Abstract

This Recommendation defines a new XHTML document type that is based upon the module framework and modules defined in Modularization of XHTML [XHTMLMOD]. The purpose of this document type is to serve as the basis for future extended XHTML ‘family’ document types, and to provide a consistent, forward-looking document type cleanly separated from the deprecated, legacy functionality of HTML 4 [HTML4] that was brought forward into the XHTML 1.0 [XHTML1] document types. This document type is essentially a reformulation of XHTML 1.0 Strict using XHTML Modules. This means that many facilities available in other XHTML Family document types (e.g., XHTML Frames) are not available in this document type. These other facilities are available through modules defined in Modularization of XHTML, and document authors are free to define document types based upon XHTML 1.1 that use these facilities (see [XHTMLMOD] for information on creating new document types).

Status of this document

This section describes the status of this document at the time of its publication. Other documents may supersede this document. The latest status of this document series is maintained at the W3C.

This document has been reviewed by W3C Members and other interested parties and has been endorsed by the Director as a W3C Recommendation. It is a stable document and may be used as reference material or cited as a normative reference from another document. W3C's role in making the Recommendation is to draw attention to the specification and to promote its widespread deployment. This enhances the functionality and interoperability of the Web.
1. Introduction

This section is normative.

With the introduction of the XHTML family of modules and document types, the W3C has helped move the Internet content-development community from the days of malformed, non-standard markup into the well-formed, valid world of XML [XML]. In XHTML 1.0, this move was moderated by a goal of providing for easy migration of existing, HTML 4 (or earlier) based content to XHTML and XML. With the advent of the XHTML modules defined in Modularization of XHTML, the W3C has removed support for deprecated elements and attributes from the XHTML family. These elements and attributes were largely presentation oriented functionality that is better handled via style sheets or client-specific default behavior.

Going forward, XHTML family document types will be based upon this new, more structural functional collection. In this specification, the W3C’s HTML Working Group has defined an initial document type based solely upon modules. This document type is designed to be portable to a broad collection of client devices, and applicable to the majority of Internet content. Content developers who base their content upon the functionality expressed in this specification can be confident that it will be consistently portable across XHTML family conforming user agents.

2. Conformance Definition

This section is normative.

The keywords "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in [RFC2119].

2.1. Document Conformance

This version of XHTML provides a definition of strictly conforming XHTML documents, which are restricted to elements and attributes from the XHTML namespace.

2.1.1. Strictly Conforming Documents

A strictly conforming XHTML 1.1 document is a document that requires only the facilities described as mandatory in this specification. Such a document must meet all the following criteria:

1. The document must conform to the constraints expressed in Appendix C.
The root element of the document must be <html>.

The root element of the document must designate the XHTML namespace using the xmlns attribute [XMLNAMES]. The namespace designator for XHTML is "http://www.w3.org/1999/xhtml".

There must be a DOCTYPE declaration in the document prior to the root element. If present, the public identifier included in the DOCTYPE declaration must reference the DTD found in Appendix C using its Formal Public Identifier. The system identifier may be modified appropriately.

```xml
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.1//EN" 
"http://www.w3.org/TR/xhtml11/DTD/xhtml11.dtd">
<html xmlns="http://www.w3.org/1999/xhtml" xml:lang="en">
  <head>
    <title>Virtual Library</title>
  </head>
  <body>
    <p>Moved to <a href="http://vlib.org/">vlib.org</a>.</p>
  </body>
</html>
```

Here is an example of an XHTML 1.1 document.

Note that in this example, the XML declaration is included. An XML declaration like the one above is not required in all XML documents. XHTML document authors are strongly encouraged to use XML declarations in all their documents. Such a declaration is required when the character encoding of the document is other than the default UTF-8 or UTF-16.

2.2. User Agent Conformance

A conforming user agent must meet all user agent conformance requirements defined in [XHTMLMOD].

3. The XHTML 1.1 Document Type

This section is normative.
The XHTML 1.1 document type is a fully functional document type with rich semantics. It is not, however, as varied in functionality as the XHTML 1.0 Transitional or Frameset document types. These document types defined many presentational components that are better handled through style sheets or other similar mechanisms. Moreover, since the XHTML 1.1 document type is based exclusively upon the facilities defined in the XHTML modules [XHTMLMOD], it does not contain any of the deprecated functionality of XHTML 1.0 nor of HTML 4. Despite these exceptions, or perhaps because of them, the XHTML 1.1 document type is a solid basis for future document types that are targeted at varied user agent environments.

The XHTML 1.1 document type is made up of the following XHTML modules. The elements, attributes, and minimal content models associated with these modules are defined in "Modularization of XHTML" [XHTMLMOD]. The elements are listed here for information purposes, but the definitions in "Modularization of XHTML" should be considered definitive. In the on-line version of this document, the module names in the list below link into the definitions of the modules within the current version of "Modularization of XHTML".

**Structure Module**
- body, head, html, title

**Text Module**
- abbr, acronym, address, blockquote, br, cite, code, dfn, div, em, h1, h2, h3, h4, h5, h6, kbd, p, pre, q, samp, span, strong, var

**Hypertext Module**
- a

**List Module**
- dl, dt, dd, ol, ul, li

**Object Module**
- object, param

**Presentation Module**
- b, big, hr, i, small, sub, sup, tt

**Edit Module**
- del, ins

**Bidirectional Text Module**
- bdo

**Forms Module**
- button, fieldset, form, input, label, legend, select, optgroup, option, textarea

**Table Module**
- caption, col, colgroup, table, tbody, td, tfoot, th, thead, tr

**Image Module**
- img

**Client-side Image Map Module**
- area, map

**Server-side Image Map Module**
- Attribute ismap on img

**Intrinsic Events Module**
- Events attributes

**Metainformation Module**
- meta

**Scripting Module**
- noscript, script

**Stylesheet Module**
- style element

**Style Attribute Module** *Deprecated*
- style attribute

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XHTML also uses the Ruby Annotation module as defined in [RUBY]:

Ruby Annotation Module
    ruby, rbc, rtc, rb, rt, rp

There are no additional definitions required by this document type. An implementation of this document type as an XML DTD is defined in Appendix C.

A. Changes from XHTML 1.0 Strict

This appendix is informative.

This Appendix describes the differences between XHTML 1.1 and XHTML 1.0 Strict. XHTML 1.1 represents a departure from both HTML 4 and XHTML 1.0. Most significant is the removal of features that were deprecated. In general, the strategy is to define a markup language that is rich in structural functionality, but that relies upon style sheets for presentation.

The differences can be summarized as follows:

1. On every element, the lang attribute has been removed in favor of the xml:lang attribute (as defined in [XHTMLMOD]).
2. On the a and map elements, the name attribute has been removed in favor of the id attribute (as defined in [XHTMLMOD]).
3. The "ruby" collection of elements has been added (as defined in [RUBY]).

B. References

This appendix is normative.

B.1. Normative References

[HTML4]


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B.2. Informative References

[CATALOG]


[RFC2119]

"Key words for use in RFCs to indicate requirement levels", RFC 2119, S. Bradner, March 1997. Available at: http://www.ietf.org/rfc/rfc2119.txt

/XMLNAMES/


C. XHTML 1.1 Document Type Definition

This appendix is normative.

C.1. SGML Open Catalog Entry for XHTML 1.1

This section contains the SGML Open Catalog-format definition [CATALOG] of the XHTML 1.1 FPI.

-- .......................................................................... --
-- File catalog ............................................................ --
-- XHTML 1.1 Catalog Data File

Revision: (@(#)xhtml11.cat 1.9 2001/04/04 SMI

See "Entity Management", SGML Open Technical Resolution 9401 for detailed information on supplying and using catalog data. This document is available from OASIS at URL:

C.2. XHTML 1.1 Driver

This section contains the driver for the XHTML 1.1 document type implementation as an XML DTD. It relies upon XHTML module implementations defined in [XHTMLMOD] and in [RUBY].

<!-- ................................. -->
<!--  ... file: xhtml11.dtd -->
<!--}

<!-- XHTML 1.1 DTD

This is XHTML, a reformulation of HTML as a modular XML application.

The Extensible HyperText Markup Language (XHTML)
Copyright 1998-2001 World Wide Web Consortium
(Massachusetts Institute of Technology, Institut National de Recherche en Informatique et en Automatique, Keio University).
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Permission to use, copy, modify and distribute the XHTML DTD and its accompanying documentation for any purpose and without fee is hereby granted in perpetuity, provided that the above copyright notice and this paragraph appear in all copies. The copyright holders make no representation about the suitability of the DTD for any purpose.

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Author: Murray M. Altheim <altheim@eng.sun.com>
Revision: $Id: xhtml11.html,v 1.2 2001/07/31 10:45:46 mf Exp$
This is XHTML 1.1, a reformulation of HTML as a modular XML application. Copyright 1998-2001 W3C (MIT, INRIA, Keio), All Rights Reserved.
Revision: $Id: xhtml11.html,v 1.2 2001/07/31 10:45:46 mf Exp $ SMI

This DTD module is identified by the PUBLIC and SYSTEM identifiers:

PUBLIC "--//W3C//ENTITIES XHTML 1.1 Document Model 1.0//EN"
SYSTEM "http://www.w3.org/TR/xhtml11/DTD/xhtml11-model-1.mod"

Revisions:
(none)

This module describes the groupings of elements that make up common content models for XHTML elements.

XHTML has three basic content models:

%Inline.mix; character-level elements
%Block.mix; block-like elements, eg., paragraphs and lists
%Flow.mix; any block or inline elements

Any parameter entities declared in this module may be used to create element content models, but the above three are considered 'global' (insofar as that term applies here).

The reserved word '#PCDATA' (indicating a text string) is now included explicitly with each element declaration that is declared as mixed content, as XML requires that this token occur first in a content model specification.

Extending the Model

While in some cases this module may need to be rewritten to accommodate changes to the document model, minor extensions may be accomplished by redeclaring any of the three *.extra; parameter entities to contain extension element types as follows:

%Misc.extra; whose parent may be any block or inline element.

%Inline.extra; whose parent may be any inline element.

%Block.extra; whose parent may be any block element.

If used, these parameter entities must be an OR-separated list beginning with an OR separator ("|"), eg., "| a | b | c"

All block and inline *.class parameter entities not part of the *struct.class classes begin with "| " to allow for exclusion from mixes.
D. Acknowledgements

This appendix is informative.

This specification was prepared by the W3C HTML Working Group. The members at the time of publication were:

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