Document Markup Language (DML) Specification 1.0

Abstract

This specification defines the Document Markup Language (DML), a markup language for books, articles, notes and other type of documents. DML is normatively available as a RELAX NG (Appendix A, pg. 15) schema with additional Schematron (Appendix A, pg. 15) assertions.

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. 15).

- A

  ```
  monospaced
  ```

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

Element:

When an element (node with type `element`) is mentioned in the text, always has a preceding slash (`/`) and optionally has an associated attribute (pg. 1) as a predicate. Element EBNF definition (pg. 2).

<div align="center">

Notation for the `/section` element

</div>

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

Attribute:

When an attribute (node with type `attribute`) is mentioned in the text, always has a preceding at-sign (`@`) and optionally has an associated value. Attribute EBNF definition (pg. 2).

<div align="center">Notation for the <code>@role</code> attribute</div>

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

Tag:

> When a tag is mentioned in the text, always has a preceding less-than symbol (<) and a following greater-than symbol (>). Tag EBNF definition (pg. 2).

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

<div align="center">Notation for the start tag <code><section …></code></div>

```
<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 <code>@status?</code>. Or, if a "section" element is repeatable the expression will be <code>/section+</code>.

EBNF[1] definitions

<mark>(Draft) TODO: define dml-xpath syntax used in chlidren, attribute and parent definitions.</mark>

- `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)+`

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

Status of this document

This is a *draft* and it may change at any time basis in response to comments and as a general part of its development process.

Table of Contents

1. Elements

1.1. The `/abbr` element

The `/abbr` element represents an abbreviation or acronym.

Status

    Released

Flow

    Inline (Section 4.2, pg. 14)

Children

    `( $inline[not( /abbr )] | text() )+`

Attributes

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

Parents

    `( $block | $inline[not( /abbr )] )`

The `@content` attribute (Section 3.2, pg. 13)*may* be used to provide an expansion of the abbreviation.

The `@about` attribute (Section 3.1, pg. 13)*may* be used to provide a resource which provide the expansion form.

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

Example 1.1-1: `/abbr` element with inline expansion

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

Example 1.1-2: `/abbr` element with remote expansion

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

1.2. The `/cell` element

…?

1.3. The `/dml` element

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

Status

Released

Flow

Block (Section 4.1, pg. 14)

Children

```
( /title, $block[not( /title )]+ )
(: this expression is more accurated but necessary? :)
( /title, $block[not( /title | /section )]*, /section* )
```

Attributes

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

(Draft) TODO: examples

1.4. The `/em` element

The `/em` element represents an stressed text.

Status

Released

Flow

Inline (Section 4.2, pg. 14)

Children

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

Attributes

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

Parents

    ($block | $inline)

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

Example 1.4-1: 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>
```

1.5. The `/example` element

The `/example` element represents an example.

Status

    Released

Flow

    Block (Section 4.1, pg. 14)

Children

    (/title?, $block[not(/example)]+)

Attributes

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

Parents

    (/dml | /note | /section)

Example 1.5-1: 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>
```

(Draft)

1.6. The `/figure` element

...?
(Draft)

1.7. The `/group` element

...?
(Draft)

1.8. The `/item` element

...?
(Draft)

1.9. The `/list` element

...?
(Draft)

1.10. The `/metadata` element

...?

1.11. The `/note` element

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

Status
    Draft

Flow

> Block (Section 4.1, pg. 14)

Children

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

Attributes

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

Parents

> ` ( /dml | /object[parent::$block] | /section ) `

(Review) 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.
>
> (Draft) /section[@role="aside"] or /note[@role="aside"] or @role="sidebar" …?

`footnote`

> (Review) A footnote. Footnotes in paged medias usually occur at the end of the page which cite it.

(Draft) TODO: examples

(Draft)

1.12. The `/object` element

...?

(Draft)

1.13. The `/p` element

...?

1.14. The `/quote` element

...?

1.15. The `/section` element

The `/section` element represents a generic document section.

Status

 Draft

Flow

 Block (Section 4.1, pg. 14)

Children

 (/title, $block[not(/title)]+)

Attributes

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

Parents

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

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

`abstract`

 (Review) 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`

 (Review) A main division of a book.

`appendix`

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

`(Draft) header`

(Draft) description …?

`(Draft) footer`

(Draft) description …?

`(Draft) toc`

(Draft) description …?

`license`

(Draft) description …?

(Draft) TODO: examples

(Draft)

1.16. The `/span` element

...?
(Draft)

1.17. The `/sub` element

...?
(Draft)

1.18. The `/summary` element

...?
(Draft)

1.19. The `/sup` element

...?
(Draft)

1.20. The `/table` element

...?
(Draft)

1.21. The `/title` element

...?

2. Core attributes

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

This attributes *must not* been repeated.

- `@xml:id`
- `@xml:lang`
- (Draft) `@xml:base`
- (Draft) `@dir`
- `@class`
- `@href`
- `@status`

(Draft)

2.1. The `@xml:id` attribute

...?
(Draft)

2.2. The `@xml:lang` attribute

...?
(Draft)

2.3. The `@class` attribute

...?
(Draft)

2.4. The `@href` attribute

...?
(Draft)

2.5. The `@status` attribute

...?

3. Metadata attributes

- `@about?`
- `@content?`
- `@datatype?`
- `@typeof?`
- `@property?`
- `@resource?`

(Draft)

3.1. The `@about` attribute

...?
(Draft)

3.2. The `@content` attribute

...?

(Draft)

3.3. The `@datatype` attribute

...?
(Draft)

3.4. The `@typeof` attribute

...?
(Draft)

3.5. The `@property` attribute

...?
(Draft)

3.6. The `@resource` attribute

...?
(Draft)

4. Flow

4.1. Block

4.2. Inline

(Draft)

5. Relationship with RDFa

...?
(Draft)

6. Namespace

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

(Draft)

7. 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.

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.

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.