XHTML Role Attribute Module

A module to support role classification of elements

W3C Working Draft 4 October 2007

This version:
http://www.w3.org/TR/2007/WD-xhtml-role-20071004
Latest version:
http://www.w3.org/TR/xhtml-role
Previous version:
http://www.w3.org/TR/2006/WD-xhtml-role-20061113/
Diff from previous version:
xhtml-role-diff.html
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The English version of this specification is the only normative version. Non-normative translations may also be available.

Abstract

The XHTML Role Attribute defined in this specification allows the author to annotate XML Languages with machine-extractable semantic information about the purpose of an element. Use cases include accessibility, device adaptation, server-side processing, and complex data description. This attribute can be integrated into any markup language based upon XHTML Modularization [XHTMLMOD [p.19]].

Status of This Document

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This document is a Last Call Working Draft. It is based upon comments received against the previous draft, and also upon work done in the definition of [XHTML2 [p.19]]. The Last Call period extends through 26 October 2007.

This document has been produced by the W3C XHTML 2 Working Group as part of the HTML Activity. The goals of the XHTML 2 Working Group are discussed in the XHTML 2 Working Group charter.

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Table of Contents

1. Introduction

This section is informative.

This document is a module designed to be used to help extend the scope of XHTML-family markup languages into new environments. It has been developed in conjunction with the accessibility community and other groups to make it easier to describe the semantic meaning of XHTML-family document content.

2. Conformance Requirements

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 [p.19]].

Note that all examples in this document are informative, and are not meant to be interpreted as normative requirements.

2.1. Document Conformance

XHTML Role Attribute Module is not a stand-alone document type. It is intended to be integrated into other host languages such as XHTML. A conforming XHTML Role Attribute Module document is a document that requires only the facilities described as mandatory in this specification and the facilities described as mandatory in its host language. Such a document must meet all the following criteria:

1. The document MUST conform to the constraints expressed in Appendix A - DTD Implementation [p.13] , combined with the constraints expressed in its host language implementation.

2. If the host language is not in the XHTML namespace, the document MUST contain an `xmlns` declaration for the XHTML Role Attribute Module namespace [XMLNAMES [p.19]]. The namespace for XHTML Role Attribute Module is defined to be `http://www.w3.org/1999/xhtml`. An example start tag of a root element might look like:

   This example is informative

   ```
   <html xmlns="http://www.w3.org/1999/xhtml" xml:lang="en" >
   ```

2.2. Host Language Conformance

When the XHTML Role Attribute Module is included in a host language, all of the facilities required in this specification MUST be included in the host language. In addition, the attribute defined in this specification MUST be included in the content model of the host language. Finally, the attribute MUST be referenced using its namespace-qualified form (e.g., <myml:myelement xhtml:role='definition'>a term</myml:myelement>).

2.3. User Agent Conformance

A conforming user agent MUST support all of the features required in this specification.

3. Terms and Definitions

This section is *normative*.

3.1. Compact URIs

In order to allow for the scoped expression of role values, this specification uses a superset of of QNames that allows the contraction of all URIs (QNames have a syntactic restriction on the sorts of URI that can be contracted).

These Compact URIs are called CURIEs here.

3.1.1. CURIE Syntax Definition

Note that this syntax definition will ultimately be defined in an external document [CURIE [p.19]].

A CURIE is comprised of two components, a *prefix* and a *reference*. The prefix is separated from the reference by a colon (`:`). It is possible to omit the prefix, and make use of the default prefix. It is also possible to omit both the prefix *and* the colon, leaving just a *reference*.

```
curie       :=   [ prefix [ ':' ] ] reference

prefix      :=   NCName

reference   :=   irelative-ref (as defined in [IRI])
```

The prefix value MUST be defined using the 'xmlns:' syntax specified in [XMLNAMES [p.19]].

If the prefix is omitted from a CURIE, the default value of `http://www.w3.org/1999/xhtml/vocab#` MUST be used.

A CURIE is a representation of a full IRI. This IRI is obtained by concatenating the IRI associated with the `prefix` with the `reference`. The result MUST be a syntactically valid IRI [IRI [p.19]].

The CURIE prefix '_' is reserved. For this reason, prefix declarations using '_' SHOULD be avoided by authors.

Host languages MAY define additional constraints on these syntax rules when CURIES are used in the context of those host languages. Host languages MUST NOT relax the CURIE syntax constraints defined in this specification.

4. The XHTML Role Attribute

This section is normative.

The `role` attribute takes as its value one or more whitespace separated CURIE [p.9] s. Any non-qualified value MUST be interpreted in the XHTML namespace, and MUST be taken from the list defined in this section.

The attribute describes the role(s) the current element plays in the context of the document. This can be used, for example, by applications and assistive technologies to determine the purpose of an element. This could allow a user to make informed decisions on which actions may be taken on an element and activate the selected action in a device independent way. It could also be used as a mechanism for annotating portions of a document in a domain specific way (e.g., a legal term taxonomy).

This example is informative

```
<ul role="navigation wai:sitemap">
    <li href="downloads">Downloads</li>
    <li href="docs">Documentation</li>
    <li href="news">News</li>
</ul>
```

Authors may use the following standard roles, listed here with their conventional interpretations. They are intended to define regions of the document to help orient the user.

banner
: A banner is usually defined as the advertisement at the top of a web page. The banner content typically contains the site or company logo and other key advertisements for the site.

contentinfo
: This is information about the content on the page. For example, footnotes, copyrights, links to privacy statements, etc. would belong here.

definition
: The contents of the associated element represent a definition (e.g., of a term or concept). If there is a `dfn` element within the contents (as defined in [XHTMLMOD [p.19]]), then that represents the term being defined.

main
: This defines the main content of a document.

navigation
: This is a collection of links suitable for use when navigating the document or related documents.

note
: The content is parenthetic or ancillary to the main content of the resource.

search
: This is the search section of a web document. This is typically a form used to submit search requests about the site or a more general Internet wide search service.

secondary
: This is any unique section of the document. In the case of a portal, this may include but not be limited to: show times; current weather; or stocks to watch.

seealso
: Indicates that the element contains content that is related to the main content of the page.

4.1. Extending the collection of roles

It is possible to define additional role values. Such values MUST be defined in their own namespace. Note that current best practice is that the URI associated with that namespace resolve to a resource that allows for the discovery of the definition of the roles in the namespace. Example definitions include the RDF/OWL Taxonomy for the XHTML role attribute values in Appendix B [p.17] , and the Web Accessibility Initiative's work on an RDF Taxonomy [ARIA-ROLE [p.19]].

A. DTD Implementation

This appendix is *normative*.

The DTD implementation of XHTML Role Attribute Module conforms to the requirements defined in [XHTMLMOD [p.19]]. Consequently, it provides a Qualified Names sub-module, and a module file for the XHTML Role Attribute Module module defined in this Proposed Recommendation.

A.1. Qualified Names Module

Note that this module defines the parameter entity `%xhtml-role-attrs.qname;`. This entity is intended to be used in the attribute lists of elements in any host language that permits the use of the role attribute on elements in its own namespace. In this case the Host Language driver should set a parameter entity `%XHTML-ROLE.prefixed;` to `INCLUDE` and a parameter entity `%XHTML-ROLE.prefix;` to a value that is the prefix for the XHTML Role Attribute Module attributes.

```
<!-- ...................................................................... -->
<!-- XHTML Role Qname Module  ............................................ -->
<!-- file: xhtml-role-qname-1.mod

     This is XHTML Role - the Role Attribute Module for XHTML.

     Copyright 2006 W3C (MIT, ERCIM, Keio), All Rights Reserved.

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

       PUBLIC "-//W3C//ENTITIES XHTML Role Attribute Qnames 1.0//EN"
       SYSTEM "http://www.w3.org/MarkUp/DTD/xhtml-role-qname-1.mod"

     Revisions:
     (none)
     ....................................................................... -->

<!-- XHTML Role Attribute Qname (Qualified Name) Module

     This module is contained in two parts, labeled Section 'A' and 'B':

       Section A declares parameter entities to support namespace-
       qualified names, namespace declarations, and name prefixing
       for XHTML Role and extensions.

       Section B declares parameter entities used to provide
       namespace-qualified names for the XHTML role attribute:

         %role.qname;   the xmlns-qualified name for @role
         ...

     XHTML Role extensions would create a module similar to this one.
-->
```

```
<!-- Section A: XHTML Role Attribute XML Namespace Framework :::::::::::::: -->

<!-- 1. Declare a %XHTML-ROLE.prefixed; conditional section keyword, used
        to activate namespace prefixing. The default value should
        inherit '%NS.prefixed;' from the DTD driver, so that unless
        overridden, the default behavior follows the overall DTD
        prefixing scheme.
-->
<!ENTITY % NS.prefixed "IGNORE" >
<!ENTITY % XHTML-ROLE.prefixed "%NS.prefixed;" >

<!-- 2. Declare a parameter entity (eg., %XHTML-ROLE.xmlns;) containing
        the URI reference used to identify the XHTML Role Attribute namespace
-->
<!ENTITY % XHTML-ROLE.xmlns  "http://www.w3.org/1999/xhtml" >

<!-- 3. Declare parameter entities (eg., %XML.prefix;) containing
        the default namespace prefix string(s) to use when prefixing
        is enabled. This may be overridden in the DTD driver or the
        internal subset of an document instance. If no default prefix
        is desired, this may be declared as an empty string.

     NOTE: As specified in [XMLNAMES], the namespace prefix serves
     as a proxy for the URI reference, and is not in itself significant.
-->
<!ENTITY % XHTML-ROLE.prefix  "" >

<!-- 4. Declare parameter entities (eg., %XHTML-ROLE.pfx;) containing the
        colonized prefix(es) (eg., '%XHTML-ROLE.prefix;:') used when
        prefixing is active, an empty string when it is not.
-->
<![%XHTML-ROLE.prefixed;[
<!ENTITY % XHTML-ROLE.pfx  "%XHTML-ROLE.prefix;:" >
]]>
<!ENTITY % XHTML-ROLE.pfx  "" >

<!-- declare qualified name extensions here ............ -->
<!ENTITY % xhtml-role-qname-extra.mod "" >
%xhtml-role-qname-extra.mod;

<!-- 5. The parameter entity %XHTML-ROLE.xmlns.extra.attrib; may be
        redeclared to contain any non-XHTML Role Attribute namespace
        declaration attributes for namespaces embedded in XML. The default
        is an empty string.  XLink should be included here if used
        in the DTD.
-->
<!ENTITY % XHTML-ROLE.xmlns.extra.attrib "" >


<!-- Section B: XML Qualified Names ::::::::::::::::::::::::::::: -->

<!-- 6. This section declares parameter entities used to provide
        namespace-qualified names for the XHTML role attribute.
-->

<!ENTITY % xhtml-role.role.qname  "%XHTML-ROLE.pfx;role" >
```

```
<!-- The following defines a PE for use in the attribute sets of elements in
     other namespaces that want to incorporate the XML Event attributes. Note
     that in this case the XHTML-ROLE.pfx should always be defined. -->

<!ENTITY % xhtml-role.attrs.qname
   "%XHTML-ROLE.pfx;role             CDATA        #IMPLIED"
    >

<!-- end of xhtml-role-qname-1.mod -->
```

A.2. XHTML Role Attribute Module

```
<!-- ...................................................................... -->
<!-- XHTML Role Module .................................................... -->
<!-- file: xhtml-role-1.mod

     This is XHTML Role - the Role Attribute Module for XHTML.

     Copyright 2006 W3C (MIT, ERCIM, Keio), All Rights Reserved.

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

       PUBLIC "-//W3C//ENTITIES XHTML Role Attribute 1.0//EN"
       SYSTEM "http://www.w3.org/MarkUp/DTD/xhtml-role-1.mod"

     Revisions:
     (none)
     ....................................................................... -->


<!-- XHTML Role Attribute Module does nothing, since role is not incorporated
     in any elements content model as part of this module. -->
<!-- end of xhtml-role-1.mod -->
```

B. RDF/OWL Taxonomy

This section is informative

This example is informative

```
<?xml version="1.0"?>
<!DOCTYPE rdf:RDF [
    <!ENTITY xsd "http://www.w3.org/2001/XMLSchema#">
    <!ENTITY dc "http://dublincore.org/2003/03/24/dces#">
    <!ENTITY owl "http://www.w3.org/2002/07/owl#">
    <!ENTITY rdfs "http://www.w3.org/2000/01/rdf-schema#">
    <!ENTITY rdf "http://www.w3.org/1999/02/22-rdf-syntax-ns#">
    <!ENTITY states "http://www.w3.org/2005/07/aaa#">
    <!ENTITY wairole "http://www.w3.org/2005/01/wai-rdf/GUIRoleTaxonomy#">
]>
<rdf:RDF xml:base="http://www.w3.org/1999/xhtml"
    xmlns:dc="http://purl.org/dc/elements/1.1/#"
    xmlns:owl="http://www.w3.org/2002/07/owl#"
    xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
    xmlns:rdfs="http://www.w3.org/2000/01/rdf-schema#"
    xmlns:states="http://www.w3.org/2005/07/aaa#"
    xmlns:wairole="http://www.w3.org/2005/01/wai-rdf/GUIRoleTaxonomy#"
    <owl:Class rdf:ID="banner">
        <rdfs:subClassOf rdf:resource="wairole:region"/>
        <wairole:scope rdf:resource="wairole:document"/>
        <dc:description xml:lang="en">
        A banner is usually defined as the advertisement at the top of
        a web page. The banner content typically contains the site or
        company logo and other key advertisements for the site.
        </dc:description>
    </owl:Class>
    <owl:Class rdf:ID="contentinfo">
        <rdfs:subClassOf rdf:resource="wairole:region"/>
        <wairole:scope rdf:resource="wairole:document"/>
        <dc:description xml:lang="en">
        This is information about the content on the page.
        For example, footnotes, copyrights, links to privacy
        statements, etc. would belong here.
        </dc:description>
    </owl:Class>
    <owl:Class rdf:ID="definition">
        <rdfs:subClassOf rdf:resource="wairole:section"/>
        <wairole:scope rdf:resource="wairole:document"/>
        <dc:description xml:lang="en">
        The contents of the associated element represent a
        definition (e.g., of a term or concept).  If there is a
        dfn element within the contents (as defined in [XHTMLMOD]),
        then that represents the term being defined.
        </dc:description>
    </owl:Class>
    <owl:Class rdf:ID="main">
        <rdfs:subClassOf rdf:resource="wairole:region"/>
        <wairole:scope rdf:resource="wairole:document"/>
        <dc:description xml:lang="en">
```

```
        This defines the main content of a document.
        </dc:description>
    </owl:Class>
    <owl:Class rdf:ID="navigation">
        <rdfs:subClassOf rdf:resource="wairole:region"/>
        <wairole:scope rdf:resource="wairole:document"/>
        <wairole:relatedConcept rdf:resource="wairole:menu"/>
        <dc:description xml:lang="en">
        This is the navigation bar on a web document. This is
        typically a list of links to other pages on the site or other
        areas of the same document.
        </dc:description>
    </owl:Class>
    <owl:Class rdf:ID="note">
        <rdfs:subClassOf rdf:resource="wairole:section"/>
        <wairole:scope rdf:resource="wairole:document"/>
        <dc:description xml:lang="en">
        The content is parenthetic or ancillary to the main content
        of the resource.
        </dc:description>
    </owl:Class>
    <owl:Class rdf:ID="search">
        <rdfs:subClassOf rdf:resource="wairole:region"/>
        <wairole:scope rdf:resource="wairole:document"/>
        <dc:description xml:lang="en">
        This is the search section of a web document. This is
        typically a form used to submit search requests about
        the site or a more general Internet wide search service.
        </dc:description>
    </owl:Class>
    <owl:Class rdf:ID="secondary">
        <rdfs:subClassOf rdf:resource="wairole:region"/>
        <dc:description xml:lang="en">
        This is any unique section of the document. In the case
        of a portal, this may include but not be limited to: show
        times; current weather; or stocks to watch.
        </dc:description>
    </owl:Class>
    <owl:Class rdf:ID="seealso">
        <rdfs:subClassOf rdf:resource="wairole:section"/>
        <dc:description xml:lang="en">
        Indicates that the element contains content that is related
        to the main content of the page.
        </dc:description>
        <wairole:relatedConcept rdf:resource="#main"/>
    </owl:Class>
</rdf:RDF>
```

C. References

This appendix is *normative*.

C.1. Normative References

IRI
"*Internationalized Resource Identifiers (IRI)*", RFC 3987, M.Duerst, M. Suignard January 2005.
Available at: http://www.ietf.org/rfc/rfc3987.txt

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"*Key words for use in RFCs to indicate requirement levels*", RFC 2119, S. Bradner, March 1997.
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"*Modularization of XHTML™ 1.1*", W3C Proposed Recommendation, D. Austin *et al.*, *eds.*, 13 February 2006.
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"*Namespaces in XML*", W3C Recommendation, T. Bray *et al.*, *eds.*, 14 January 1999.
Available at: http://www.w3.org/TR/1999/REC-xml-names-19990114
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C.2. Other References

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"*Roles for Accessible Rich Internet Applications*". L. Seeman, R. Schwerdtfeger, 1 June 2007.
The latest version is available at: http://www.w3.org/TR/aria-role

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Available at: http://www.w3.org/TR/2007/WD-curie-20070307
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"*XHTML™ 1.0: The Extensible HyperText Markup Language (Second Edition)*". S. Pemberton *et al.*, 26 January 2000, revised 1 August 2002.
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[XHTML2]
"*XHTML™ 2.0*". J. Axelsson *et al.*, 27 May 2005.
Available at: http://www.w3.org/TR/2005/WD-xhtml2-20050527
The latest version is available at: http://www.w3.org/TR/xhtml2

D. Acknowledgments

This section is informative.

At the time of publication, the participants in the W3C XHTML 2 Working Group were: