Document Markup Language (DML) Specification 1.0

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Abstract

This specification defines the Document Markup Language (DML), a markup language for books, articles, notes and other types of document. DML is normatively available as a RELAX NG (Appendix A, pg. 26) schema with additional Schematron (Appendix A, pg. 26) assertions.

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1. Introduction

DML is a general-purpose XML schema, particularly well suited to books, articles and annotations in other XML sources.

DML is normatively available as a RELAX NG (Appendix A, pg. 26) schema with additional Schematron (Appendix A, pg. 26) assertions to cover all missing cases.

DML is a simple set of elements and attributes which define the basic semantics for a generic document. It is designed keeping in mind that all specialization may be defined through a scoped XML schema. For example, to mark up code it may be used the *Programming Markup Language (Appendix A, pg. 27)*.

The *metadata model* use a set of metadata attributes (Section 4, pg. 23) which are originally defined in RDFa Syntax (Appendix A, pg. 26) from W3C.

This specification has a style and nomenclature conventions (Appendix B, pg. 27) to simplify the reading process.

1.1. Namespace

The *DML namespace* has the URI `"http://purl.oclc.org/NET/dml/1.0/"`. It is usually associated with the `"dml"` prefix.

1.2. Status of this document

This is a *draft* and it may change at any time based on comments and on its development process.

Use the DML-discuss mailing list (Appendix A, pg. 27) to discuss and learn about Document Markup Language.

1.3. Acknowledgments

Many people has helped to realise this document. Some of them in no particular order are: Àlex Royo, Ferran Cases, Alejandro Gonzalo Bravo, David Rodríguez, Choan Gálvez, Tatiana Ledesma, Iu Siches, Oscar Sanchez Casamitjana and Carolina Figueroa.

2. Elements

2.1. The `abbr` element

The `abbr` element represents an abbreviation or acronym.

- Flow

  Inline (Section 5.2, pg. 25)

- Children

  ```
  ( em | metadata | object | quote | span | sub | sup | text() )+
  ```

- Attributes

  ```
  ( $core.attrs* | $meta.attrs* )
  ```

- Parents

  ```
  (
    cell | citation | em | example | item | metadata | note | object |
    p | quote | span | sub | summary | sup | title
  )
  ```

The `@content` attribute (Section 4.2, pg. 24) *may* be used to provide an expansion of the abbreviation.

The `@about` attribute (Section 4.1, pg. 23) *may* be used to provide a resource which contains the expanded form.

`@content` and `@about` attributes are mutually exclusive.

Example 2.1-1: `abbr` element with inline expansion

```
<p>Example of <abbr content="Document Markup Language">DML</abbr>'s abbr
element.</p>
```

Example 2.1-2: `abbr` element with remote expansion

```
<p>Example of <abbr about="http://example.org/glossary#dml">DML</abbr>'s abbr
element.</p>
```

2.2. The `cell` element

The `cell` element represents a table data container.

- Flow

  Block (Section 5.1, pg. 25)

- Children

```
(
  (
    example | list | metadata | note | object | p | quote
  )+ | (
    abbr | em | metadata | object | quote | span | sub | sup | text()
  )+
)
```

- Attributes

```
( $core.attrs* | $meta.attrs* )
```

- Parents

```
( group )
```

2.3. The `citation` element

The `citation` element represents a citation reference of a quotation block.

- Flow

  Block (Section 5.1, pg. 25)

- Children

  ```
  ( abbr | em | metadata | object | quote | span | sub | sup | text() )+
  ```

- Attributes

  ```
  ( $core.attrs* | $meta.attrs* )
  ```

- Parents

  ```
  ( quote )
  ```

2.4. The `dml` element

The `dml` element is the root element for a DML document.

- Flow

  Block (Section 5.1, pg. 25)

- Children

  ```
  (
    title,
    ( example | figure | list | metadata | note | object | p | quote | table )*,
    section*
  )
  ```

- Attributes

  ```
  ( $core.attrs* )
  ```

Example 2.4-1: Simple DML document

```
<dml xmlns="http://purl.oclc.org/NET/dml/1.0/">
  <title>Simple DML document</title>
  <p>Lorem ipsum dolor sit amet…</p>
</dml>
```

Example 2.4-2: DML document with metadata

```
<dml xmlns="http://purl.oclc.org/NET/dml/1.0/"
xmlns:dct="http://purl.org/dc/terms/">
  <title>DML document</title>
  <metadata about="">
    <list>
      <item property="dct:creator">Arnau Siches</item>
      <item property="dct:created">2009-01-02</item>
    </list>
  </metadata>
  <p>Lorem ipsum dolor sit amet…</p>
</dml>
```

2.5. The `em` element

The `em` element represents an emphasized text.

- Flow

  Inline (Section 5.2, pg. 25)

- Children

  ```
  ( abbr | em | metadata | object | quote | span | sub | sup | text() )+
  ```

- Attributes

  ```
  ( $core.attrs* | $meta.attrs* | @role? )
  ```

- Parents

  ```
  (
    abbr | cell | citation | em | example | item | metadata | note |
    object | p | quote | span | sub | summary | sup | title
  )
  ```

The `@role` attribute *may* be used to provide strong emphasized text with `"strong"` value.

Example 2.5-1: Usage of `em` element

```
<p>
  <em>Lorem ipsum</em> dolor sit amet, consectetur adipisicing elit, sed do <em
  role="strong">eiusmod tempor incididunt ut labore</em> et dolore magna aliqua.
</p>
```

2.6. The `example` element

The `example` element represents an example.

- Flow

  Block (Section 5.1, pg. 25)

- Children

```
(
  title?,
  ( figure | list | metadata | note | object | p | quote | table )+
)
```

- Attributes

```
( $core.attrs* | $meta.attrs* )
```

- Parents

```
( dml | note | section )
```

Example 2.6-1: Usage of `example` element

```
<example xml:id="example-identifier">
  <title>Title of the Lorem Ipsum example</title>
  <p>Lorem ipsum dolor sit amet…</p>
</example>
```

2.7. The `figure` element

The `figure` element is a figure container; it usually contains an illustration or something to be shown graphically.

- Flow

  Block (Section 5.1, pg. 25)

- Children

```
(
  title?,
  ( list | metadata | note | object | p | quote | table )+
)
```

- Attributes

```
( $core.attrs* | $meta.attrs* )
```

- Parents

  ```
  ( dml | example | note | section | item | cell )
  ```

Example 2.7-1: Usage of `figure` element

```
<figure xml:id="figure-identifier">
  <title>It shown an illustration through a figure element</title>
  <object src="path/to/illustration"/>
</figure>
```

2.8. The `group` element

The `group` element represents a generic table cell container.

- Flow

  Block (Section 5.1, pg. 25)

- Children

  ```
  ( group+ | title+ | ( title?, cell+ ) )
  ```

- Attributes

  ```
  ( $core.attrs* | $meta.attrs* | @role? )
  ```

- Parents

  ```
  ( group | table )
  ```

The `@role` attribute *may* be used to provide a form to refine the `group` element meaning. Allowed values are:

- `"header"`

  A header table group. Table header *must* be the first child of a `table` element.

- `"footer"`

  A footer table group. Table footer *must* be child of a `table` element.

2.9. The `item` element

The `item` element represents a list item container.

- Flow

  Block (Section 5.1, pg. 25)

- Children

```
(
  (
    title*,
    ( figure | list | metadata | note | object | p | quote | table )+
  ) | (
    abbr | em | metadata | object | quote | span | sub | sup | text()
  )+
)
```

- Attributes

```
( $core.attrs* | $meta.attrs* )
```

- Parents

```
( list )
```

2.10. The `list` element

The `list` element represents a list of items.

- Flow

  Block (Section 5.1, pg. 25)

- Children

```
( title?, item+ )
```

- Attributes

```
( $core.attrs* | $meta.attrs* | @role? )
```

- Parents

```
( cell | dml | example | figure | metadata | note | object | quote | section )
```

The `@role` attribute *may* be used to define an ordered list with `"ordered"` value.

Example 2.10-1: Simple list

```
<list>
  <item>sugar</item>
  <item>salt</item>
  <item>pepper</item>
</list>
```

Example 2.10-2: Ordered list

```
<list role="ordered">
  <item>first</item>
  <item>second</item>
  <item>third</item>
</list>
```

Example 2.10-3: List with title

```
<list>
  <title>List title</title>
  <item>first</item>
  <item>second</item>
  <item>third</item>
</list>
```

Example 2.10-4: Definition list

```
<list>
  <item>
    <title>Dweeb</title>
    <p>Young excitable person who may mature into a Nerd or Geek.</p>
  </item>
  <item>
    <title>Hacker</title>
    <p>A clever programmer.</p>
  </item>
  <item>
    <title>Nerd</title>
    <p>Technically bright but socially inept person.</p>
  </item>
</list>
```

Example 2.10-5: Definition list with multiple terms and definitions

```
<list>
  <item>
    <title>Center</title>
    <title>Centre</title>
    <list>
      <item>A point equidistant from all points on the surface of a
      sphere.</item>
      <item>In some field sports, the player who holds the middle position on
      the field, court, or forward line.</item>
    </list>
  </item>
  <item>
    <title>Color</title>
    <title>Colour</title>
    <p>The property possessed by an object of producing different sensations on
    the eye.</p>
  </item>
</list>
```

2.11. The `metadata` element

The `metadata` element represents a metadata container.

- Flow

  Block (Section 5.1, pg. 25)

- Children

  (*$block*+ **)**

- Attributes

  (*$core.attrs** **|** *$meta.attrs** **)**

- Parents

  (dml **|** *$block* **|** *$inline* **)**

Example 2.11-1: Usage of `metadata` element

```
<metadata about="#document-id">
  <list>
    <item property="dct:creator">Arnau Siches</item>
    <item property="dct:created">2008-12-29</item>
    <item property="dct:description">
      <p>
        This specification defines the Document Markup Language (DML), a markup
        language for books, articles, documents, notes, etc.
      </p>
    </item>
  </list>
</metadata>
```

2.12. The `note` element

The `note` element represents a generic document note or annotation. It *may* be used as a root element in *DML islands* in non-DML documents.

- Flow

  Block (Section 5.1, pg. 25)

- Children

  ```
  (
    ( title?, $block[not( title | note | citation )]+ ) |
    ( $inline | text() )+
  )
  ```

- Attributes

  ```
  ( $core.attrs* | $meta.attrs* | @role? )
  ```

- Parents

  ```
  ( dml | $block[$block[not( self::note )]] )
  ```

The `@role` attribute may be used to provide a form to refine the `note` element meaning. Allowed values are:

- `"tip"`

  A suggestion, tip or trick.

- `"warning"`

  An admonition note.

- `"sidebar"`

  A note that is isolated from the main narrative flow.

- `"footnote"`

  A footnote. Footnotes in paged media usually occur at the end of the page that reference it.

Example 2.12-1: Usage of `note` element

```
<note>
  <p>
    Lorem ipsum dolor sit amet, consectetur adipisicing elit…
  </p>
</note>
```

Example 2.12-2: Usage of `note[@role="footnote"]` element

```
<p>
  Lorem ipsum dolor sit amet, <span href="#a-footnote">consectetur
  adipisicing</span> elit…
</p>
( … )
<note role="footnote" xml:id="a-footnote">
  <p>
    …sunt in culpa qui officia deserunt mollit anim id est laborum.
  </p>
</note>
```

2.13. The `object` element

The `object` element represents a generic embedded media object like images, videos, audio and other types of multimedia files.

- Flow

  When its parent is an inline element or a block element that only allows inline elements its flow is inline (Section 5.2, pg. 25), otherwise its flow is block (Section 5.1, pg. 25).

- Children

```
(
  (
    figure | list | note | object | p | quote | section | table | title
  )* | (
    abbr | em | object | quote | span | sub | sup | text()
  )*
)
```

- Attributes

  ```
  ( $core.attrs* | $meta.attrs* | @src | @type? | @width? | @height? )
  ```

- Parents

  ```
  (
    abbr | cell | citation | dml | em | example | figure | item | note |
    object | p | quote | section | span | sub | sup | title
  )
  ```

The `@src` attribute *must* be used to provide the URI (`xs:anyURI`) of the resource. It also specifies a *resource object* in RDF triple, as it is described in RDFa Recomendation (Appendix A, pg. 26) of W3C.

The `@type` attribute *may* be used to provide the MIME type (Appendix A, pg. 26) of the resource.

The `@width` attribute *may* be used to provide the width dimension of the resource.

The `@height` attribute *may* be used to provide the height dimension of the resource.

The children of the `object` element *must* be used to provide an alternative content if the resource provided by `@src` fails to load.

The alternative content *must* be *inline* or *block* in accordance of the flow of its `object` parent.

Example 2.13-1: Usage of block flow `object` element.

```
<figure xml:id="fig-markup-trends">
  <title>Usage of markup language in %</title>
  <object src="markup-trends.svg" type="application/svg+xml">
    <list>
      <item>
        <title>HTML</title>
        <p>98%</p>
      </item>
      <item>
        <title>DocBook</title>
        <p>1%</p>
      </item>
      <item>
        <title>Other</title>
        <p>1%</p>
      </item>
    </list>
  </object>
</figure>
```

Example 2.13-2: Usage of inline flow `object` element.

```
<p>
  Press the <object src="accept-call-button-icon.svg"/><em>accept
  call</em></object> button to allow an incoming call.
</p>
```

2.14. The p element

The p element represents a generic block of text, usually a paragraph.

- Flow

  Block (Section 5.1, pg. 25)

- Children

  ```
  ( $inline | text() )+
  ```

- Attributes

  ```
  ( $core.attrs* | $meta.attrs* )
  ```

- Parents

  ```
  ( dml | $block[$block] )
  ```

2.15. The quote element

The quote element represents a generic quotation container.

- Flow

  When its parent is an inline element or a block element that only allows inline elements its flow is inline (Section 5.2, pg. 25), otherwise its flow is block (Section 5.1, pg. 25).

- Children

  ```
  ( $block[not( quote | citation )]+ citation? | ( $inline | text() )+ )
  ```

- Attributes

  ```
  ( $core.attrs* | $meta.attrs* | @citation? )
  ```

- Parents

  ```
  ( dml | $block[not( quote | citation )] | $inline[not( quote )] )
  ```

The @citation attribute *must* be used to provide the URI (xs:anyURI) of the resource cited when the flow of quote element is *inline*, otherwise it *must not* be used.

Example 2.15-1: Usage of block flow `quote` element.

```
<section>
  ( … )
  <quote>
    <p>DML is a general-purpose XML schema, particularly well suited to books,
    articles and annotations in other XML sources.</p>
    <citation><span href="http://purl.oclc.org/NET/dml/1.0/">Document Markup
    Language Specification 1.0, Introduction</span>. A. Siches. 2009</citation>
  </quote>
  ( … )
</section>
```

Example 2.15-2: Usage of inline flow `quote` element.

```
<p>
  […] in that case, when the DML specification says <quote
  citation="http://purl.oclc.org/NET/dml/1.0/">well suited to books, articles
and annotations</quote> it means […]
</p>
```

2.16. The `section` element

The `section` element represents a generic document section.

- Flow

  Block (Section 5.1, pg. 25)

- Children

  (`title`, *`$block`*[not**(** `title` **|** `citation` **)]+)**

- Attributes

  (*`$core.attrs`** **|** *`$meta.attrs`** **|** `@role`**?** **)**

- Parents

  (`dml` **|** `note` **|** `object`**[parent::**`$block`**]** **|** `quote`**[parent::**`$block`**]** **|** `section` **)**

The `@role` attribute *may* be used to provide a form to refine the meaning of the `section` element. Allowed values are:

- `"abstract"`

  A summary or statement of the contents of a document.

- `"part"`

  A part of a book. Parts usually group related chapters in a book.

- `"chapter"`

  A main division of a book.

- `"appendix"`

  An appendix in a document. Appendixes usually occur at the end of a document.

- `"header"`

  A header section. Usually it groups common parts like a tagline, author, version history information, etc.

- `"footer"`

  A footer section. Usually it groups information about its parent such as rights, related links, etc.

- `"toc"`

  A table of contents.

Example 2.16-1: Usage of `section` element

```
<section xml:id="introduction">
  <title>Introduction</title>
  <p>
    Lorem ipsum dolor sit amet, consectetur adipisicing elit…
  </p>
</section>
```

Example 2.16-2: An appendix section

```
<section role="appendix">
  <title>Resources</title>
  <list>
    ( … )
  </list>
</section>
```

2.17. The `span` element

The `span` element has no specific semantic. It is provided as a container of inline content.

- Flow

  Inline (Section 5.2, pg. 25)

- Children

  ```
  ( $inline | text() )+
  ```

- Attributes

  ```
  ( $core.attrs* | $meta.attrs* )
  ```

- Parents

  ```
  ( $block | $inline )
  ```

2.18. The `sub` element

The `sub` element represents a subscript.

- Flow

  Inline (Section 5.2, pg. 25)

- Children

  ```
  ( $inline | text() )+
  ```

- Attributes

  ```
  ( $core.attrs* | $meta.attrs* )
  ```

- Parents

  ```
  ( $block | $inline )
  ```

2.19. The `summary` element

The `summary` element is a tabular data summary.

- Flow

  Block (Section 5.1, pg. 25)

- Children

  ```
  ( $inline | text() )+
  ```

- Attributes

  ```
  ( $core.attrs* | $meta.attrs* )
  ```

- Parents

  ```
  ( table )
  ```

2.20. The `sup` element

The `sup` element represents a superscript.

- Flow

  Inline (Section 5.2, pg. 25)

- Children

  ```
  ( $inline | text() )+
  ```

- Attributes

  ```
  ( $core.attrs* | $meta.attrs* )
  ```

- Parents

  ```
  ( $block | $inline )
  ```

2.21. The `table` element

The `table` element represents a table container.

- Flow

  Block (Section 5.1, pg. 25)

- Children

  ```
  ( title?, summary, group+ )
  ```

- Attributes

  ```
  ( $core.attrs* | $meta.attrs* | @scope )
  ```

- Parents

  ```
  ( dml | $block[$block] )
  ```

The `@scope` attribute *must* be used to provide the primary scope of groups. Allowed values are: `"row"` and `"column"`.

Example 2.21-1: Usage of `table` element

```
<table scope="row">
  <title>ISO-639-1 codes</title>
  <summary>Common ISO-639-1 codes with its english name</summary>
  <group role="header">
    <title>Name</title>
    <title>Code</title>
  </group>
  <group>
    <group>
      <cell>English</cell>
      <cell>en</cell>
    </group>
    <group>
      <cell>German</cell>
      <cell>de</cell>
    </group>
  </group>
</table>
```

2.22. The `title` element

The `title` element represents a header container.

- Flow

  Block (Section 5.1, pg. 25)

- Children

  ```
  ( $inline | text() )+
  ```

- Attributes

  ```
  ( $core.attrs* | $meta.attrs* )
  ```

- Parents

  ```
  ( dml | $block[$block] )
  ```

3. Core attributes

```
$core.attrs = (
  @class | @dir | @href | @status | @xml:base | @xml:id | @xml:lang
)
```

These attributes *must not* be repeated in the same element.

3.1. The `@class` attribute

The `@class` attribute provides additional user-specified classification for an element. Value type is `xs:NMTOKENS`.

Any number of elements *may* be assigned the same class name.

3.2. The `@dir` attribute

The `@dir` attribute specifies the direction of the element and its descendants. Allowed values are:

- `"ltr"`

  Left to right text.

- `"rtl"`

  Right to left text.

3.3. The `@href` attribute

The `@href` attribute specifies the location of a resource through an URI (`xs:anyURI`). It also specifies a *resource object* in RDF triple, as it is described in RDFa Recomendation (Appendix A, pg. 26) of W3C.

3.4. The `@status` attribute

The `@status` attribute specifies the status of the content in the element. Allowed values are:

- `"added"`

  Added text since last revision.

- `"deleted"`

  Deleted text since last revision.

- `"draft"`

  Text work in progress.

- `"review"`

  Text to evaluate or reevaluate but publishable.

- *user-value*

  Specific status defined by the users according their publishing process. This value *must* be an `xs:NMTOKEN`.

3.5. The `@xml:base` attribute

The `@xml:base` attribute specifies the base URI (`xs:anyURI`) of the element and its descendants.

Its value *must* be interpreted according xml:base W3C recomendation (Appendix A, pg. 26).

3.6. The `@xml:id` attribute

The `@xml:id` attribute identifies the unique ID (`xs:ID`) value of the element.

Its value *must* be interpreted according xml:id W3C recomendation (Appendix A, pg. 26).

3.7. The `@xml:lang` attribute

The `@xml:lang` attribute identifies the language of the element and its descendants.

Its value *must* be interpreted according XML 1.0 (Appendix A, pg. 26).

4. Metadata attributes

```
$meta.attrs = (
  @about | @content | @datatype | @property | @rel | @resource | @rev | @typeof
)
```

These attributes *must not* be repeated in the same element.

4.1. The `@about` attribute

The `@about` attribute provides a *subject* for an RDF triple through an URIorSafeCURIE (Appendix A, pg. 26).

This attribute is part of RDFa Recomendation (Appendix A, pg. 26) of W3C.

4.2. The `@content` attribute

The `@content` attribute provides a machine-readable content for a literal in an RDF triple.

This attribute is part of RDFa Recomendation (Appendix A, pg. 26) of W3C.

4.3. The `@datatype` attribute

The `@datatype` attribute provides a datatype of a literal through a CURIE (Appendix A, pg. 26).

This attribute is part of RDFa Recomendation (Appendix A, pg. 26) of W3C.

4.4. The `@property` attribute

The `@property` attribute provides a predicate for an RDF triple through a whitespace separated list of CURIEs (Appendix A, pg. 26).

This attribute is part of RDFa Recomendation (Appendix A, pg. 26) of W3C.

4.5. The `@rel` attribute

The `@rel` attribute provides a predicate for an RDF triple through a whitespace separated list of CURIEs (Appendix A, pg. 26).

This attribute is part of RDFa Recomendation (Appendix A, pg. 26) of W3C.

4.6. The `@resource` attribute

The `@resource` attribute provides an object for an RDF triple through a URIorSafeCURIE (Appendix A, pg. 26).

This attribute is part of RDFa Recomendation (Appendix A, pg. 26) of W3C.

4.7. The `@rev` attribute

The `@rev` attribute provides a reverse predicate for an RDF triple through a whitespace separated list of CURIEs (Appendix A, pg. 26).

This attribute is part of RDFa Recomendation (Appendix A, pg. 26) of W3C.

4.8. The `@typeof` attribute

The `@typeof` attribute provides the type(s) associated with a subject for an RDF triple through a whitespace separated list of CURIEs (Appendix A, pg. 26).

This attribute is part of RDFa Recomendation (Appendix A, pg. 26) of W3C.

5. Flow

Usually any elements belong to a single flow type, block or inline flow type but there are two cases (`object` and `quote`) where they change their type depending on their sibling elements.

5.1. Block

Block elements are containers of other block elements or wrappers of inline (Section 5.2, pg. 25) elements and raw text.

```
$block = (
  cell | citation | example | figure | group | item | list | metadata | note |
  object | p | quote | section | summary | table | title
)
```

5.2. Inline

Inline elements are used to mark up running text. It *may* contain inline elements and raw text.

```
$inline = (
  abbr | em | object | quote | span | sub | sup
)
```

(Draft)

6. Schema

RELAX NG and Schematron references

Appendix A — Resources

RELAX NG

- ISO/IEC 19757-2:2008: Information technology — Document Schema Definition Language (DSDL) — Part 2: Regular-grammar-based validation — RELAX NG (http://standards.iso.org/ittf/PubliclyAvailableStandards/c052348_ISO_IEC_19757-2_2008(E).zip). ISO/IEC. 2008.
- RELAX NG Home page (http://www.relaxng.org/)

Schematron

- ISO/IEC 19757-3:2006: Information technology — Document Schema Definition Language (DSDL) — Part 3: Rule-based validation — Schematron (http://standards.iso.org/ittf/PubliclyAvailableStandards/c040833_ISO_IEC_19757-3_2006(E).zip). ISO/IEC. 2006.
- Schematron Home page (http://www.schematron.com)

IETF (Internet Engineering Task Force)

- RFC 2119: Key words for use in RFCs to Indicate Requirement Levels (http://www.apps.ietf.org/rfc/rfc2119.html). S. Bradner. 1997.
- RFC 4646: Tags for the Identification of Languages (http://www.apps.ietf.org/rfc/rfc4646.html). A. Phillips, Ed., M. Davis. 2006.
- RFC 2045: Multipurpose Internet Mail Extensions (MIME) Part One: Format of Internet Message Bodies (http://www.apps.ietf.org/rfc/rfc2045.html). N. Freed, N. Borenstein. 1996.

xml namespace

- xml:id Version 1.0 (http://www.w3.org/TR/2005/REC-xml-id-20050909/). N. Walsh, D. Veillard, J. Marsh. 2005.
- Extensible Markup Language (XML) 1.0 (Fifth Edition), 2.12 Language Identification (http://www.w3.org/TR/REC-xml/#sec-lang-tag). T. Bray, J. Paoli, C. M. Sperberg-McQueen, E. Maler, F. Yergeau. 2008.
- XML Base (http://www.w3.org/TR/2001/REC-xmlbase-20010627/). J. Marsh. 2001.

RDFa

- RDFa in XHTML: Syntax and Processing (http://www.w3.org/TR/2008/REC-rdfa-syntax-20081014). B. Adida, M. Birbeck, S. McCarron, S. Pemberton. 2008.
- RDFa Primer (http://www.w3.org/TR/2008/NOTE-xhtml-rdfa-primer-20081014/). B. Adida, M. Birbeck. 2008.
- RDFa in XHTML: Syntax and Processing, CURIE definition (http://www.w3.org/TR/rdfa-syntax/#dt_curie). B. Adida, M. Birbeck, S. McCarron, S. Pemberton. 2008.
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Dublin Core Metadata Initiative

- Dublin Core Metadata Initiative Home page. (http://dublincore.org/)

- Expressing Dublin Core metadata using HTML/XHTML meta and link elements (http://dublincore.org/documents/2008/08/04/dc-html/). P. Jhonston, A. Powell. 2008.

XPath

- XML Path Language (XPath) 2.0, A.1 EBNF (http://www.w3.org/TR/xpath20/#id-grammar). A. Berglund, S. Boag, D. Chamberlin, M. F. Fernández, M. Kay, J. Robie, J. Siméon. 2007.

Discuss

- DML-discuss mailing list (http://groups.google.com/group/dml-discuss)

XML Schemes

- Programming Markup Language Specification 1.0 (http://purl.oclc.org/NET/pml/1.0/). A. Siches. 2009.

CSS

- Cascading Style Sheets Level 2 Revision 1 (CSS 2.1) Specification, 9.2.4 The 'display' property (http://www.w3.org/TR/CSS21/visuren.html#propdef-display). B. Bos, T. Çelik, I. Hickson, H Wium Lie. 2007.

Appendix B — Conventions

The keywords *must*, *must not*, *required*, *shall*, *shall not*, *should*, *should not*, *recommended*, *may*, and *optional*, when emphasized, are to be interpreted as described in IETF RFC 2119 (Appendix A, pg. 26).

- A `monospaced` font is used for code, elements, atributes, tags and value literals.
- An *`italic monospaced`* font is used for variables.

The expressions to define allowed *children*, *attributes* and *parent* for an element uses XPath 2.0 grammar (Appendix A, pg. 27) with addition of quantifier modificators (Appendix B, pg. 28).

When an element (node with type `"element"`) is mentioned in the text with an associated attribute (Appendix B, pg. 27) it is always showed as a predicate. Element EBNF definition (Appendix B.1, pg. 29).

Example B-1: Notation for the `section` element

```
section
section[@role]
```

When an attribute (node with type `"attribute"`) is mentioned in the text, it is always preceded by an at-sign (`@`) and it optionally has an associated value. Attribute EBNF definition (Appendix B.1, pg. 29).

Example B-2: Notation for the `@role` attribute

```
@role
@role="chapter"
```

When a value is mentioned in the text, it is always preceded and followed by an quote ("). Value EBNF definition (Appendix B.1, pg. 29).

Example B-3: Notation for the `"chapter"` value

```
"chapter"
```

When a tag is mentioned in the text, it is always preceded by a less-than symbol (<) and it is followed by a greater-than symbol (>). Tag EBNF definition (Appendix B.1, pg. 29).

When a tag is mentioned with some omitted attributes it has an ellipsis symbol (…) preceding greater-than symbol (>).

Example B-4: Notation for the start tag `<section …>`

```
<section role="chapter" …>
```

Any element or attribute can be modified by a quantifier modificator as follows:

- ?

  Zero or one time.

- +

  One or more times.

- *

  Zero or more times.

Therefore, to indicate that an “status” attribute is optional the expression will be `@status?`. Or, if a “section” element is repeatable the expression will be `section+`.

For brevity, throughout this document, assume that the following namespace prefixes have been defined:

- `"dct"`

  http://purl.org/dc/terms/

- `"dml"`

  http://purl.oclc.org/NET/dml/1.0/

- `"rdf"`

  http://www.w3.org/1999/02/22-rdf-syntax-ns#

- `"xi"`

  http://www.w3.org/2001/XInclude

- `"xs"`

  http://www.w3.org/2001/XMLSchema

B.1 EBNF[1] definitions

```
Element ::= Name ('[' Attribute ']')*
Attribute ::= '@' Name ('=' Value)?
Tag ::= '<' Name (S Name '=' Value)* S? '…'? '/'? '>'
Name ::= ([A-Za-z]+ ':')? [A-Za-z_] [A-Za-z0-9_-.]*
Value ::= '"' [^<>"]+ '"'
S ::= (#x20 | #x9 | #xD | #xA)+
```

Appendix C — GNU Free Documentation License

Version 1.3, 3 November 2008

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[1] W3C notation (http://www.w3.org/TR/REC-xml/#sec-notation)

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