

SMPTE STANDARD

XML Constraints



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Foreword

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SMPTE Engineering Documents are drafted in accordance with the rules given in Standards Operations Manual.

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Intellectual Property

At the time of publication no notice had been received by SMPTE claiming patent rights essential to the implementation of this Engineering Document. However, attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. SMPTE shall not be held responsible for identifying any or all such patent rights.

1 Scope

This document defines constraints intended to enhance the interoperability of XML documents.

2 Conformance Notation

Normative text is text that describes elements of the design that are indispensable or contains the conformance language keywords: "shall", "should", or "may". Informative text is text that is potentially helpful to the user, but not indispensable, and can be removed, changed, or added editorially without affecting interoperability. Informative text does not contain any conformance keywords.

All text in this document is, by default, normative, except: the Introduction, any section explicitly labeled as "Informative" or individual paragraphs that start with "Note:"

The keywords "shall" and "shall not" indicate requirements strictly to be followed in order to conform to the document and from which no deviation is permitted.

The keywords, "should" and "should not" indicate that, among several possibilities, one is recommended as particularly suitable, without mentioning or excluding others; or that a certain course of action is preferred but not necessarily required; or that (in the negative form) a certain possibility or course of action is deprecated but not prohibited.

The keywords "may" and "need not" indicate courses of action permissible within the limits of the document.

The keyword "reserved" indicates a provision that is not defined at this time, shall not be used, and may be defined in the future. The keyword "forbidden" indicates "reserved" and in addition indicates that the provision will never be defined in the future.

3 Normative References

Note: All references in this document to other SMPTE documents use the current numbering style (e.g. SMPTE ST 382:2007) although, during a transitional phase, the document as published (printed or PDF) may bear an older designation (such as SMPTE 382M-2007). Documents with the same root number (e.g. 382) and publication year (e.g. 2007) are functionally identical.

The following standards contain provisions which, through reference in this text, constitute provisions of this recommended practice. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this recommended practice are encouraged to investigate the possibility of applying the most recent edition of the standards indicated below.

1. World Wide Web Consortium (W3C) (2004, February 4). Extensible Markup Language (XML) 1.0 (Third Edition)
2. World Wide Web Consortium (W3C) (2004, October 28). XML Schema Part 1: Structures (Second Edition)
3. World Wide Web Consortium (W3C) (2004, October 28). XML Schema Part 2: Datatypes (Second Edition)
4. ISO/IEC 10646-1, 2000 Information Technology — Universal Multiple-Octet Coded Character Set (UCS)

4 Constraints

4.1 Encoding

XML documents complying with this standard shall be encoded using the UTF-8 character encoding [ISO/IEC 10646-1], taking into account the constraints specified in sections 4.2 to 4.5 below.

4.2 XML Prolog

The XML prolog shall be present with the following constraints:

- The `version` attribute shall be present and its value shall be `1.0`.
- The `encoding` attribute shall be present and its value shall be `UTF-8`.
- The `standalone` attribute may be present, and when present, its value shall be `no`.

Example of compliant prologs:

```
<?xml version="1.0" encoding="UTF-8"?>
```

```
<?xml version="1.0" encoding="UTF-8" standalone="no"?>
```

4.3 Document Start/End

The XML documents should:

- start with the LESS-THAN SIGN character (U+003C)
- not contain Byte Order Mark
- end either with one LF character (U+000A), or with one CR character (U+000D) followed by one LF character (U+000A). This(ese) character(s) should appear immediately after last element - *i.e.*, immediately following the final GREATER-THAN SIGN character (U+003E).

4.4 Prohibited Elements

The following elements shall not be present:

- `!DOCTYPE`
- `!ELEMENT`
- `!ATTLIST`
- `![CDATA[]]`

4.5 Top Level XML Element Namespace

The top level XML element should use a default namespace - *i.e.*, no namespace qualifier should be associated with the top level XML element or any child element belonging to the default namespace.