
**Information technology — Document
description and processing languages —
Regular Language Description for XML
(RELAX) —**

**Part 1:
RELAX Core**

*Technologies de l'information — Description de documents et langages de
traitement — Description de langage courant pour XML (RELAX) —*

Partie 1: Noyau RELAX



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Contents

Page

Foreword.....	v
1 Scope	1
2 References	1
3 Terms and definitions	2
3.1 XML 1.0	2
3.2 Name Spaces in XML	3
3.3 XML Schema Part 2	3
3.4 XML Information Set	3
3.5 Definitions specific to <i>RELAX Core</i>	3
4 Notations	4
5 Basic concepts	4
5.1 Design principles	4
5.2 Instances, schemas, and meta schemas	4
5.2.1 Instances	4
5.2.2 RELAX schema	5
5.2.3 RELAX meta schema	5
5.3 Modules and frameworks	5
5.4 Islands and instances	5
5.5 Behaviour of the <i>RELAX Core</i> processor	6
5.6 Datatypes	6
5.7 Roles and clauses	7
5.8 Production rules, labels, and hedge models	7
5.8.1 General	7
5.8.2 Element hedge models	8
5.8.3 Mixed hedge models	8
5.8.4 Datatype references	8
5.9 Taxonomy and occurrences of names	8
6 Module Constructs	9
6.1 module	9
6.2 interface	9
6.3 export	10
6.4 tag	10
6.5 attPool	11
6.6 ref with the role attribute	11
6.7 attribute	11
6.8 elementRule	12
6.9 hedgeRule	13
6.10 ref with the label attribute	13
6.11 hedgeRef	13
6.12 sequence	14
6.13 choice	14
6.14 empty	14
6.15 none	14
6.16 mixed	14
6.17 element	15
6.18 include	15
6.19 div	16
6.20 annotation	16
6.21 documentation	16

6.22	appinfo	16
7	Datatypes	17
7.1	General	17
7.2	Built-in datatypes of XML Schema Part 2	17
7.3	Datatypes Specific to RELAX	18
7.3.1	none	18
7.3.2	emptyString	18
7.4	Facets	18
8	Reference model	19
8.1	General	19
8.2	Creation of element hedge models	19
8.3	Expansion of include	19
8.4	Expansion of element	19
8.5	Expansion of module	19
8.6	Expansion of tag embedded in elementRule	20
8.7	Interpretation	20
9	Conformance	21
9.1	General	21
9.2	Conformance levels of RELAX modules	21
9.3	Conformance levels of the RELAX Core processor	21
	Annex A DTD for RELAX Core	23
	Annex B RELAX Module for RELAX Core	27
	Bibliography	36

Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

The main task of the joint technical committee is to prepare International Standards. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

In exceptional circumstances, the joint technical committee may propose the publication of a Technical Report of one of the following types:

- type 1, when the required support cannot be obtained for the publication of an International Standard, despite repeated efforts;
- type 2, when the subject is still under technical development or where for any other reason there is the future but not immediate possibility of an agreement on an International Standard;
- type 3, when the joint technical committee has collected data of a different kind from that which is normally published as an International Standard ("state of the art" for example).

Technical Reports of types 1 and 2 are subject to review within three years of publication, to decide whether they can be transformed into International Standards. Technical Reports of type 3 do not necessarily have to be reviewed until the data they provide are considered to be no longer valid or useful.

Attention is drawn to the possibility that some of the elements of this part of ISO/IEC TR 22250 may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights.

ISO/IEC TR 22250-1, which is a Technical Report of type 3, was prepared by JISC (as JIS/TR X 0029) and was adopted, under a special "fast-track procedure", by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, in parallel with its approval by national bodies of ISO and IEC.

ISO/IEC TR 22250 consists of the following parts, under the general title *Information technology — Document description and processing languages — Regular Language Description for XML (RELAX)*:

- *Part 1: RELAX Core*
- *Part 2: RELAX Namespace*

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Information technology — Document description and processing languages — Regular Language Description for XML (RELAX) —

Part 1:

RELAX Core

1 Scope

This Technical Report gives mechanisms for formally specifying the syntax of XML-based languages. For example, the syntax of XHTML 1.0 can be specified in RELAX.

Compared with DTDs, RELAX provides the following advantages:

- Specification in RELAX uses XML instance (i.e., document) syntax,
- RELAX provides rich datatypes, and
- RELAX is namespace-aware.

The RELAX specification consists of two parts, *RELAX Core* and *RELAX Namespace*. This part of the Technical Report gives *RELAX Core*, which may be used to describe markup languages containing a single XML namespace. Part 2 of this Technical Report gives *RELAX Namespace*, which may be used to describe markup languages containing more than a single XML namespace, consisting of more than one *RELAX Core* document.

Given a sequence of elements, a software module called the *RELAX Core* processor compares it against a specification in *RELAX Core* and reports the result. The *RELAX Core* processor can be directly invoked by the user, and can also be invoked by another software module called the *RELAX Namespace* processor.

RELAX may be used in conjunction with DTDs. In particular, notations and entities declared by DTDs can be constrained by RELAX.

This part of the Technical Report also gives a subset of *RELAX Core*, which is restricted to DTD features plus datatypes. This subset is very easy to implement, and with the exception of datatype information, conversion between this subset and XML DTDs results in no information loss.

NOTE 1 Since XML is a subset of WebSGML (TC2 of ISO 8879), RELAX is applicable to SGML.

NOTE 2 A successor of RELAX Core is being developed at the RELAX NG TC of OASIS.

2 References

ISO 8879:1986, *Information processing – Text and office systems – Standard Generalized Markup Language (SGML)*

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W3C (World Wide Web Consortium), XML Information Set, W3C Proposed Recommendation, <http://www.w3.org/TR/xml-infoset>, 2001

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IETF (Internet Engineering Task Force). RFC2396: Uniform Resource Identifiers (URI): Generic Syntax, 1998.

3 Terms and definitions

3.1 XML 1.0

For the purposes of this part of the Technical Report, the following terms and definitions given in XML 1.0 apply.

- a) start tag
- b) end tag
- c) empty-element tag
- d) attribute
- e) attribute name
- f) content
- g) content model
- h) attribute-list declaration
- i) DTD
- j) XML processor
- k) validity
- l) validating processor
- m) non-validating processor
- n) whitespace
- o) child
- p) parameter entity
- q) match

NOTE 3 On top of those meanings given in XML 1.0, “match” has another meaning (see 5.8).