W3C

XML

World Wide Web **, 14** **1999**

Namespaces in XML (W3C Recommendation) .

,

http://www.w3.org/TR/REC-xml-names

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http://www.w3.org/TR/1999/REC-xml-names-19990114
http://www.w3.org/TR/1999/REC-xml-names-19990114/xml-names.xml
http://www.w3.org/TR/1999/REC-xml-names-19990114/Overview.html
:

http://www.w3.org/TR/REC-xml-names
:

http://www.w3.org/TR/1998/PR-xml-names-19981117
:

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Статус данного документа

W3C,
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, , http://www.w3.org/XML/xml-names-19990114-errata.

, , xml-names-editor@w3.org.

Резюме

XML
, .
, URI.

Содержание

1. Причины возникновения и краткое описание

(XML),

XML (" ") ,
:

, .

, , .

, ,

" ", , ,

, .

,

, , .

- *XML -* .

[:] **XML** - URI [RFC2396]

, XML _____ _____.

XML " ", ,

, XML , , ,

. "A. _____ XML".

[:] URI ,

. , URI,

, . ,

, , URI.

XML _____ (qualified names),

, _____ _____.

, URI, .

URI

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URI , ,

. ,

URI. , _____

URI. ,

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.

1.1 _____

,

, XML [XML].

, XML, ,

, , .

NSC "Namespace Constraint" (

), , ,

.

, Internet (w3.org)

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2. Декларирование пространства имен

[:] .

xmlns, xmlns:.

, XML, , _____.

[1] NSAttName ::= PrefixedAttName

```
                                    | DefaultAttName
[2] PrefixedAttName ::= 'xmlns:' NCName                         [ NSC: _____
                                                                   "XML" ]
[3]  DefaultAttName ::= 'xmlns'
[4]        NCName ::= (Letter | '_') (NCNameChar)*        /* ___ XML
                                                             ":" */
[5]     NCNameChar ::= Letter | Digit | '.' | '-' | '_'
                       | CombiningChar | Extender
```

[:] _____ URI   ,
                    .   ,
                    .

            (   ).   ,   ,
                    Uniform Resource Names [RFC2141].   ,   URL
                                    .

[:]   PrefixedAttName,
    NCName   .   ,   _____
_____,   .
                    .

[:]   DefaultAttName,
            _____   ,   ,
                                    .
                    .

"5._____".
                    ,   edi   ,
            http://ecommerce.org/schema:

```
<x xmlns:edi='http://ecommerce.org/schema'>
  <!-            "x"
            "edi"              http://ecommerce.org/schema
  -->
</x>
```

                                    :   **"XML"**
            ,   x, m, l (   ),
            XML   .

3. Полные имена

[:]   XML   ,   (,
                                    Name)   (qualified names),
                                    :

```
[6]    QName ::= (Prefix ':')? LocalPart
[7]    Prefix ::= NCName
[8] LocalPart ::= NCName
```

    Prefix   _____   URI
_____.[:]   LocalPart   (local part)
            .

            ,   .   ,
                                    .
                    ,   .

4. Использование полных имен

    XML   ,   ,_____
            :

[9]	STag ::= '<' QName (S Attribute)* S? '>'	[NSC: _____]
[10]	ETag ::= '</' QName S? '>'	[NSC: _____]
[11]	EmptyElemTag ::= '<' QName (S Attribute)* S? '/>'	[NSC: _____]

:

```
<x xmlns:edi='http://ecommerce.org/schema'>
  <!--                          'price' - http://ecommerce.org/schema -->
  <edi:price units='Euro'>32.18</edi:price>
</x>
```

_____, _____:

[12]	Attribute ::= NSAttName Eq AttValue
	| QName Eq AttValue [NSC:]

:

```
<x xmlns:edi='http://ecommerce.org/schema'>
  <!--                          'taxClass' - http://ecommerce.org/schema -->
  <lineItem edi:taxClass="exempt">Baby food</lineItem>
</x>
```

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, xml xmlns, , _____

_____ , ,

, (, , _____

). xml

http://www.w3.org/XML/1998/namespace. xmlns

, - .

, , ,

_____ XML,

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XML . XML , ,

, . ,

, ,

, _____ DTD.

DTD,

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[13]	doctypedecl ::= '<!DOCTYPE' S QName (S ExternalID)? S? ('[' (markupdecl | PEReference | S)* ']' S?)? '>'
[14]	elementdecl ::= '<!ELEMENT' S QName S contentspec S? '>'
[15]	cp ::= (QName | choice | seq) ('?' | '*' | '+')?
[16]	Mixed ::= '(' S? '#PCDATA' (S? '|' S? QName)* S? ')*' | '(' S? '#PCDATA' S? ')'
[17]	AttlistDecl ::= '<!ATTLIST' S QName AttDef* S? '>'
[18]	AttDef ::= S (QName | NSAttName) S AttType S DefaultDecl

5. Пространство имен для элементов и атрибутов

5.1

NSAttName):

```xml
<?xml version="1.0"?>
<!--                                                              HTML  -->
<html:html xmlns:html='http://www.w3.org/TR/REC-html40'>
  <html:head><html:title>Frobnostication</html:title></html:head>
  <html:body><html:p>Moved to
    <html:a href='http://frob.com'>here.</html:a></html:p></html:body>
</html:html>
```

```xml
<?xml version="1.0"?>
<!--                                                  -->
<bk:book xmlns:bk='urn:loc.gov:books'
        xmlns:isbn='urn:ISBN:0-395-36341-6'>
    <bk:title>Cheaper by the Dozen</bk:title>
    <isbn:number>1568491379</isbn:number>
</bk:book>
```

5.2

URI

```xml
<?xml version="1.0"?>
<!--
                                                                  HTML -->
<html xmlns='http://www.w3.org/TR/REC-html40'>
  <head><title>Frobnostication</title></head>
  <body><p>Moved to
    <a href='http://frob.com'>here</a>.</p></body>
</html>
```

```xml
<?xml version="1.0"?>
<!--                              "books" -->
<book xmlns='urn:loc.gov:books'
      xmlns:isbn='urn:ISBN:0-395-36341-6'>
    <title>Cheaper by the Dozen</title>
    <isbn:number>1568491379</isbn:number>
</book>
```

```xml
<?xml version="1.0"?>
<!--                                                  "books" -->
<book xmlns='urn:loc.gov:books'
      xmlns:isbn='urn:ISBN:0-395-36341-6'>
    <title>Cheaper by the Dozen</title>
    <isbn:number>1568491379</isbn:number>
    <notes>
      <!--                                          ,
                                      ,        HTML -->
      <p xmlns='urn:w3-org-ns:HTML'>
          This is a <i>funny</i> book!
      </p>
```

```
      </notes>
</book>
```

.   ,
                    ,   ,
              .

```
<?xml version='1.0'?>
<Beers>
  <!-- nbsp;                                          HTML -->
  <table xmlns='http://www.w3.org/TR/REC-html40'>
   <th><td>Name</td><td>Origin</td><td>Description</td></th>
   <tr>
     <!--                                                  ,
                                      -->
    <td><brandName xmlns="">Huntsman</brandName></td>
    <td><origin xmlns="">Bath, UK</origin></td>
    <td>
      <details xmlns=""><class>Bitter</class><hop>Fuggles</hop>
       <pro>Wonderful hop, light alcohol, good summer beer</pro>
       <con>Fragile; excessive variance pub to pub</con>
       </details>
      </td>
    </tr>
   </table>
  </Beers>
```

5.3

             XML,   ,
1.   ,
2.   , _____   , _____   _____,
         _____.
     ,   bad   :

```
<!-- http://www.w3.org             n1    n2 -->
<x xmlns:n1="http://www.w3.org"
   xmlns:n2="http://www.w3.org" >
  <bad a="1"      a="2" />
  <bad n1:a="1"  n2:a="2" />
</x>
```

                              (,
                      ):

```
<!--               http://www.w3.org             n1 -->
<x xmlns:n1="http://www.w3.org"
   xmlns="http://www.w3.org" >
  <good a="1"      b="2" />
  <good a="1"      n1:a="2" />
</x>
```

6. Согласованность документов

    XML   ,   ,
                              QName   "Namespace Constraints".
          XML   ,   ,   ,
      XML,   Name   XML,
      NCName   .
                                        :
- •   ,   .
- •   ,   PI   .
          ,   ,   ID, IDREF(S), ENTITY(IES) NOTATION,
                  Names,   .

,

, [link] .   ,

, ,

.

A. Внутренняя структура пространства имен XML (обсуждение стандарта)

A.1

"   "   ,   ,

,   .   ,   ,   XML,

,   .

XML   ,   ,

,

.   :

```
<section><title>Book-Signing Event</title>
<signing>
  <author title="Mr" name="Vikram Seth" />
  <book title="A Suitable Boy" price="$22.95" /></signing>
<signing>
  <author title="Dr" name="Oliver Sacks" />
  <book title="The Island of the Color-Blind" price="$12.95" /></signing>
</section>
```

title   ,   ,

.

"   "   ,

,   XML   CSS:

```
<RESERVATION>
 <NAME HTML:CLASS="largeSansSerif">Layman, A</NAME>
 <SEAT CLASS="Y" HTML:CLASS="reallyImportant">33B</SEAT>
 <DEPARTURE>1997-05-24T07:55:00+1</DEPARTURE></RESERVATION>
```

CLASS,   , "J", "Y"   "C",

HTML:CLASS,

HTML   .

XML 1.0   "   "   .   ,

CLASS   HTML,

HTML   .   ,   ,   .

A.2   XML

,   ,   ,

XML,

(,   )   ,   .   :

,   XML.

[link],

.

,

.   ,   -

.

.

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XML 1.0

XML , , ( )

A.3

XML ,
XML.
[:] XML ExpEType.
type, , ns,
, .
[:] XML ExpAName.
name, . ,
ns, .
eltype, ,
elns, , .

. , ,

:

```
<!-- 1 --> <section xmlns='urn:com:books-r-us'>
<!-- 2 -->    <title>Book-Signing Event</title>
<!-- 3 -->    <signing>
<!-- 4 -->       <author title="Mr" name="Vikram Seth" />
<!-- 5 -->       <book title="A Suitable Boy" price="$22.95" />
           </signing>
         </section>
```

:

1	section	<ExpEType type="section" ns="urn:com:books-r-us" />
2	title	<ExpEType type="title" ns="urn:com:books-r-us" />
3	signing	<ExpEType type="signing" ns="urn:com:books-r-us" />
4	author	<ExpEType type="author" ns="urn:com:books-r-us" />
4	title	<ExpAName name='title' eltype="author" elns="urn:com:books-r-us" />
4	name	<ExpAName name='name' eltype="author" elns="urn:com:books-r-us" />
5	book	<ExpEType type="book" ns="urn:com:books-r-us" />
5	title	<ExpAName name='title' eltype="book" elns="urn:com:books-r-us" />
5	price	<ExpAName name='price' eltype="book" elns="urn:com:books-r-us" />

```
<!-- 1 --> <RESERVATION xmlns:HTML="http://www.w3.org/TR/REC-html40">
<!-- 2 --> <NAME HTML:CLASS="largeSansSerif">Layman, A</NAME>
<!-- 3 --> <SEAT CLASS="Y" HTML:CLASS="largeMonotype">33B</SEAT>
<!-- 4 --> <HTML:A HREF='/cgi-bin/ResStatus'>Check Status</HTML:A>
<!-- 5 --> <DEPARTURE>1997-05-24T07:55:00+1</DEPARTURE></RESERVATION>
```

1	RESERVATION	<ExpEType type="RESERVATION" />
2	NAME	<ExpEType type="NAME" />
2	HTML:CLASS	<ExpAName name="CLASS" ns=http://www.w3.org/TR/REC-html40 />
3	SEAT	<ExpEType type="SEAT" />

3	CLASS	<ExpAName name="CLASS" eltype="SEAT">
3	HTML:CLASS	<ExpAName name="CLASS" ns="http://www.w3.org/TR/REC-html40" />
4	HTML:A	<ExpEType type="A" ns="http://www.w3.org/TR/REC-html40" />
4	HREF	<ExpAName name="HREF" eltype="A" elns="http://www.w3.org/TR/REC-html40" />
5	DEPARTURE	<ExpEType type="DEPARTURE" />

A.4

, "5.3 ",

, , ,

- .

B. Благодарности (обсуждение стандарта)

,

XML World Wide Web, Special Interest Group W3C Metadata Activity.

(Charles Frankston) Microsoft.

C. Ссылки

RFC2141

IETF (Internet Engineering Task Force) *RFC 2141: URN Syntax*, . R. Moats., 1997.

RFC2396

IETF (Internet Engineering Task Force) *RFC 2396: Uniform Resource Identifiers (URI): Generic Syntax*, . T. Berners-Lee, R. Fielding, L. Masinter., 1998.

XML

Extensible Markup Language (XML) 1.0, . Tim Bray, Jean Paoli C. M. Sperberg-McQueen. 10 1998. http://www.w3.org/TR/REC-xml.

D. Словарь

:

conformance document - ; ,

document entity -

entity -

markup vocabulary -

namespace -

nonterminal -

production -

qualified name -

start-tag -

validating processor - (XML)