

Schema evaluation criteria

OASIS Legal XML eContracts TC

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1 Introduction

1.1 Purpose of this document

The Technical Committee (TC) has adopted requirements for development of its specification. Those requirements define the high level requirements for a schema to represent narrative contract documents.

During 2004 a sub-committee of the TC produced a preliminary report for a draft structural markup model for narrative contract documents based on XHTML 2.0.

The TC proposes to review selected available schema (*host schema*) against its requirements and the conclusions reached by the sub-committee to determine whether it should:

- (a) continue with the model proposed by the sub-committee based on XHTML 2.0;
- (b) adopt a grammar from another DTD or schema; or
- (c) develop a new grammar.

This document lists the criteria to be applied by the TC in its evaluation of existing schema.

1.2 Revision history

Document versions are listed in the table in reverse chronological order.

Date/version	Description	Author
Draft 0.01 22/5/2005	Initial draft for review at phone conference on 24 May 2005	PM

2 Object representation (R-1 to R-4)

2.1 Does the host schema use a generic structural markup model?

Explanation

See R-1 and the definition of generic structural markup language in section 2.1 of the Requirements.

2.2 Does the host schema define a "clause" object?

Explanation

A clause object is something that is equivalent to this pattern (using DTD syntax):

number?, title/heading/caption?, (paragraph+ | clause+)

Note that under some models, paragraph and clause may be permitted to occur as siblings.

2.3 Does the host schema define a paragraph level object that represents a structural or grammatical paragraph?

Explanation

In the earlier work by the TC sub committee, a grammatical paragraph is one in which lists and other subordinate content is contained by the paragraph element so that it can be selected and manipulated as a single object.

2.4 Using the host schema, can the clause equivalent object be inserted at arbitrary levels in the document hierarchy without transformation?

Explanation

This is permitted by the clause pattern described in section 2.2 which is often described as a recursive model.

2.5 In the host schema, are element names and the structure sufficiently flexible that the clause and paragraph level objects can be used for other legal and business documents?

Explanation

Element names should not be suitable only for contracts.

3 Metadata (R-5, R-12, R-14 & R-16)

3.1 Does the host schema provide a mechanism to add semantic information about:

(a) whole documents;

(b) distinct objects, such as clauses, within documents?

3.2 If so, is the metadata model for the host schema sufficient for contracts or will it be necessary to extend it?

Explanation

The TC has yet to decide on a model for representation of metadata.

3.3 Does the host schema allow embedded values to be represented and semantic information to be added to those values?

Explanation

See also section 7.1 of these criteria.

4 Processing technologies (R-6)

4.1 Does the host schema require use of a particular processing technology?

4.2 Does the design of the host schema preclude use of particular currently available processing technologies?

5 Numbering of content objects (R-7)

5.1 Does the host schema permit the numbering of clauses, paragraphs, lists and other objects to be represented in the markup?

Explanation

Some schema envisage that numbering is applied by each rendering process. The structural markup sub-committee concluded that the schema should permit numbers to be added during the authoring phase so that rendering applications do not need to understand numbering schemes to apply them consistently.

5.2 Does the host schema provide a mechanism to define the numbering scheme applied to the document so that two applications could apply the same numbering, if desired?

Explanation

This may be necessary if the recipient of a contract document wishes to edit it and apply automatic numbering using the same scheme as the original author.

6 Complete document representation (R-8)

- 6.1 Using the host schema, will it be possible for the contract author to explicitly represent all parts of the narrative contract terms or will it be necessary to imply some parts?
- 6.2 Does the host schema represent the relationship between all significant components in a way that allows high quality print and web renditions of contract documents?

7 Variables definition (R-9 & R-10)

- 7.1 Does the host schema include a mechanism for defining variables for embedded data values?

Explanation

See the definition of "embedded data value" in section 2.1 of the Requirements.

- 7.2 If the host schema does not include such a mechanism, is there any obstacle to adding it?

8 Ease of use for authors (R-11)

- 8.1 Based on the following factors is the host schema easy for contract authors to use:
- (a) Does it require authors to know only a small number of elements (positive factor)?
 - (b) Does it require authors to make unnecessary or subtle distinctions that will be applied inconsistently (negative factor)?
 - (c) Does it have a clear, logical structure that can be quickly explained to new users (positive factor)?
 - (d) Does it allow authors to re-locate content objects within a document hierarchy with minimal or no need for transformation of markup (positive factor)?

Explanation

Ease of use is highly subjective. The factors listed above derive from the work of the structural markup sub-committee.

9 Schema syntax

- 9.1 Is the host schema a DTD only or can it also be expressed as an XML Schema or other schema type?

Explanation

The TC ought to decide if it is important to use a particular syntax.

10 Adaptability to contracts

- 10.1 Does the host schema provide for the complete representation of the distinct structures commonly found in contracts?

Explanation

The structural markup sub-committee concluded it would be necessary to provide for structures or containers in a contract document markup to represent such components as parties, recitals, schedules or attachments and provision for written signatures.

- 10.2 If not, does the host schema explicitly allow additional distinct structures to be added?

- 10.3 Does the host schema allow elements not considered necessary for contracts markup to be removed without contract documents being incompatible in a disadvantageous way with other documents using the host schema?

- 10.4 If distinct contract structures are added to the host schema, will this result in contracts documents being incompatible in a disadvantageous way with other documents using the host schema?

Explanation

We need to work out what level of compatibility is important, if any. The real issue is probably whether it will cause us to lose the benefit of existing authoring, processing and rendering tools developed around the host schema.

11 Vendor and developer support

- 11.1 Is the host schema already in widespread or general use for markup of narrative documents?

- 11.2 Are there already developed applications that will make it easy for organisations to implement the TC's specification based around the host schema?

- 11.3 Is there any reason to expect that the host schema will provide any particular advantages in gaining market support.

12 Other factors

- 12.1 Does the host schema provide any other advantages for use in the TC's specification?
- 12.2 Does the host schema have any other disadvantages that make it undesirable for use in the TC's specification?