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<break> (2)	
textType3/break	
Element Data Type	
Children	
Attributes	**type** (mandatory, restriction of xs:token **à** {pagebreak, columnbreak, line})
Semantics	A page break, a column break or a line break.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<tab>	
textType3/tab	
Element Data Type	
Children	
Attributes	
Semantics	Represents the tabulator character, use as an empty tag.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<illustration>	
textType3/illustration	
Element Data Type	pictureType
Children	<pictureLow> <pictureHigh> <description>
Attributes	
Semantics	Insert an illustration (a picture).
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<comment> (6)	
textType3/comment	
Element Data Type	commentType
Children	<commentReferencing> <number> <origin>
Attributes	
Semantics	A footnote marker.
Schema Rules	Optional, unbound occurrence.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<xhtml>	
textType3/xhtml	
Element Data Type	xs:anyType
Children	
Attributes	any (not specified)
Semantics	XHTML code to specify the formatting of a text (or part of a text).
Schema Rules	Optional, unbound occurrence.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	Using "anyType" in combination with "any" attribute allows for specifying virtually any kind of markup language.

<list>	
textType3/list	
Element Data Type	listType
Children	
Attributes	
Semantics	Specify a listing having bullets or not, being ordered or not.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	listType allows for nested lists, or sub-lists.

<table>	
textType3/table	
Element Data Type	tableType
Children	<tableContent> <description>
Attributes	
Semantics	A tabular representation of data.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

textType4

Type structure	**textType4 :=** *authorityDescription* *basis [**à** textType5]* *formal*
Description	textType4 is used in to specify the content of the ingress.
Important notes	textType4 is a mixed type. It allows to write formatted text *as defined by the authors*.

Appearances

norm/normMetadata/ingress/ingressContent/ingressText

<authorityDescription>	
textType4/authorityDescription	
Element Data Type	xs:token
Children	
Attributes	
Semantics	The authority mentioned in the beginning of the ingress. For instance "Der Schweizerische Bundesrat".
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<basis>	
textType4/basis	
Element Data Type	textType5
Children	`<relation>` `<comment>`
Attributes	
Semantics	Description of the legal basis in the ingress.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<formal>	
textType4/formal	
Element Data Type	xs:token
Children	
Attributes	
Semantics	A term describing the intention of the authority in the ingress. For example "beschliesst", "verordnet", etc.
Schema Rules	Optional.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

textType5

Type structure	**textType5 :=** relation [**à** relationType] comment [**à** commentType]
Description	textType5 is used to specify the legal basis in the ingress as well as transitory regulations in an article.
Important notes	textType5 is a mixed type. It allows to write formatted text *as defined by the authors*.

Appearances

```
norm/normMetadata/ingress/ingressContent/ingressText/basis
norm/normContents/ {subStructure/normContents/}* structure/normTexts/article/articleBody/
articleText/ {subparts/articleText/}* transitory
```

<relation> (4)	
textType5/relation	
Element Data Type	relationType
Children	<source> <link>
Attributes	
Semantics	relation is a reference to some other norm (or parts thereof). Used to specify the norms to which the current text (or part of a text) refers.
Schema Rules	Mandatory choice.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<comment> (7)	
textType5/comment	
Element Data Type	commentType
Children	<commentReferencing> <number> <origin>
Attributes	
Semantics	A footnote marker.
Schema Rules	Mandatory choice.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

textType6

Type structure	**textType6 :=** relation [**à** relationType] comment [**à** commentType] break
Description	textType6 is used to specify comment text.
Important notes	textType6 is a mixed text. It allows to write formatted text *as defined by the authors*.

Appearances

norm/normComments/normComment/commentContent/commentText

<relation> (5)	
textType6/relation	
Element Data Type	relationType
Children	<source> <link>
Attributes	
Semantics	relation is a reference to some other norm (or parts thereof). Used to specify the norms to which the current text (or part of a text) refers.
Schema Rules	Mandatory.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<comment> (8)	
textType6/comment	
Element Data Type	commentType
Children	<commentReferencing> <number> <origin>
Attributes	
Semantics	A footnote marker.
Schema Rules	Mandatory.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

<break> (3)	
textType6/break	
Element Data Type	
Children	
Attributes	**type** (mandatory **à** enumeration {pagebreak, columnbreak, line})
Semantics	A page break, a column break or a line break.
Schema Rules	Mandatory.
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

Simple Data Types

cantonType	
Type	Restriction of xs:token Enumeration {ZH, BE, LU, UR, SZ, OW, NW, ZG, GL, SG, TG, SH, GR, AG, AI, AR, SO, BS, BL, JU, NE,VD, GE, VS, TI, FR}
Children	
Attributes	
Semantics	Specifies one of the Swiss cantons using the official 2-character abbreviation.
Schema Rules	
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

languageType	
Type	Restriction of xs:token Enumeration {de, fr, it, rm, en}
Children	
Attributes	
Semantics	Specify one of the Swiss languages or English.
Schema Rules	
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

pictureNotationType	
Type	xs:token
Children	
Attributes	
Semantics	Used to specify the format of a picture by means of free text. You are encouraged to use well-known abbreviations, e.g. GIF, JPEG, MPEG, etc.
Schema Rules	
Business Rules	
Dependencies	
Errors Raised	
Example	
Remarks	

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