Errata to the OMDoc 1.1 Specification

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Abstract

This document tracks the errata in the OMDoc 1.1 specification (see http://www.mathweb.org/omdoc/archive/omdoc1.1.{ps,pdf}). We will keep a corrected version available at http://www.mathweb.org/omdoc/omdoc.{ps.pdf}

1 Introduction

No errata known.

2 Mathematical Markup Schemes

No errata known.

3 OMDoc Elements

No errata known.

3.1 Metadata for Mathematical Elements

No errata known.

3.2 Mathematical Statements

3.2.1 Specifying Mathematical Properties

- The text fails to make clear for the `id`/`xref` to OPENMATH objects are only allowed, if the referencing element has the same name as the

referenced one. In particular, there are no implicit conversions.

- The text fails to mention the `logic` attribute of the `FMP` element. We need to add "FMPs always appear in groups, which can differ in the value of their `logic` attribute, which specifies the logical formalism. The value of this attribute specifies the logical system used in formalizing the content. All members of the multi-logic `FMP` group have to formalize the same mathematical object or property, i.e. they have to be translations of each other."

3.2.2 Symbols, Definitions, and Axioms

1. The values `'obj'` and `'simple'` were overlapping, and the role of the `FMP` and `OMOBJ` children of the `definition` was unclear. The value `'obj'` has been dropped and we have clarified that in simple definitions, the `OMOBJ` is the substitution element whereas the `FMP` captures the meaning of the `CMP` group in Logic.

2. The attribute `kind` of the `symbol` element can also have the value `'sort'` for sets that are inductively built up from constructor symbols

3.2.3 Assertions and Alternatives

No errata known.

3.2.4 Mathematical Examples in OMDoc

No errata known.

3.2.5 Representing Proofs in OMDoc

No errata known.

3.2.6 Abstract Data Types

The optional `recognizer` element should be a child of `sortdef`, and not of the `constructor` element. The specification text and examples are correct, but the quick reference table is incorrect.

3.3 Theories as Mathematical Contexts

3.3.1 Simple Inheritance

The content model for `theory` in Figure 3.22 is incorrect. It should read `commonname*, CMP*, (statement | inclusion, imports)*`. Moreover, the attribute model has a spurious comma. Furthermore, the text should make clear that OMDoc1.1 does not allow theories to nest and that theories can include `imports` statements.

3.3.2 Inheritance via Translations

No errata known.

3.3.3 Statements about Theories

The text does not make this clear, but the elements `theory-inclusion`, `axiom-inclusion` and `decomposition` may not occur in a `theory` element. Worse, the document type definition allows this as well.

3.3.4 Parametric theories in OMDoc

No errata known.

3.4 Auxiliary Elements

3.4.1 Preservation of Text Structure

Figure 3.29: Specifying Tables with `<omgroup type="dataset">` The first label for the second axis is "`b11`". Should be "`b1`".

omgroup The DTD did not contain value `'narrative'` that was present in the specification.

3.4.4 Exercises

In the `solution` element, where `proof` was allowed, we have to allow `proofobject` as well.

3.5 Adding Presentation Information to OMDoc

1. It should be made clear that the `xml:lang` attribute of the `use`, `xslt` and `style` elements does not have the default value `en`.

2. OMDoc1.1 uses the `style` attribute for all elements that have an `id` attribute to specify generic style classes for the OMDoc elements. This is based on a misunderstanding of the XML cascading style sheet (Css) mechanism [Bos98], which uses the `class` attribute to specify this information and uses the `style` attribute to specify Css directives that override the class information.

   Even though this is a grave error (it severely limits the usefulness) we will not change it in the OMDoc 1.1 specification and wait for the release of OMDoc 1.2 to fix this, the renaming of the `style` attribute to `class` would break existing implementations.

0.0.1 3.5.2 Specifying the Notation of Mathematical Symbols

Figure 3.44 the example still uses the OMDoc1.0 version of specifying XSLT content via the `system` attribute, in OMDoc1.1 the element `xslt` should be used.

3.6 Identifying and Referencing OMDoc Elements

Locating `OMS` elements by the OMDoc Catalogue

No errata known.

A URI-based Mechanism for Element Reference

The text does not make it clear that the namespace prefixes for theory collections can be declared in any element that dominates the referencing element. The DTD does not allow this either. We will not change this in the DTD, since the changes are too disruptive and OMDoc1.2 is coming up soon.

Uniqueness Constraints and Relative URI references

No errata known.

4 OMDoc Applications, Tools, and Projects

No errata known.

B Changes

No errata known.

C Quick-Reference for OMDoc Elements

No errata known.

D Quick-Reference for OMDoc Attributes

No errata known.

E OMDoc DTD

We use the following public identifier for DTDs: `-//OMDoc//DTD OMDoc V1.1//EN`

1. The `xml:lang` attribute of the `use`, `xslt` and `style` elements should not have the default value `en`.

2. The elements `theory-inclusion`, `axiom-inclusion` and `decomposition` may not occur in a `theory` element.

3. The content model for `solution` should make the `FMP`, `proof`, and `proofobjects` elements optional.

4. the attribute `for` should have been optional

5. the optional `recognizer` element should be a child of `sortdef`, and not of the `constructor` element.

6. the `exercise` element should allow multiple mathematical objects, not at most one.

7. the `%cfm;` parameter entity in the DTD did not allow for multiple FMPs, even though the spefication says that they appear in multi-logic groups.

8. the default `precedence` attribute of the `presentation` element should have the default value 1000.

9. the content model of the `definition` element had to be adapted to the clarification in the specification. The old version only allowed `CMP`-only content with `rxp`. The value `'obj'` has also been dropped.

10. the content model for the `omdoc` element prescribed at least one omdoc item. This is not intended, since we want to allow catalogue-only documents for administrative purposes.

11. the theory attribute for the `assertion alernative`, `proof` and `proofobject` elements should be of type `CDATA`, after all it contains a URI that points to an external theory.

12. the specification mentions type `'comment'`, but the DTD did not allow this.

References

[Bos98] Cascading style sheets, level 2; css2 specification. W3c recommendation, World Wide Web Consortium (W3C), 1998. available as `http://www.w3.org/TR/1998/REC-CSS2-19980512`.

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