

Network Working Group
Internet-Draft
Obsoletes: [2629](#) (if approved)
Intended status: Informational
Expires: December 14, 2014

J. Reschke
greenbytes
June 12, 2014

**The 'XML2RFC' version 2 Vocabulary
draft-reschke-xml2rfc-08**

Abstract

This document defines the 'XML2RFC' version 2 vocabulary; an XML-based language used for writing RFCs and Internet-Drafts.

Editorial Note (To be removed by RFC Editor)

Discussion of this draft takes place on the XML2RFC mailing list (xml2rfc@ietf.org), which has its home page at [<https://www.ietf.org/mailman/listinfo/xml2rfc>](https://www.ietf.org/mailman/listinfo/xml2rfc).

Status of This Memo

This Internet-Draft is submitted in full conformance with the provisions of [BCP 78](#) and [BCP 79](#).

Internet-Drafts are working documents of the Internet Engineering Task Force (IETF). Note that other groups may also distribute working documents as Internet-Drafts. The list of current Internet-Drafts is at <http://datatracker.ietf.org/drafts/current/>.

Internet-Drafts are draft documents valid for a maximum of six months and may be updated, replaced, or obsoleted by other documents at any time. It is inappropriate to use Internet-Drafts as reference material or to cite them other than as "work in progress."

This Internet-Draft will expire on December 14, 2014.

Copyright Notice

Copyright (c) 2014 IETF Trust and the persons identified as the document authors. All rights reserved.

This document is subject to [BCP 78](#) and the IETF Trust's Legal Provisions Relating to IETF Documents (<http://trustee.ietf.org/license-info>) in effect on the date of publication of this document. Please review these documents carefully, as they describe your rights and restrictions with respect

to this document.

Table of Contents

1.	Introduction	4
1.1.	Syntax Notation	4
2.	Elements	4
2.1.	<abstract>	4
2.2.	<address>	4
2.3.	<annotation>	5
2.4.	<area>	6
2.5.	<artwork>	6
2.6.	<author>	8
2.7.	<back>	9
2.8.	<c>	10
2.9.	<city>	10
2.10.	<code>	10
2.11.	<country>	11
2.12.	<cref>	11
2.13.	<date>	11
2.14.	<email>	12
2.15.	<eref>	12
2.16.	<facsimile>	13
2.17.	<figure>	13
2.18.	<format>	15
2.19.	<front>	15
2.20.	<iref>	16
2.21.	<keyword>	17
2.22.	<list>	17
2.23.	<middle>	19
2.24.	<note>	19
2.25.	<organization>	20
2.26.	<phone>	20
2.27.	<postal>	20
2.28.	<postamble>	21
2.29.	<preamble>	21
2.30.	<reference>	22
2.31.	<references>	22
2.32.	<region>	23
2.33.	<rfc>	23
2.34.	<section>	27
2.35.	<seriesInfo>	28
2.36.	<spanx>	28
2.37.	<street>	29
2.38.	<t>	29
2.39.	<texttable>	30
2.40.	<title>	32
2.41.	<ttable>	32

2.42.	<uri>	33
2.43.	<vspace>	33
2.44.	<workgroup>	34
2.45.	<xref>	34
3.	Escaping for use in XML	36
4.	Special Unicode Code Points	36
5.	Including Files	37
6.	Internationalization Considerations	38
7.	Security Considerations	38
8.	IANA Considerations	38
8.1.	Internet Media Type Registration	38
9.	Acknowledgments	39
10.	References	40
10.1.	Normative References	40
10.2.	Informative References	40
Appendix A.	Front Page Generation	42
A.1.	The /rfc/@category Attribute	42
A.2.	The /rfc/@ipr Attribute	42
A.2.1.	Current Values: '*trust200902'	43
A.2.2.	Historic Values	45
Appendix B.	Changes from RFC 2629 ('v1')	45
B.1.	Removed Elements	45
B.2.	Changed Defaults	45
B.3.	Changed Elements	46
B.4.	New Elements	46
Appendix C.	Relax NG Schema	46
C.1.	Checking Validity	52
Appendix D.	Proposed Future Changes for 'v3'	52
D.1.	Contact Information	53
D.2.	Figures	53
D.3.	Linking	53
D.4.	Lists	54
D.5.	References	54
D.6.	Archival Considerations	54
D.7.	Document Metadata	54
D.8.	Including Material	55
D.9.	Misc.	55
Index		56

1. Introduction

This document describes version 2 ('v2') of the 'XML2RFC' vocabulary; an XML-based language ('Extensible Markup Language', [[XML](#)]) used for writing RFCs ([[RFCSTYLE](#)]) and Internet-Drafts ([[IDGUIDE](#)]).

It obsoletes the original version ("v1") [[RFC2629](#)], which contained the original language definition, and which was subsequently extended ("v2"). Furthermore, it discusses potential extensions in a future revision ("v3").

Note that the vocabulary contains certain constructs that might not be used when generating the final text; however, they can provide useful data for other uses (such index generation, populating a keyword database, or syntax checks).

1.1. Syntax Notation

The XML vocabulary here is defined in prose, based on the Relax NG schema ([[RNC](#)]) contained in [Appendix C](#) (specified in Relax NG Compact Notation, "RNC").

Note that the schema can be used for automated validity checks, but certain constraints are only described in prose (example: the conditionally required presence of the "abbrev" attribute).

2. Elements

The sections below describe all elements and their attributes.

Note that attributes not labeled "mandatory" are optional.

2.1. <abstract>

Contains the abstract of the document. The abstract ought to be self-contained and thus should not contain references or unexpanded abbreviations. See Section 4.3 of [[RFCSTYLE](#)] for more information.

This element appears as child element of: <front> ([Section 2.19](#)).

Content model:

One or more <t> elements ([Section 2.38](#))

2.2. <address>

Provides address information for the author.

This element appears as child element of: <author> ([Section 2.6](#)).

Content model:

In this order:

1. One optional <postal> element ([Section 2.27](#))
2. One optional <phone> element ([Section 2.26](#))
3. One optional <facsimile> element ([Section 2.16](#))
4. One optional <email> element ([Section 2.14](#))
5. One optional <uri> element ([Section 2.42](#))

[2.3](#). <annotation>

Provides additional prose augmenting a bibliographical reference.

For instance:

```
<annotation>
  Latest version available at <eref
    target='http://www.w3.org/TR/xml'/>.
</annotation>
```

...will generate the text used in the reference for [[XML](#)].

This element appears as child element of: <reference> ([Section 2.30](#)).

Content model:

In any order:

- o Text
- o <xref> elements ([Section 2.45](#))
- o <eref> elements ([Section 2.15](#))
- o <iref> elements ([Section 2.20](#))
- o <cref> elements ([Section 2.12](#))
- o <spanx> elements ([Section 2.36](#))

2.4. <area>

Provides information about the IETF area to which this document relates (currently not used when generating documents).

The value ought to be either the fullname or the abbreviation of one of the IETF areas as listed on [<http://www.ietf.org/iesg/area.html>](http://www.ietf.org/iesg/area.html). The list at the time that this document is being published is: "Applications", "app", "General", "gen", "Internet", "int", "Operations and Management", "ops", "Real-time Applications and Infrastructure", "rai", "Routing", "rtg", "Security", "sec", "Transport", "tsv".

This element appears as child element of: <front> ([Section 2.19](#)).

Content model: only text content.

2.5. <artwork>

This element allows the inclusion of "artwork" into the document.

<artwork> is the only element in the vocabulary that provides full control of horizontal whitespace and line breaks, and thus is used for a variety of things, such as:

- o diagrams ("line art"),
- o source code,
- o formal languages (such as ABNF or the RNC notation used in this document),
- o complex tables, or
- o protocol unit diagrams.

Alternatively, the "src" attribute allows referencing an external graphics file, such as a bitmap or a vector drawing, using a URI. In this case, the textual content acts as fallback for output formats that do not support graphics, and thus ought to contain either a "line art" variant of the graphics, or otherwise prose that describes the included image in sufficient detail. Note that RFCs occasionally are published with enhanced diagrams; a recent example is [\[RFC5598\]](#).

This element appears as child element of: <figure> ([Section 2.17](#)).

Content model:

Text

[2.5.1.](#) **'align' attribute**

Controls whether the artwork appears left (default), centered, or right.

Allowed values:

- o "left" (default)
- o "center"
- o "right"

[2.5.2.](#) **'alt' attribute**

Alternative text description of the artwork (not just the caption).

[2.5.3.](#) **'height' attribute**

The suggested height of the graphics included using the "src" attribute.

This attribute is format-dependent and ought to be avoided.

When generating HTML output, current implementations copy the attribute "as is". For other output formats it is usually ignored.

[2.5.4.](#) **'name' attribute**

A filename suitable for the contents (such as for extraction to a local file).

This attribute generally isn't used for document generation, but it can be helpful for other kinds of tools (such as automated syntax checkers which work by extracting the source code).

[2.5.5.](#) **'src' attribute**

The URI of a graphics file.

Note that this can be a "data" URI ([RFC2397](#)) as well, in which case the graphics file is wholly part of the XML file.

[2.5.6.](#) 'type' attribute

Specifies the type of the artwork.

The value either is a well-known keyword (such as "abnf"), or an Internet Media Type (see [[RFC2046](#)]).

How it is used depends on context and application. For instance, a formatter can attempt to syntax-highlight code in certain known languages.

[2.5.7.](#) 'width' attribute

The suggested width of the graphics included using the "src" attribute.

This attribute is format-dependent and ought to be avoided.

When generating HTML output, current implementations copy the attribute "as is". For other output formats it is usually ignored.

[2.5.8.](#) 'xml:space' attribute

Determines whitespace handling.

"preserve" is both the default value and the only meaningful setting anyway (because that's what the <artwork> element is for).

See also Section 2.10 of [[XML](#)].

Allowed values:

- o "default"
- o "preserve" (default)

[2.6.](#) <author>

Provides information about a document's author. This is used both for the document itself (at the beginning of the document) and for referenced documents (inside of <reference>).

The <author> elements contained within the document's <front> element are used to fill the boilerplate, and also to generate the "Author's Address" section (see Section 4.12 of [[RFCSTYLE](#)]).

Note that an "author" can also be just an organization (by not specifying any of the name attributes, but adding the <organization>

child element).

Furthermore, the "role" attribute can be used to mark an author as "editor". This is reflected both on the front page and in bibliographical references. Note that this specification does not define a precise meaning for the term "editor".

See Section "Authors vs. Contributors" of [[RFCPOLICY](#)] for more information.

This element appears as child element of: <front> ([Section 2.19](#)).

Content model:

In this order:

1. One optional <organization> element ([Section 2.25](#))
2. One optional <address> element ([Section 2.2](#))

[2.6.1.](#) 'fullname' attribute

The full name (used in the automatically generated "Author's Address" section).

[2.6.2.](#) 'initials' attribute

Author initials (used on the front page and in references).

Initials should be provided as a whitespace separated list of pairs of a letter and a dot.

[2.6.3.](#) 'role' attribute

Specifies the role the author had in creating the document.

Allowed values:

- o "editor"

[2.6.4.](#) 'surname' attribute

The author's surname.

[2.7.](#) <back>

Contains the "back" part of the document: the references and appendices. In <back>, <section> elements indicate appendices.

This element appears as child element of: <rfc> ([Section 2.33](#)).

Content model:

In this order:

1. Optional <references> elements ([Section 2.31](#))
2. Optional <section> elements ([Section 2.34](#))

[2.8.](#) <c>

Provides the content of a cell in a table.

This element appears as child element of: <texttable> ([Section 2.39](#)).

Content model:

In any order:

- o Text
- o <xref> elements ([Section 2.45](#))
- o <eref> elements ([Section 2.15](#))
- o <iref> elements ([Section 2.20](#))
- o <cref> elements ([Section 2.12](#))
- o <spanx> elements ([Section 2.36](#))

[2.9.](#) <city>

Gives the city name in a postal address.

This element appears as child element of: <postal> ([Section 2.27](#)).

Content model: only text content.

[2.10.](#) <code>

Gives the postal region code.

This element appears as child element of: <postal> ([Section 2.27](#)).

Content model: only text content.

[2.11.](#) **<country>**

Gives the country in a postal address.

This element appears as child element of: <postal> ([Section 2.27](#)).

Content model: only text content.

[2.12.](#) **<cref>**

Represents a comment.

Comments can be used in a document while it is work-in-progress. They usually appear either inline and visually highlighted, at the end of the document (depending on file format and settings of the formatter), or not at all (when generating an RFC).

This element appears as child element of: <annotation> ([Section 2.3](#)), <c> ([Section 2.8](#)), <postamble> ([Section 2.28](#)), <preamble> ([Section 2.29](#)), and <t> ([Section 2.38](#)).

Content model: only text content.

[2.12.1.](#) **'anchor' attribute**

Document-wide unique identifier for this comment. The processor will auto-generate an identifier when none is given.

The value needs to be a valid XML "Name" (Section 2.3 of [[XML](#)]), additionally constrained to US-ASCII characters ([[USASCII](#)]).

[2.12.2.](#) **'source' attribute**

Holds the "source" of a comment, such as the name or the initials of the person who made the comment.

[2.13.](#) **<date>**

Provides information about the publication date.

Note that this element is used both for the boilerplate of the document being produced, and also inside bibliographic references.

In the first case, it defines the publication date, which, when producing Internet-Drafts, will be used for computing the expiration date (see Section 8 of [[IDGUIDE](#)]). When "year", "month" or "day" are left out, the processor will attempt to use the current system date if the attributes that are specified do match the system date.

Note that in the first case, month names need to match the full (English) month name ("January", "February", "March", "April", "May", "June", "July", "August", "September", "October", "November", or "December") in order for expiration calculations to work (some implementations might support additional formats, though).

In the second case, the date information can have prose text for the month or year. For example, vague dates (year="ca. 2000"), date ranges (year="2012-2013") non-specific months (month="Second quarter") and so on, are allowed.

This element appears as child element of: <front> ([Section 2.19](#)).

Content model: this element does not have any contents.

[2.13.1.](#) 'day' attribute

Day of publication; this is a number.

[2.13.2.](#) 'month' attribute

Month of publication; this is the English name of the month.

[2.13.3.](#) 'year' attribute

Year of publication.

[2.14.](#) <email>

Provides an email address.

The value is expected to be the scheme-specific part of a "mailto" URI (so does not include the prefix "mailto:"). See [Section 2 of \[RFC6068\]](#) for details.

This element appears as child element of: <address> ([Section 2.2](#)).

Content model: only text content.

[2.15.](#) <eref>

Represents an "external" link (as specified in the "target" attribute).

If the element has text content, that content will be used. Otherwise, the value of the target attribute will be inserted in angle brackets ([\[RFC3986\]](#), [Appendix C](#)).

This element appears as child element of: <annotation> ([Section 2.3](#)), <c> ([Section 2.8](#)), <postamble> ([Section 2.28](#)), <preamble> ([Section 2.29](#)), and <t> ([Section 2.38](#)).

Content model: only text content.

[2.15.1.](#) 'target' attribute (mandatory)

URI of the link target (see [Section 3 of \[RFC3986\]](#)).

[2.16.](#) <facsimile>

Represents the phone number of a fax machine.

The value is expected to be the scheme-specific part of a "tel" URI (so does not include the prefix "tel:"), using the "global numbers" syntax. See [Section 3 of \[RFC3966\]](#) for details.

This element appears as child element of: <address> ([Section 2.2](#)).

Content model: only text content.

[2.17.](#) <figure>

This element is used to represent a figure, consisting of an optional preamble, the actual figure, an optional postamble, and an optional title.

This element appears as child element of: <section> ([Section 2.34](#)), and <t> ([Section 2.38](#)).

Content model:

In this order:

1. Optional <iref> elements ([Section 2.20](#))
2. One optional <preamble> element ([Section 2.29](#))
3. One <artwork> element ([Section 2.5](#))
4. One optional <postamble> element ([Section 2.28](#))

[2.17.1.](#) 'align' attribute

Used to change the alignment of <preamble> and <postamble>.

Note: does not affect title or <artwork> alignment.

Allowed values:

- o "left" (default)
- o "center"
- o "right"

2.17.2. 'alt' attribute

Duplicates functionality available on <artwork>; avoid it.

2.17.3. 'anchor' attribute

Document-wide unique identifier for this figure.

Furthermore, the presence of this attribute causes the figure to be numbered.

The value needs to be a valid XML "Name" (Section 2.3 of [[XML](#)]).

2.17.4. 'height' attribute

Duplicates functionality available on <artwork>; avoid it.

2.17.5. 'src' attribute

Duplicates functionality available on <artwork>; avoid it.

2.17.6. 'suppress-title' attribute

Figures that have an "anchor" attribute will automatically get an autogenerated title (such as "Figure 1"), even if the "title" attribute is absent. Setting this attribute to "true" will prevent this.

Allowed values:

- o "true"
- o "false" (default)

2.17.7. 'title' attribute

The title for the figure; this usually appears on a line after the figure.

[2.17.8.](#) **'width' attribute**

Duplicates functionality available on <artwork>; avoid it.

[2.18.](#) **<format>**

Provides a link to an additional format variant for a reference.

Note that these additional links are neither used in published RFCs, nor supported by all tools. If the goal is to provide a single URI for a reference, the "target" attribute on <reference> can be used instead.

This element appears as child element of: <reference> ([Section 2.30](#)).

Content model: this element does not have any contents.

[2.18.1.](#) **'octets' attribute**

Octet length of linked-to document.

[2.18.2.](#) **'target' attribute**

URI of document.

[2.18.3.](#) **'type' attribute (mandatory)**

The type of the linked-to document, such as "TXT", "HTML", or "PDF".

[2.19.](#) **<front>**

Represent the "front matter": metadata (such as author information), abstract, and additional notes.

This element appears as child element of: <reference> ([Section 2.30](#)), and <rfc> ([Section 2.33](#)).

Content model:

In this order:

1. One <title> element ([Section 2.40](#))
2. One or more <author> elements ([Section 2.6](#))
3. One <date> element ([Section 2.13](#))

4. Optional <area> elements ([Section 2.4](#))
5. Optional <workgroup> elements ([Section 2.44](#))
6. Optional <keyword> elements ([Section 2.21](#))
7. One optional <abstract> element ([Section 2.1](#))
8. Optional <note> elements ([Section 2.24](#))

[2.20.](#) <iref>

Provides terms for the document's index.

Index entries can be either single items (when just the "item" attribute is given) or nested items (by specifying "subitem" as well).

For instance:

```
<iref item="Grammar" subitem="item"/>
```

will produce an index entry for "Grammar, item".

This element appears as child element of: <annotation> ([Section 2.3](#)), <c> ([Section 2.8](#)), <figure> ([Section 2.17](#)), <postamble> ([Section 2.28](#)), <preamble> ([Section 2.29](#)), <section> ([Section 2.34](#)), and <t> ([Section 2.38](#)).

Content model: this element does not have any contents.

[2.20.1.](#) 'item' attribute (mandatory)

The item to include.

[2.20.2.](#) 'primary' attribute

Setting this to "true" declares the occurrence as "primary", which might cause it to be highlighted in the index.

Allowed values:

- o "true"
- o "false" (default)

[2.20.3.](#) 'subitem' attribute

The subitem to include.

[2.21.](#) <keyword>

Specifies a keyword applicable to the document.

Note that each element should only contain a single keyword; for multiple keywords, the element can simply be repeated.

Keywords are used both in the RFC Index and in the metadata of generated document formats.

This element appears as child element of: <front> ([Section 2.19](#)).

Content model: only text content.

[2.22.](#) <list>

Delineates a text list.

Each list item is represented by a <t> element. The vocabulary currently does not directly support list items consisting of multiple paragraphs; if this is needed, <vspace> ([Section 2.43](#)) can be used as workaround.

This element appears as child element of: <t> ([Section 2.38](#)).

Content model:

One or more <t> elements ([Section 2.38](#))

[2.22.1.](#) 'counter' attribute

This attribute holds a token that serves as an identifier for a counter. The intended use is continuation of lists.

Note that this attribute functions only when the style attribute is using the "format..." syntax ([Section 2.22.3](#)); otherwise, it is ignored.

[2.22.2.](#) 'hangIndent' attribute

For list styles with potentially wide labels, this attribute can override the default indentation level, measured in characters.

Note that it only affects style with variable-width labels

("format..." and "hanging", see below), and it may not affect formats in which the list item text appears below the label.

2.22.3. 'style' attribute

This attribute is used to control the display of a list.

The value of this attribute is inherited by any nested lists that do not have this attribute set. It may be set to:

"empty" (or not set)

For unlabeled list items; it can also be used for indentation purposes (this is the default value).

"hanging"

For lists where the items are labeled with a piece of text.

The label text is specified in the 'hangText' attribute of the <t> element ([Section 2.38.2](#)).

"letters"

For ordered lists using letters as labels (lowercase letters followed by a period; after "z", it rolls over to a two-letter format). For nested lists, processors usually flip between uppercase and lowercase.

"numbers"

For ordered lists using numbers as labels.

"symbols"

For unordered (bulleted) lists.

The style of the bullets is chosen automatically by the processor (some implementations allow overriding the default using a processing instruction).

And, finally:

"format ..."

For lists with customized labels, consisting of fixed text and an item counter in various formats.

The value is a free-form text that allows counter values to be inserted using a "percent-letter" format. For instance, "[REQ%d]" generates labels of the form "[REQ1]", where "%d" inserts the item number as decimal number.

The following formats are supported:

%c lowercase letters (a, b, c, etc.)

%C uppercase letters (A, B, C, etc.)

%d decimal numbers (1, 2, 3, etc.)

%i lowercase Roman numerals (i, ii, iii, etc.)

%I uppercase Roman numerals (I, II, III, etc.)

%% represents a percent sign

Other formats are reserved for future use.

[2.23.](#) <middle>

Represents the main content of the document.

This element appears as child element of: <rfc> ([Section 2.33](#)).

Content model:

One or more <section> elements ([Section 2.34](#))

[2.24.](#) <note>

Creates an unnumbered section that appears after the abstract.

It is usually used for additional information to reviewers (working group information, mailing list, ...), or for additional publication information such as "IESG Notes".

This element appears as child element of: <front> ([Section 2.19](#)).

Content model:

One or more <t> elements ([Section 2.38](#))

[2.24.1.](#) 'title' attribute (mandatory)

The title of the note.

[2.25.](#) <organization>

Specifies the affiliation of an author.

This information appears in both the "Author's Address" section and on the front page (see [\[RFCSTYLE\]](#), Section 4.1.1 for more information). If the value is long, an abbreviated variant can be specified in the "abbrev" attribute.

This element appears as child element of: <author> ([Section 2.6](#)).

Content model: only text content.

[2.25.1.](#) 'abbrev' attribute

Abbreviated variant.

[2.26.](#) <phone>

Represents a phone number.

The value is expected to be the scheme-specific part of a "tel" URI (so does not include the prefix "tel:"), using the "global numbers" syntax. See [Section 3 of \[RFC3966\]](#) for details.

This element appears as child element of: <address> ([Section 2.2](#)).

Content model: only text content.

[2.27.](#) <postal>

Contains child elements providing postal information.

This element appears as child element of: <address> ([Section 2.2](#)).

Content model:

In this order:

1. One or more <street> elements ([Section 2.37](#))
2. In any order:

- * <city> elements ([Section 2.9](#))
- * <region> elements ([Section 2.32](#))
- * <code> elements ([Section 2.10](#))
- * <country> elements ([Section 2.11](#))

[2.28.](#) <postamble>

Gives text that appears at the bottom of a figure or table.

This element appears as child element of: <figure> ([Section 2.17](#)), and <texttable> ([Section 2.39](#)).

Content model:

In any order:

- o Text
- o <xref> elements ([Section 2.45](#))
- o <eref> elements ([Section 2.15](#))
- o <iref> elements ([Section 2.20](#))
- o <cref> elements ([Section 2.12](#))
- o <spanx> elements ([Section 2.36](#))

[2.29.](#) <preamble>

Gives text that appears at the top of a figure or table.

This element appears as child element of: <figure> ([Section 2.17](#)), and <texttable> ([Section 2.39](#)).

Content model:

In any order:

- o Text
- o <xref> elements ([Section 2.45](#))
- o <eref> elements ([Section 2.15](#))

- o `<iref>` elements ([Section 2.20](#))
- o `<cref>` elements ([Section 2.12](#))
- o `<spanx>` elements ([Section 2.36](#))

[2.30.](#) `<reference>`

Represents a bibliographical reference.

This element appears as child element of: `<references>` ([Section 2.31](#)).

Content model:

In this order:

1. One `<front>` element ([Section 2.19](#))
2. Optional `<seriesInfo>` elements ([Section 2.35](#))
3. Optional `<format>` elements ([Section 2.18](#))
4. Optional `<annotation>` elements ([Section 2.3](#))

[2.30.1.](#) 'anchor' attribute (mandatory)

Document-wide unique identifier for this reference. Usually, this will be used both to "label" the reference in the references section, and as an identifier in links to this reference entry.

The value needs to be a valid XML "Name" (Section 2.3 of [[XML](#)]), additionally constrained to US-ASCII characters ([[USASCII](#)]).

[2.30.2.](#) 'target' attribute

Holds the URI for the reference.

Note that depending on the `<seriesInfo>` element, a URI might not be needed, nor desirable, as it can be automatically generated (for instance, for RFCs).

[2.31.](#) `<references>`

Contains a set of bibliographical references.

In the early days of the RFC series, there was only one "References" section per RFC. This convention was later changed to group

references into two sets, "Normative" and "Informative" as described in Section 4.8.6 of [[RFCSTYLE](#)]). This vocabulary supports the split with the "title" attribute.

This element appears as child element of: <back> ([Section 2.7](#)).

Content model:

One or more <reference> elements ([Section 2.30](#))

[2.31.1](#). 'title' attribute

Provides the title for the References section (defaulting to "References").

In general, the title should be either "Normative References" or "Informative References".

[2.32](#). <region>

Provides the region name in a postal address.

This element appears as child element of: <postal> ([Section 2.27](#)).

Content model: only text content.

[2.33](#). <rfc>

This is the root element of the xml2rfc vocabulary.

Processors distinguish between RFC mode ("number" attribute being present) and Internet-Draft mode ("docName" attribute being present): it is invalid to specify both. Setting neither "number" nor "docName" can be useful for producing other types of document but is out-of-scope for this specification.

Content model:

In this order:

1. One <front> element ([Section 2.19](#))
2. One <middle> element ([Section 2.23](#))
3. One optional <back> element ([Section 2.7](#))

2.33.1. 'category' attribute

Document category (see [Appendix A.1](#)).

Allowed values:

- o "std"
- o "bcp"
- o "info"
- o "exp"
- o "historic"

2.33.2. 'consensus' attribute

Affects the generated boilerplate.

See [[RFC5741](#)] for more information.

Allowed values:

- o "no"
- o "yes"

2.33.3. 'docName' attribute

For Internet-Drafts, this specifies the draft name (which appears below the title).

A processor should give an error if both the "docName" and "number" attributes are given in the <rfc> element.

Note that the file extension is not part of the draft, so in general it should end with the current draft number ("- ", plus two digits).

Furthermore, it is good practice to disambiguate current editor copies from submitted drafts (for instance, by replacing the draft number with the string "latest").

See Section 7 of [[IDGUIDE](#)] for further information.

2.33.4. 'ipr' attribute

Represents the Intellectual Property status of the document. See [Appendix A.2](#) for details.

Allowed values:

- o "full2026"
- o "noDerivativeWorks2026"
- o "none"
- o "full3667"
- o "noModification3667"
- o "noDerivatives3667"
- o "full3978"
- o "noModification3978"
- o "noDerivatives3978"
- o "trust200811"
- o "noModificationTrust200811"
- o "noDerivativesTrust200811"
- o "trust200902"
- o "noModificationTrust200902"
- o "noDerivativesTrust200902"
- o "pre5378Trust200902"

2.33.5. 'iprExtract' attribute

Identifies a single section within the document (by its 'anchor' attribute) for which extraction "as-is" is explicitly allowed (this is only relevant for historic values of the "ipr" attribute).

2.33.6. 'number' attribute

The number of the RFC to be produced.

A processor should give an error if both the "docName" and "number" attributes are given in the <rfc> element.

2.33.7. 'obsoletes' attribute

A comma-separated list of RFC `_numbers_` or Internet-Draft names.

Processors ought to parse the attribute value, so that incorrect references can be detected and, depending on output format, hyperlinks can be generated. Also, the value ought to be reformatted to insert whitespace after each comma if not already present.

2.33.8. 'seriesNo' attribute

When producing a document within document series (such as "STD"): the number within that series.

2.33.9. 'submissionType' attribute

The document stream.

See [Section 2 of \[RFC5741\]](#) for details.

Allowed values:

- o "IETF" (default)
- o "IAB"
- o "IRTF"
- o "independent"

2.33.10. 'updates' attribute

A comma-separated list of RFC `_numbers_` or Internet-Draft names.

Processors ought to parse the attribute value, so that incorrect references can be detected and, depending on output format, hyperlinks can be generated. Also, the value ought to be reformatted to insert whitespace after each comma if not already present.

[2.33.11.](#) 'xml:lang' attribute

The natural language used in the document (defaults to "en").

See Section 2.12 of [[XML](#)] for more information.

[2.34.](#) <section>

Represents a section (when inside a <middle> element) or an appendix (when inside a <back> element).

Sub-sections are created by nesting <section> elements inside <section> elements.

This element appears as child element of: <back> ([Section 2.7](#)), <middle> ([Section 2.23](#)), and <section> ([Section 2.34](#)).

Content model:

In this order:

1. In any order:
 - * <t> elements ([Section 2.38](#))
 - * <figure> elements ([Section 2.17](#))
 - * <texttable> elements ([Section 2.39](#))
 - * <iref> elements ([Section 2.20](#))
2. Optional <section> elements ([Section 2.34](#))

[2.34.1.](#) 'anchor' attribute

Document-wide unique identifier for this section.

The value needs to be a valid XML "Name" (Section 2.3 of [[XML](#)]).

[2.34.2.](#) 'title' attribute (mandatory)

The title of the section.

[2.34.3.](#) 'toc' attribute

Determines whether the section is included in the Table Of Contents.

The processor usually has defaults for whether a Table Of Contents

will be produced at all, and sections of which maximal depth will be included (frequently: 3). "include" and "exclude" allow overriding the processor's default behavior for the element they are specified on (they do not affect nested elements).

Allowed values:

- o "include"
- o "exclude"
- o "default" (default)

[2.35.](#) **<seriesInfo>**

Specifies the document series in which this document appears, and also specifies an identifier within that series.

This element appears as child element of: <reference> ([Section 2.30](#)).

Content model: this element does not have any contents.

[2.35.1.](#) **'name' attribute (mandatory)**

The name of the series.

The following names trigger specific processing (such as for auto-generating links, and adding descriptions such as "work in progress"): "BCP", "FYI", "Internet-Draft", "RFC", and "STD".

[2.35.2.](#) **'value' attribute (mandatory)**

The identifier within the series specified by the "name" attribute.

For BCPs, FYIs, RFCs, and STDs this is the number within the series. For Internet-Drafts, it is the full draft name (ending with the two-digit version number).

[2.36.](#) **<spanx>**

Wraps a piece of text, indicating special formatting styles.

When generating plain text, processors usually emulate font changes using characters such as "*" and "_".

The following styles are defined:

emph Simple emphasis (this is the default).

strong Strong emphasis.

verb "Verbatim" text (usually displayed using a monospaced font face).

This element appears as child element of: <annotation> ([Section 2.3](#)), <c> ([Section 2.8](#)), <postamble> ([Section 2.28](#)), <preamble> ([Section 2.29](#)), and <t> ([Section 2.38](#)).

Content model: only text content.

[2.36.1](#). 'style' attribute

The style to be used (defaults to "emph").

[2.36.2](#). 'xml:space' attribute

Determines whitespace handling.

According to the DTD, the default value is "preserve". Tests however show that it doesn't have any effect on processing; thus this attribute will be removed in future versions of the vocabulary.

See also Section 2.10 of [[XML](#)].

Allowed values:

- o "default"
- o "preserve" (default)

[2.37](#). <street>

Provides a street address.

This element appears as child element of: <postal> ([Section 2.27](#)).

Content model: only text content.

[2.38](#). <t>

Contains a paragraph of text.

This element appears as child element of: <abstract> ([Section 2.1](#)), <list> ([Section 2.22](#)), <note> ([Section 2.24](#)), and <section> ([Section 2.34](#)).

Content model:

In any order:

- o Text
- o <list> elements ([Section 2.22](#))
- o <figure> elements ([Section 2.17](#))
- o <xref> elements ([Section 2.45](#))
- o <eref> elements ([Section 2.15](#))
- o <iref> elements ([Section 2.20](#))
- o <cref> elements ([Section 2.12](#))
- o <spanx> elements ([Section 2.36](#))
- o <vspace> elements ([Section 2.43](#))

[2.38.1.](#) 'anchor' attribute

Document-wide unique identifier for this paragraph.

The value needs to be a valid XML "Name" (Section 2.3 of [[XML](#)]).

[2.38.2.](#) 'hangText' attribute

Holds the label ("hanging text") for items in lists using the "hanging" style (see [Section 2.22.3](#)).

[2.39.](#) <texttable>

Contains a table, consisting of an optional preamble, a header line, rows, an optional postamble, and an optional title.

The number of columns in the table is determined by the number of <ttcol> elements. The number of rows in the table is determined by the number of <c> elements divided by the number of columns. There is no requirement that the number of <c> elements be evenly divisible by the number of columns.

This element appears as child element of: <section> ([Section 2.34](#)).

Content model:

In this order:

1. One optional <preamble> element ([Section 2.29](#))
2. One or more <ttcol> elements ([Section 2.41](#))
3. Optional <c> elements ([Section 2.8](#))
4. One optional <postamble> element ([Section 2.28](#))

[2.39.1.](#) **'align' attribute**

Determines the horizontal alignment of the table.

Allowed values:

- o "left"
- o "center" (default)
- o "right"

[2.39.2.](#) **'anchor' attribute**

Document-wide unique identifier for this table.

Furthermore, the presence of this attribute causes the table to be numbered.

The value needs to be a valid XML "Name" (Section 2.3 of [[XML](#)]).

[2.39.3.](#) **'style' attribute**

Selects which borders should be drawn, where

- o "all" means borders around all table cells,
- o "full" is like "all" except no horizontal lines between table rows (except below the column titles),
- o "headers" adds just a separator between column titles and rows, and
- o "none" means no borders at all.

Allowed values:

- o "all"
- o "none"
- o "headers"
- o "full" (default)

[2.39.4.](#) **'suppress-title' attribute**

Tables that have an "anchor" attribute will automatically get an autogenerated title (such as "Table 1"), even if the "title" attribute is absent. Setting this attribute to "true" will prevent this.

Allowed values:

- o "true"
- o "false" (default)

[2.39.5.](#) **'title' attribute**

The title for the table; this usually appears on a line below the table body.

[2.40.](#) **<title>**

Represents the document title.

When this element appears in the <front> element of the current document, the title might also appear in page headers or footers. If it's long (~40 characters), the "abbrev" attribute is used to specify an abbreviated variant.

This element appears as child element of: <front> ([Section 2.19](#)).

Content model: only text content.

[2.40.1.](#) **'abbrev' attribute**

Specifies an abbreviated variant of the document title.

[2.41.](#) **<ttcol>**

Contains a column heading in a table.

This element appears as child element of: <texttable> ([Section 2.39](#)).

Content model: only text content.

[2.41.1.](#) **'align' attribute**

Determines the horizontal alignment within the table column.

Allowed values:

- o "left" (default)
- o "center"
- o "right"

[2.41.2.](#) **'width' attribute**

The desired column width (as integer 0..100 followed by "%").

[2.42.](#) **<uri>**

Contains a web address associated with the author.

The contents should be a valid URI (see [Section 3 of \[RFC3986\]](#)).

This element appears as child element of: <address> ([Section 2.2](#)).

Content model: only text content.

[2.43.](#) **<vspace>**

This element can be used to force the inclusion of a single line break or multiple blank lines.

Note that this is a purely presentational element and thus its use ought to be avoided.

This element appears as child element of: <t> ([Section 2.38](#)).

Content model: this element does not have any contents.

[2.43.1.](#) **'blankLines' attribute**

Number of blank lines to be inserted, where "0" indicates a single line break (defaults to "0").

For paged output formats, no additional blank lines should be generated after a page break.

[2.44.](#) `<workgroup>`

This element is used to specify the Working Group (IETF) or Research Group (IRTF) from which the document originates, if any. The recommended format is the official name of the Working Group (with some capitalization).

In Internet-Drafts, this is used in the upper left corner of the boilerplate, replacing the "Network Working Group" string. Formatting software can append the words "Working Group" or "Research Group", depending on the "submissionType" property on the `<rfc>` element ([Section 2.33.9](#)).

This element appears as child element of: `<front>` ([Section 2.19](#)).

Content model: only text content.

[2.45.](#) `<xref>`

Inserts a reference to a different part of a document.

The generated text depends on whether the `<xref>` is empty (in which case the processor will try to generate a meaningful text fragment), and the nature of the referenced document part.

Any element that allows the "anchor" attribute can be referenced, however there are restrictions with respect to the text content being generated. For instance, a `<t>` can be a reference target, however, because paragraphs are not (visibly) numbered, the author will have to make sure that the prose is sufficient for a reader to understand what is being referred to.

[[anchor2: This needs to be expanded with examples and with a discussion how the autogenerated text differs when `<xref>` is not empty]]

This element appears as child element of: `<annotation>` ([Section 2.3](#)), `<c>` ([Section 2.8](#)), `<postamble>` ([Section 2.28](#)), `<preamble>` ([Section 2.29](#)), and `<t>` ([Section 2.38](#)).

Content model: only text content.

[2.45.1.](#) 'format' attribute

This attribute is used to control the format of the generated reference text.

"counter"

Inserts a counter, such as the number of a section, figure, or table.

"default"

Inserts a text fragment that describes the referenced part completely, such as "[Section 2](#)", "Table 4", or "[[XML](#)]".

"none"

There will be no auto-generated text.

"title"

Inserts a title for the referenced element (usually obtained from the referenced element's "title" attribute; some processors also use the <title> child element or a <reference> target).

Allowed values:

- o "counter"
- o "title"
- o "none"
- o "default" (default)

[2.45.2.](#) 'pageno' attribute

Unused.

It's unclear what the purpose of this attribute is; processors seem to ignore it and it never was documented.

Allowed values:

- o "true"
- o "false" (default)

[2.45.3.](#) 'target' attribute (mandatory)

Identifies the document component being referenced.

The value needs to match the value of the "anchor" attribute of another element in the document.

3. Escaping for use in XML

Text in XML can not use the literal characters "<" and "&", as they have special meaning to the XML processor (starting entities, elements, etc.). Usually, these characters will need to be substituted by "<" and "&" (see Section 4.6 of [\[XML\]](#)).

">" does not require escaping, unless it appears in the sequence "]]>" (which indicates the end of a CDATA section, see below).

Escaping the individual characters can be a lot of work (when done manually), and also messes up alignment in artwork. Another approach to escaping is to use CDATA sections ([\[XML\]](#), Section 2.7). Within these, no further escaping is needed, except when the "end-of-CDATA" marker needs to be used (in that case, the CDATA section needs to be closed, and a new one needs to be started).

4. Special Unicode Code Points

Although the current RFC format does not allow non-ASCII Unicode characters ([\[UNICODE\]](#)), some of them can be used to enforce certain behaviors of formatters.

For instance:

non-breaking space (U+00A0)

Represents a space character where no line break should happen. This is frequently used in titles (by excluding certain space characters from the line breaking algorithm, the processor will use the remaining whitespace occurrences for line breaks).

non-breaking hyphen (U+2011)

Similarly, this represents a hyphen character where nevertheless no line breaking ought to occur.

word joiner (U+2060)

Also called "zero width non-breaking space" -- can be used to disallow line breaking between two non-whitespace characters.

Note that in order to use these characters by name, they need to be declared either in the Document Type Definition (DTD, [\[XML\]](#), [Section 2.9](#)), or in the "internal subset" ([\[XML\]](#), Section 2.8), like that:


```
<?xml version="1.0"?>

<!DOCTYPE rfc [

    <!-- declare nbsp and friends -->
    <!ENTITY nbsp      "&#xa0;">
    <!ENTITY nbhy      "&#x2011;">
    <!ENTITY wj        "&#x2060;">
]>
```

5. Including Files

This version of the vocabulary does not support an inclusion mechanism on it's own -- thus, a document always needs to be self-contained.

That being said, some processors do support file inclusion using processing instructions (Section 2.6 of [[XML](#)]).

Furthermore, XML itself allows inclusion of external content using the "internal subset" (Section 2.8 of [[XML](#)]). Unfortunately, this requires declaring the external data in the DTD upfront.

For instance:

```
<?xml version="1.0"?>

<!DOCTYPE rfc [

    <!-- allow later RFC2616 reference using "&rfc2616;" -->
    <!-- the data will be fetched from xml.resource.org -->
    <!ENTITY rfc2616 PUBLIC
        "http://xml.resource.org/public/rfc/bibxml/reference.RFC.2616.xml">
]>
```

...declares the entity "[rfc2616](#)", which then can be used in the "references" section:

```
<references>
    &rfc2616;
</references>
```

Note that this mechanism only works for well-formed XML fragments; thus any plain text that would need to be escaped in XML can't be included as-is.

6. Internationalization Considerations

This format is based on [XML], thus does not have any issues representing arbitrary Unicode [UNICODE] characters in text content.

However, the current canonical RFC format is restricted to US-ASCII [USASCII] characters ([RFC2223], Section 3). Future versions are likely to relax this role, and it is expected that the vocabulary will be extended so that US-ASCII alternatives can be provided when that makes sense (for instance, in contact information).

7. Security Considerations

The "name" attribute on the <artwork> element (Section 2.5.4) can be used to derive a filename for saving to a local file system. Trusting this kind of information without pre-processing is a known security risk; see Section 4.3 of [RFC6266] for more information.

Furthermore, the nature of XML, plus vocabulary features such as typed artwork, make it attractive to extract content from documents for further processing, such for the purpose of checking syntax, or computing/verifying examples. In the latter case, care needs to be taken that only trusted content is processed.

Furthermore, all security considerations related to XML processing are relevant as well (see Section 7 of [RFC3470]).

8. IANA Considerations

8.1. Internet Media Type Registration

IANA maintains the registry of Internet media types [BCP13] at <<http://www.iana.org/assignments/media-types>>.

This document serves as the specification for the Internet media type "application/rfc+xml". The following is to be registered with IANA.

Type name: application

Subtype name: rfc+xml

Required parameters: There are no required parameters.

Optional parameters: "charset": This parameter has identical semantics as the charset parameter of the "application/xml" media type specified in [RFC3023].

Encoding considerations: Identical to those of "application/xml" as described in [Section 3.2 of \[RFC3023\]](#).

Security considerations: As defined in [Section 7](#). In addition, as this media type uses the "+xml" convention, it inherits the security considerations described in [Section 10 of \[RFC3023\]](#).

Interoperability considerations: N/A

Published specification: This specification.

Applications that use this media type: Applications that either transform xml2rfc to output formats such as plain text or HTML, plus additional analysis tools.

Fragment identifier considerations: The "anchor" attribute is used for assigning document-wide unique identifiers that can be used as shorthand pointers, as described in Section 2.8 of [\[XPOINTER\]](#).

Additional information:

Deprecated alias names for this type: None.

Magic number(s): As specified for "application/xml" in [Section 3.2 of \[RFC3023\]](#).

File extension(s): .xml or .rfcxml when disambiguation from other XML files is needed

Macintosh file type code(s): TEXT

Person & email address to contact for further information: See Authors Section.

Intended usage: COMMON

Restrictions on usage: N/A

Author: See Authors Section.

Change controller: RFC Series Editor (rse@rfc-editor.org)

[9. Acknowledgments](#)

Thanks to everybody who reviewed this document and provided feedback and/or specification text, in particular Brian Carpenter, Tony Hansen, Paul Hoffman, Henrik Levkowetz, Alice Russo, Tom Taylor, Jim Schaad, and Nico Williams.

We also thank Marshall T. Rose for both the original design and the reference implementation of the "xml2rfc" formatter.

10. References

10.1. Normative References

- [XML] Maler, E., Yergeau, F., Paoli, J., Sperberg-McQueen, M., and T. Bray, "Extensible Markup Language (XML) 1.0 (Fifth Edition)", W3C Recommendation REC-xml-20081126, November 2008, <<http://www.w3.org/TR/2008/REC-xml-20081126/>>.
- Latest version available at <<http://www.w3.org/TR/xml>>.

10.2. Informative References

- [BCP13] Freed, N., Klensin, J., and T. Hansen, "Media Type Specifications and Registration Procedures", [BCP 13](#), [RFC 6838](#), January 2013.
- [IDGUIDE] Housley, R., "Guidelines to Authors of Internet-Drafts", December 2010, <<http://www.ietf.org/id-info/guidelines.html>>.
- [JING] Thai Open Source Software Center Ltd, "Jing - A RELAX NG validator in Java", W3C Recommendation REC-xptr-framework-20030325, 2008, <<http://www.thaiopensource.com/relaxng/jing.html>>.
- Downloads:
<<https://code.google.com/p/jing-trang/downloads/list>>.
- [RFC2026] Bradner, S., "The Internet Standards Process -- Revision 3", [BCP 9](#), [RFC 2026](#), October 1996.
- [RFC2046] Freed, N. and N. Borenstein, "Multipurpose Internet Mail Extensions (MIME) Part Two: Media Types", [RFC 2046](#), November 1996.
- [RFC2223] Postel, J. and J. Reynolds, "Instructions to RFC Authors", [RFC 2223](#), October 1997.
- [RFC2397] Masinter, L., "The "data" URL scheme", [RFC 2397](#), August 1998.
- [RFC2629] Rose, M., "Writing I-Ds and RFCs using XML", [RFC 2629](#), June 1999.

- [RFC3023] Murata, M., St. Laurent, S., and D. Kohn, "XML Media Types", [RFC 3023](#), January 2001.
- [RFC3470] Hollenbeck, S., Rose, M., and L. Masinter, "Guidelines for the Use of Extensible Markup Language (XML) within IETF Protocols", [BCP 70](#), [RFC 3470](#), January 2003.
- [RFC3966] Schulzrinne, H., "The tel URI for Telephone Numbers", [RFC 3966](#), December 2004.
- [RFC3986] Berners-Lee, T., Fielding, R., and L. Masinter, "Uniform Resource Identifier (URI): Generic Syntax", STD 66, [RFC 3986](#), January 2005.
- [RFC5598] Crocker, D., "Internet Mail Architecture", [RFC 5598](#), July 2009.
- PDF version: <<http://www.rfc-editor.org/rfc/rfc5598.pdf>>
- [RFC5741] Daigle, L. and O. Kolkman, "RFC Streams, Headers, and Boilerplates", [RFC 5741](#), December 2009.
- [RFC6068] Duerst, M., Masinter, L., and J. Zawinski, "The 'mailto' URI Scheme", [RFC 6068](#), October 2010.
- [RFC6266] Reschke, J., "Use of the Content-Disposition Header Field in the Hypertext Transfer Protocol (HTTP)", [RFC 6266](#), June 2011.
- [RFCPOLICY] RFC Editor, "RFC Editorial Guidelines and Procedures", February 2012, <<http://www.rfc-editor.org/policy.html>>.
- [RFCSTYLE] Heather, H. and S. Ginoza, "RFC Style Guide", [draft-iab-styleguide-02](#) (work in progress), April 2014.
- [RNC] Clark, J., "RELAX NG Compact Syntax", OASIS , November 2002, <<http://www.oasis-open.org/committees/relax-ng/compact-20021121.html>>.
- [TLP2.0] IETF Trust, "Legal Provisions Relating to IETF Documents", February 2009, <<http://trustee.ietf.org/license-info/IETF-TLP-2.htm>>.
- [TLP3.0] IETF Trust, "Legal Provisions Relating to IETF Documents", September 2009, <<http://trustee.ietf.org/license-info/IETF-TLP-3.htm>>.
- [TLP4.0] IETF Trust, "Legal Provisions Relating to IETF

Documents", December 2009,
<<http://trustee.ietf.org/license-info/IETF-TLP-4.htm>>.

[UNICODE] The Unicode Consortium, "The Unicode Standard, Version 6.3.0", September 2013,
<<http://www.unicode.org/versions/Unicode6.3.0/>>.

[USASCII] American National Standards Institute, "Coded Character Set -- 7-bit American Standard Code for Information Interchange", ANSI X3.4, 1986.

[XINCLUDE] Marsh, J., Orchard, D., and D. Veillard, "XML Inclusions (XInclude) Version 1.0 (Second Edition)", W3C Recommendation REC-xinclude-20061115, November 2006,
<<http://www.w3.org/TR/2006/REC-xinclude-20061115/>>.

Latest version available at
<<http://www.w3.org/TR/xinclude/>>.

[XPOINTER] Grosso, P., Maler, E., Marsh, J., and N. Walsh, "XPointer Framework", W3C Recommendation REC-xptr-framework-20030325, March 2003,
<<http://www.w3.org/TR/2003/REC-xptr-framework-20030325/>>.

Latest version available at
<<http://www.w3.org/TR/xptr-framework/>>.

Appendix A. Front Page Generation

A.1. The /rfc/@category Attribute

For RFCs, the "category" determines the "maturity level" (see [Section 4 of \[RFC2026\]](#)). The allowed values are "std" for "Standards Track", "bcp" for "BCP", "info" for "Informational", "exp" for "Experimental", and "historic" for "Historic".

For Internet-Drafts, the category attribute is not needed, but will appear on the front page as "Intended Status". Supplying this information can be useful to reviewers.

A.2. The /rfc/@ipr Attribute

This attribute value can take a long list of values, each of which describes an IPR policy for the document. This attribute's values are not the result of a grand plan, but remain simply for historic reasons. Of these values, only a few are currently in use; all others are supported by the various tools for backwards compatibility

with old source files.

Note: some variations of the boilerplate are selected based on the document's date; therefore it is important to specify the "year", "month" and "day" attributes of the "<date>" element when archiving the XML source of an Internet-Draft on the day of submission.

Disclaimer: THIS ONLY PROVIDES IMPLEMENTATION INFORMATION. IF YOU NEED LEGAL ADVICE, PLEASE CONTACT A LAWYER. For further information, refer to <<http://trustee.ietf.org/docs/IETF-Copyright-FAQ.pdf>>.

For the current "Status Of This Memo" text, the "submissionType" attribute determines whether a statement about "Code Components" is inserted (which is the case for the value "IETF", which is the default). Other values, such as "independent", suppress this part of the text.

A.2.1. Current Values: '*trust200902'

The name for these values refers to the "IETF TRUST Legal Provisions Relating to IETF Documents", sometimes simply called the "TLP, that went into effect on February 15, 2009 ([[TLP2.0](#)]). Updates to this document were published on September 12, 2009 ([[TLP3.0](#)]) and on December 28, 2009 ([[TLP4.0](#)]), modifying the license for code components (see <<http://trustee.ietf.org/license-info/>> for further information). The actual text is located in [Section 6](#) ("Text To Be Included in IETF Documents") of these documents.

The tools will automatically produce the "correct" text depending on the document's date information (see above):

```
+-----+-----+
| TLP      | starting with publication date |
+-----+-----+
| [TLP3.0] | 2009-11-01                       |
| [TLP4.0] | 2010-04-01                       |
+-----+-----+
```

A.2.1.1. trust200902

This should be the default, unless one of the more specific '*trust200902' values is a better fit. It produces the text in Sections [6.a](#) and [6.b](#) of the TLP.

A.2.1.2. noModificationTrust200902

This produces additional text from [Section 6.c.i](#) of the TLP:

This document may not be modified, and derivative works of it may not be created, except to format it for publication as an RFC or to translate it into languages other than English.

Note: this clause is incompatible with RFCs that are published on the Standards Track.

A.2.1.3. noDerivativesTrust200902

This produces the additional text from [Section 6.c.ii](#) of the TLP:

This document may not be modified, and derivative works of it may not be created, and it may not be published except as an Internet-Draft.

Note: this clause is incompatible with RFCs.

A.2.1.4. pre5378Trust200902

This produces the additional text from [Section 6.c.iii](#) of the TLP, frequently called the "pre-5378 escape clause":

This document may contain material from IETF Documents or IETF Contributions published or made publicly available before November 10, 2008. The person(s) controlling the copyright in some of this material may not have granted the IETF Trust the right to allow modifications of such material outside the IETF Standards Process. Without obtaining an adequate license from the person(s) controlling the copyright in such materials, this document may not be modified outside the IETF Standards Process, and derivative works of it may not be created outside the IETF Standards Process, except to format it for publication as an RFC or to translate it into languages other than English.

See [Section 4](#) of

<<http://trustee.ietf.org/docs/IETF-Copyright-FAQ.pdf>> for further information about when to use this value.

Note: this text appears under "Copyright Notice", unless the document was published before November 2009, in which case it appears under "Status Of This Memo".

A.2.2. Historic Values

A.2.2.1. Historic Values: '*trust200811'

The attribute values "trust200811", "noModificationTrust200811" and "noDerivativesTrust200811" are similar to their "trust200902" counterparts, except that they use text specified in http://trustee.ietf.org/license-info/archive/IETF-Trust-License-Policy_11-10-08.pdf.

A.2.2.2. Historic Values: '*3978'

The attribute values "full3978", "noModification3978" and "noDerivatives3978" are similar to their counterparts above, except that they use text specified in [RFC 3978](#) (March 2005).

A.2.2.3. Historic Values: '*3667'

The attribute values "full3667", "noModification3667" and "noDerivatives3667" are similar to their counterparts above, except that they use text specified in [RFC 3667](#) (February 2004).

A.2.2.4. Historic Values: '*2026'

The attribute values "full2026" and "noDerivativeWorks2026" are similar to their counterparts above, except that they use text specified in [RFC 2026](#) (October 1996).

The special value "none" was also used back then, and denied the IETF any rights beyond publication as Internet-Draft.

Appendix B. Changes from [RFC 2629](#) ('v1')

[[v1diff: See <http://greenbytes.de/tech/webdav/draft-reschke-xml2rfc-02.html#rfc.section.E> for a comparison of the schemata.]]

B.1. Removed Elements

The <appendix> element has been removed; to generate an appendix, place a <section> inside <back>.

B.2. Changed Defaults

Many attributes have lost their "default" value; this is to avoid having document semantics differ based on whether a DTD was specified and evaluated. Processors will handle absent values the way the default value was specified before.

B.3. Changed Elements

`<artwork>`: Has a set of new attributes: "name", "type", "src", "align", "alt", "width", and "height". ([Section 2.5](#))

`<author>`: The `<organization>` element is now optional. The "role" attribute was added. ([Section 2.6](#))

`<country>`: The requirement to use ISO 3166 codes was removed. ([Section 2.11](#))

`<date>`: All attributes are now optional. ([Section 2.13](#))

`<figure>`: Has a set of new attributes: "suppress-title", "src", "align", "alt", "width", and "height". ([Section 2.17](#))

`<iref>`: Has a new "primary" attribute. ([Section 2.20](#))

`<list>`: The "style" attribute isn't restricted to a set of enumerated values anymore. The "hangIndent" and "counter" attributes have been added. ([Section 2.22](#))

`<rfc>`: The "ipr" attribute has gained additional values. The attributes "consensus", "iprExtract", "submissionType", and "xml:lang" have been added. ([Section 2.33](#))

`<reference>`: `<annotation>` allows adding prose to a reference. The "anchor" attribute has been made mandatory. ([Section 2.30](#))

`<references>`: Can now appear multiple times, and carry a "title" attribute (so that normative and informative references can be split). ([Section 2.31](#))

`<section>`: The new "toc" attribute controls whether it will appear in the Table Of Contents. `<iref>` can now appear as direct child element. ([Section 2.34](#))

`<t>`: The "anchor" attribute can now be used as well, however there are restrictions on how they can be referred to. ([Section 2.38](#))

B.4. New Elements

The following elements have been added: `<annotation>` ([Section 2.3](#)), `<c>` ([Section 2.8](#)), `<cref>` ([Section 2.12](#)), `<format>` ([Section 2.18](#)), `<spanx>` ([Section 2.36](#)), `<texttable>` ([Section 2.39](#)).

Appendix C. Relax NG Schema


```
namespace a = "http://relaxng.org/ns/compatibility/annotations/1.0"

rfc =
  element rfc {
    attribute number { text }?,
    [ a:defaultValue = "" ] attribute obsoletes { text }?,
    [ a:defaultValue = "" ] attribute updates { text }?,
    attribute category { "std" | "bcp" | "info" | "exp" | "historic"
  }?,
  attribute consensus { "no" | "yes" }?,
  attribute seriesNo { text }?,
  attribute ipr {
    "full2026"
    | "noDerivativeWorks2026"
    | "none"
    | "full3667"
    | "noModification3667"
    | "noDerivatives3667"
    | "full3978"
    | "noModification3978"
    | "noDerivatives3978"
    | "trust200811"
    | "noModificationTrust200811"
    | "noDerivativesTrust200811"
    | "trust200902"
    | "noModificationTrust200902"
    | "noDerivativesTrust200902"
    | "pre5378Trust200902"
  }?,
  attribute iprExtract { xsd:IDREF }?,
  [ a:defaultValue = "IETF" ]
  attribute submissionType {
    "IETF" | "IAB" | "IRTF" | "independent"
  }?,
  attribute docName { text }?,
  [ a:defaultValue = "en" ] attribute xml:lang { text }?,
  front,
  middle,
  back?
}
front =
  element front {
    title, author+, date, area*, workgroup*, keyword*, abstract?,
note*
  }
title =
  element title {
    attribute abbrev { text }?,
```



```
    text
  }
author =
  element author {
    attribute initials { text }?,
    attribute surname { text }?,
    attribute fullname { text }?,
    attribute role { "editor" }?,
    organization?,
    address?
  }
organization =
  element organization {
    attribute abbrev { text }?,
    text
  }
address = element address { postal?, phone?, facsimile?, email?,
uri? }
postal = element postal { street+, (city | region | code | country)*
}
street = element street { text }
city = element city { text }
region = element region { text }
code = element code { text }
country = element country { text }
phone = element phone { text }
facsimile = element facsimile { text }
email = element email { text }
uri = element uri { text }
date =
  element date {
    attribute day { text }?,
    attribute month { text }?,
    attribute year { text }?,
    empty
  }
area = element area { text }
workgroup = element workgroup { text }
keyword = element keyword { text }
abstract = element abstract { t+ }
note =
  element note {
    attribute title { text },
    t+
  }
middle = element middle { section+ }
section =
  element section {
```



```
    attribute anchor { xsd:ID }?,
    attribute title { text },
    [ a:defaultValue = "default" ]
    attribute toc { "include" | "exclude" | "default" }?,
    (t | figure | texttable | iref)*,
    section*
  }
t =
element t {
  attribute anchor { xsd:ID }?,
  attribute hangText { text }?,
  (text
  | \list
  | figure
  | xref
  | eref
  | iref
  | cref
  | spanx
  | vspace)*
}
\list =
element list {
  attribute style { text }?,
  attribute hangIndent { text }?,
  attribute counter { text }?,
  t+
}
xref =
element xref {
  attribute target { xsd:IDREF },
  [ a:defaultValue = "false" ] attribute pageno { "true" | "false"
}?,
  [ a:defaultValue = "default" ]
  attribute format { "counter" | "title" | "none" | "default" }?,
  text
}
eref =
element eref {
  attribute target { text },
  text
}
iref =
element iref {
  attribute item { text },
  [ a:defaultValue = "" ] attribute subitem { text }?,
  [ a:defaultValue = "false" ]
  attribute primary { "true" | "false" }?,
```



```
    empty
  }
  cref =
    element cref {
      attribute anchor { xsd:ID }?,
      attribute source { text }?,
      text
    }
  spanx =
    element spanx {
      [ a:defaultValue = "preserve" ]
      attribute xml:space { "default" | "preserve" }?,
      [ a:defaultValue = "emph" ] attribute style { text }?,
      text
    }
  vspace =
    element vspace {
      [ a:defaultValue = "0" ] attribute blankLines { text }?,
      empty
    }
  figure =
    element figure {
      attribute anchor { xsd:ID }?,
      [ a:defaultValue = "" ] attribute title { text }?,
      [ a:defaultValue = "false" ]
      attribute suppress-title { "true" | "false" }?,
      attribute src { text }?,
      [ a:defaultValue = "left" ]
      attribute align { "left" | "center" | "right" }?,
      [ a:defaultValue = "" ] attribute alt { text }?,
      [ a:defaultValue = "" ] attribute width { text }?,
      [ a:defaultValue = "" ] attribute height { text }?,
      iref*,
      preamble?,
      artwork,
      postamble?
    }
  preamble =
    element preamble { (text | xref | eref | iref | cref | spanx)* }
  artwork =
    element artwork {
      [ a:defaultValue = "preserve" ]
      attribute xml:space { "default" | "preserve" }?,
      [ a:defaultValue = "" ] attribute name { text }?,
      [ a:defaultValue = "" ] attribute type { text }?,
      attribute src { text }?,
      [ a:defaultValue = "left" ]
      attribute align { "left" | "center" | "right" }?,
```



```
    [ a:defaultValue = "" ] attribute alt { text }?,
    [ a:defaultValue = "" ] attribute width { text }?,
    [ a:defaultValue = "" ] attribute height { text }?,
    text*
  }
postamble =
  element postamble { (text | xref | eref | iref | cref | spanx)* }
texttable =
  element texttable {
    attribute anchor { xsd:ID }?,
    [ a:defaultValue = "" ] attribute title { text }?,
    [ a:defaultValue = "false" ]
    attribute suppress-title { "true" | "false" }?,
    [ a:defaultValue = "center" ]
    attribute align { "left" | "center" | "right" }?,
    [ a:defaultValue = "full" ]
    attribute style { "all" | "none" | "headers" | "full" }?,
    preamble?,
    ttcol+,
    c*,
    postamble?
  }
ttcol =
  element ttcol {
    attribute width { text }?,
    [ a:defaultValue = "left" ]
    attribute align { "left" | "center" | "right" }?,
    text
  }
c = element c { (text | xref | eref | iref | cref | spanx)* }
back = element back { references*, section* }
references =
  element references {
    [ a:defaultValue = "References" ] attribute title { text }?,
    reference+
  }
reference =
  element reference {
    attribute anchor { xsd:ID },
    attribute target { text }?,
    front,
    seriesInfo*,
    format*,
    annotation*
  }
seriesInfo =
  element seriesInfo {
    attribute name { text },
```



```
    attribute value { text },
    empty
  }
format =
  element format {
    attribute target { text }?,
    attribute type { text },
    attribute octets { text }?,
    empty
  }
annotation =
  element annotation { (text | xref | eref | iref | cref | spanx)* }
start = rfc
```

(This schema was derived from version 1.3.6 of the xml2rfc DTD ('Document Type Definition', [\[XML\]](#), Section 2.8), available from <http://svn.tools.ietf.org/svn/tools/xml2rfc/vocabulary/v2/03/xml2rfcv2.dtd>).

[C.1.](#) Checking Validity

The validity of XML files can be checked with any tool that supports Relax NG ([\[RNC\]](#)). The reference implementation is the Java-based, open sourced "JING" ([\[JING\]](#)).

To use JING, download the latest ZIP file from the downloads page (currently <https://code.google.com/p/jing-trang/downloads/detail?name=jing-20091111.zip>), extract the archive, copy "jing.jar" from the "bin" folder, and make sure Java is installed).

To check a file "test.xml" using the RNC file "schema.rnc", run (from a command line prompt):

```
java -jar jing.jar -c schema.rnc test.xml
```

In good Unix tradition, no output means the file is valid.

[Appendix D.](#) Proposed Future Changes for 'v3'

Discussion of "v3" changes takes place on the rfc-interest mailing list (rfc-interest@rfc-editor.org), which has its home page at <http://www.rfc-editor.org/mailman/listinfo/rfc-interest>. See also <https://www.rfc-editor.org/rse/wiki/doku.php?id=design:xml-tags> for a related Wiki page.

D.1. Contact Information

If contact information is changed to allow non-ASCII characters: add a place for a ASCII fallback (probably just for the author names).

The content model for <postal> ought to be more strict to allow at most one of <city>, <region>, <code>, and <country>.

It should be possible to have multiple <email> and <uri> elements (see also <<http://trac.tools.ietf.org/tools/xml2rfc/trac/ticket/36>>).

<facsimile> looks outdated, while a container for IM (messaging) URIs is missing. Maybe this area needs to be aligned with vCard.

Section 4.11 of [[RFCSTYLE](#)] hints at a "Contributors" Section that could supply contact information similar to the one in the auto-generated "Authors' Address" Section. Consider how to capture contributor contact information (probably not using <author> to avoid confusion). Furthermore, consider ways to augment the contact information section with prose.

D.2. Figures

Cleanup the set of overlapping attributes between <figure> and <artwork>.

For artwork that consists of a sequence of items (such as messages in a protocol example), it would be good if a <figure> element could contain multiple <artwork> elements (to assist code to find good places for page breaks).

Extend <figure> to support different types of artwork (such as by specifying certain type attribute values, see <<http://greenbytes.de/tech/webdav/rfc2629xslt/rfc2629xslt.html#artwork.types>>), and also avoid having to markup code (such as ABNF) as "artwork".

It would be good if "code components" could be marked as such.

Finally, even in preformatted text use of markup could be useful to support (a) references, or (b) highlighting the important bits (<<http://greenbytes.de/tech/webdav/rfc2629xslt/rfc2629xslt.html#ext-rfc2629.artwork>>).

D.3. Linking

Extend <xref> so that subsection/anchors can be specified (see <<http://greenbytes.de/tech/webdav/rfc2629xslt/rfc2629xslt.html#ext-rfc2629.xref>>).

Remove the "pageno" attribute which seems to be both undocumented and non-functional.

D.4. Lists

Allow multiple paragraphs in list items; eliminating the need to use `<vspace>` -- this could be achieved by adding a list item container element ("`<lt>`", see <http://greenbytes.de/tech/webdav/rfc2629xslt/rfc2629xslt.html#ext.element.lt> and <http://www.ietf.org/mail-archive/web/xml2rfc/current/msg02010.html>).

Add support for a "dictionary" style; eliminating the need to combine "hanging" with `<vspace>` to force new lines (see thread around <http://www.rfc-editor.org/pipermail/rfc-interest/2013-December/005876.html>).

D.5. References

Allow overriding the "anchor" attribute of an included `<reference>` element.

Add a way to add prose to a reference that avoids abuse of `<seriesInfo>`.

Allow `<reference>`s that identify a document set such as a BCP.

Deprecate or remove the `<format>` element; right now it's not used for the generation of the plain text document anyway.

The "anchor" attribute is optional because it is not needed when using numeric references (symrefs processing instruction), and the reference actually is not in use. This is an edge case that doesn't need special support in the vocabulary and thus should be removed.

D.6. Archival Considerations

When this vocabulary becomes the canonical RFC format, it will need to be able to capture all generated information, such as section/figure/table numbers, plus any auto-generated boilerplate (copyright statements etc.).

D.7. Document Metadata

Extend the concept of language tagging to at least examples and contact information to address potential japanese/chinese font confusion.

Provide a way to indicate the intended level on the standards track.

Include feedback information in a way so that generated documents can provide usable feedback links (see [<http://greenbytes.de/tech/webdav/rfc2629xslt/rfc2629xslt.html#ext.element.feedback>](http://greenbytes.de/tech/webdav/rfc2629xslt/rfc2629xslt.html#ext.element.feedback)).

D.8. Including Material

As discussed in [Section 5](#), file inclusion currently uses out-of-the-box XML mechanisms or processor-specific directives.

We need to decide whether the vocabulary should have its own inclusion mechanism, or whether it would be better to use a generic solution such as [\[XINCLUDE\]](#) instead.

D.9. Misc.

Make the `<date>` element optional; all of its content is optional already.

`<spanx>` has both a weird whitespace model ("preserve") and problematic styling. Consider to deprecate it in favor of elements such as ``, `<i>`, and `<tt>`.

Indented paragraphs currently can be created by abusing the `<list>`. It would be good to have a special element for this purpose.

Provide a special element for inserting block quotes ([<http://greenbytes.de/tech/webdav/rfc2629xslt/rfc2629xslt.html#ext.element.blockquote>](http://greenbytes.de/tech/webdav/rfc2629xslt/rfc2629xslt.html#ext.element.blockquote)).

The content model for `<cref>` should be extended to allow more flow elements, such as `<xref>` and `<eref>`.

Section titles should really be elements, not attributes (this would allow them to contain markup).

Text tables are currently very constrained. For instance, it would be good if alignment of headers and table cells could be de-coupled ([<http://trac.tools.ietf.org/tools/xml2rfc/trac/ticket/69>](http://trac.tools.ietf.org/tools/xml2rfc/trac/ticket/69)).

Counters are currently restricted to lists, figures, and tables. Maybe there should be a generic mechanism that is not directly tied to other elements ([<http://trac.tools.ietf.org/tools/xml2rfc/trac/ticket/68>](http://trac.tools.ietf.org/tools/xml2rfc/trac/ticket/68)).

Index

A

- abbrev attribute
 - in organization element 20
 - in title element 32
- abstract element 4
 - inside front 16
- address element 4
 - inside author 9
- align attribute
 - in artwork element 7
 - in figure element 13
 - in texttable element 31
 - in ttable element 33
- alt attribute
 - in artwork element 7
 - in figure element 14
- anchor attribute
 - in cref element 11
 - in figure element 14
 - in reference element 22
 - in section element 27
 - in t element 30
 - in texttable element 31
- annotation element 5
 - inside reference 22
- application/rfc+xml Media Type 38
- area element 6
 - inside front 16
- artwork element 6
 - align attribute 7
 - alt attribute 7
 - height attribute 7
 - inside figure 13
 - name attribute 7
 - src attribute 7
 - type attribute 8
 - width attribute 8
 - xml:space attribute 8
- Attributes
 - abbrev 20, 32
 - align 7, 13, 31, 33
 - alt 7, 14
 - anchor 11, 14, 22, 27, 30-31
 - blankLines 33
 - category 24
 - consensus 24

counter 17
day 12
docName 24
format 34
fullname 9
hangIndent 17
hangText 30
height 7, 14
initials 9
ipr 25
iprExtract 25
item 16
month 12
name 7, 28
number 26
obsoletes 26
octets 15
pageno 35
primary 16
role 9
seriesNo 26
source 11
src 7, 14
style 18, 29, 31
subitem 17
submissionType 26
suppress-title 14, 32
surname 9
target 13, 15, 22, 35
title 14, 20, 23, 27, 32
toc 27
type 8, 15
updates 26
value 28
width 8, 15, 33
xml:lang 27
xml:space 8, 29
year 12
author element 8
 fullname attribute 9
 initials attribute 9
 inside front 15
 role attribute 9
 surname attribute 9

B

back element 9
 inside rfc 23

blankLines attribute
 in vspace element 33

C

c element 10
 inside texttable 31
category attribute
 in rfc element 24
city element 10
 inside postal 21
code element 10
 inside postal 21
consensus attribute
 in rfc element 24
counter attribute
 in list element 17
country element 11
 inside postal 21
cref element 11
 anchor attribute 11
 inside annotation 5
 inside c 10
 inside postamble 21
 inside preamble 22
 inside t 30
 source attribute 11

D

date element 11
 day attribute 12
 inside front 15
 month attribute 12
 year attribute 12
day attribute
 in date element 12
docName attribute
 in rfc element 24

E

Elements
 abstract 4, 16
 address 4, 9
 annotation 5, 22
 area 6, 16
 artwork 6, 13
 author 8, 15
 back 9, 23
 c 10, 31

city 10, 21
code 10, 21
country 11, 21
cref 5, 10-11, 21-22, 30
date 11, 15
email 5, 12
eref 5, 10, 12, 21, 30
facsimile 5, 13
figure 13, 27, 30
format 15, 22
front 15, 22-23
iref 5, 10, 13, 16, 21-22, 27, 30
keyword 16-17
list 17, 30
middle 19, 23
note 16, 19
organization 9, 20
phone 5, 20
postal 5, 20
postamble 13, 21, 31
preamble 13, 21, 31
reference 22-23
references 10, 22
region 21, 23
rfc 23
section 10, 19, 27
seriesInfo 22, 28
spanx 5, 10, 21-22, 28, 30
street 20, 29
t 4, 17, 19, 27, 29
texttable 27, 30
title 15, 32
ttcol 31-32
uri 5, 33
vspace 30, 33
workgroup 16, 34
xref 5, 10, 21, 30, 34
email element 12
 inside address 5
eref element 12
 inside annotation 5
 inside c 10
 inside postamble 21
 inside preamble 21
 inside t 30
target attribute 13

- facsimile element 13
 - inside address 5
- figure element 13
 - align attribute 13
 - alt attribute 14
 - anchor attribute 14
 - height attribute 14
 - inside section 27
 - inside t 30
 - src attribute 14
 - suppress-title attribute 14
 - title attribute 14
 - width attribute 15
- format attribute
 - in xref element 34
- format element 15
 - inside reference 22
 - octets attribute 15
 - target attribute 15
 - type attribute 15
- front element 15
 - inside reference 22
 - inside rfc 23
- fullname attribute
 - in author element 9

H

- hangIndent attribute
 - in list element 17
- hangText attribute
 - in t element 30
- height attribute
 - in artwork element 7
 - in figure element 14

I

- initials attribute
 - in author element 9
- ipr attribute
 - '*2026' 45
 - '*3667' 45
 - '*3978' 45
 - '*trust200811' 45
 - '*trust200902' 43
 - 'noDerivativesTrust200902' 44
 - 'noModificationTrust200902' 44
 - 'pre5378Trust200902' 44
 - 'trust200902' 43

- in rfc element 25
- iprExtract attribute
 - in rfc element 25
- iref element 16
 - inside annotation 5
 - inside c 10
 - inside figure 13
 - inside postamble 21
 - inside preamble 22
 - inside section 27
 - inside t 30
 - item attribute 16
 - primary attribute 16
 - subitem attribute 17
- item attribute
 - in iref element 16

K

- keyword element 17
 - inside front 16

L

- list element 17
 - counter attribute 17
 - hangIndent attribute 17
 - inside t 30
 - style attribute 18
- list styles
 - empty 18
 - format ... [18](#)
 - hanging 18
 - letters 18
 - numbers 18
 - symbols 18

M

- Media Type
 - application/rfc+xml 38
- middle element 19
 - inside rfc 23
- month attribute
 - in date element 12

N

- name attribute
 - in artwork element 7
 - in seriesInfo element 28
- note element 19

- inside front 16
- title attribute 20
- number attribute
 - in rfc element 26

O

- obsoletes attribute
 - in rfc element 26
- octets attribute
 - in format element 15
- organization element 20
 - abbrev attribute 20
 - inside author 9

P

- pageno attribute
 - in xref element 35
- phone element 20
 - inside address 5
- postal element 20
 - inside address 5
- postamble element 21
 - inside figure 13
 - inside texttable 31
- preamble element 21
 - inside figure 13
 - inside texttable 31
- primary attribute
 - in iref element 16

R

- reference element 22
 - anchor attribute 22
 - inside references 23
 - target attribute 22
- references element 22
 - inside back 10
 - title attribute 23
- region element 23
 - inside postal 21
- rfc element 23
 - category attribute 24
 - consensus attribute 24
 - docName attribute 24
 - ipr attribute 25
 - iprExtract attribute 25
 - number attribute 26
 - obsoletes attribute 26

- seriesNo attribute 26
- submissionType attribute 26
- updates attribute 26
- xml:lang attribute 27
- role attribute
 - in author element 9

S

- section element 27
 - anchor attribute 27
 - inside back 10
 - inside middle 19
 - inside section 27
 - title attribute 27
 - toc attribute 27
- seriesInfo element 28
 - inside reference 22
 - name attribute 28
 - value attribute 28
- seriesNo attribute
 - in rfc element 26
- source attribute
 - in cref element 11
- spanx element 28
 - inside annotation 5
 - inside c 10
 - inside postamble 21
 - inside preamble 22
 - inside t 30
 - style attribute 29
 - xml:space attribute 29
- src attribute
 - in artwork element 7
 - in figure element 14
- street element 29
 - inside postal 20
- style attribute
 - in list element 18
 - in spanx element 29
 - in texttable element 31
- subitem attribute
 - in iref element 17
- submissionType attribute
 - in rfc element 26
- suppress-title attribute
 - in figure element 14
 - in texttable element 32
- surname attribute

in author element 9

T

t element 29
 anchor attribute 30
 hangText attribute 30
 inside abstract 4
 inside list 17
 inside note 19
 inside section 27
target attribute
 in eref element 13
 in format element 15
 in reference element 22
 in xref element 35
texttable element 30
 align attribute 31
 anchor attribute 31
 inside section 27
 style attribute 31
 suppress-title attribute 32
 title attribute 32
title attribute
 in figure element 14
 in note element 20
 in references element 23
 in section element 27
 in texttable element 32
title element 32
 abbrev attribute 32
 inside front 15
toc attribute
 in section element 27
ttcol element 32
 align attribute 33
 inside texttable 31
 width attribute 33
type attribute
 in artwork element 8
 in format element 15

U

updates attribute
 in rfc element 26
uri element 33
 inside address 5

V

- value attribute
 - in seriesInfo element 28
- vspace element 33
 - blankLines attribute 33
 - inside t 30

W

- width attribute
 - in artwork element 8
 - in figure element 15
 - in ttcol element 33
- workgroup element 34
 - inside front 16

X

- xml:lang attribute
 - in rfc element 27
- xml:space attribute
 - in artwork element 8
 - in spanx element 29
- xref element 34
 - format attribute 34
 - inside annotation 5
 - inside c 10
 - inside postamble 21
 - inside preamble 21
 - inside t 30
 - pageno attribute 35
 - target attribute 35
- xref formats
 - counter 34
 - default 35
 - none 35
 - title 35

Y

- year attribute
 - in date element 12

Author's Address

Julian F. Reschke
greenbytes GmbH
Hafenweg 16
Muenster, NW 48155
Germany

EMail: julian.reschke@greenbytes.de

URI: <http://greenbytes.de/tech/webdav/>