
**Information technology — Document
Schema Definition Languages (DSDL) —**

**Part 8:
Document Semantics Renaming
Language (DSRL)**

Technologies de l'information — Langages de définition de schéma de documents (DSDL) —

Partie 8: Langage pour renommer une sémantique de documents (DSRL)

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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 2.

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.

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ISO/IEC 19757-8 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 34, *Document description and processing languages*.

ISO/IEC 19757 consists of the following parts, under the general title *Information technology — Document Schema Definition Languages (DSDL)*:

- *Part 1: Overview*
- *Part 2: Regular-grammar-based validation — RELAX NG*
- *Part 3: Rule-based validation — Schematron*
- *Part 4: Namespace-based Validation Dispatching Language (NVDL)*
- *Part 7: Character Repertoire Description Language (CRDL)*
- *Part 8: Document Semantics Renaming Language (DSRL)*
- *Part 9: Namespace and datatype declaration in Document Type Definitions (DTDs)*

Introduction

ISO/IEC 19757 defines a set of Document Schema Definition Languages (DSDL) that can be used to specify one or more validation processes performed against Extensible Markup Language (XML) or Standard Generalized Markup Language (SGML) documents. (XML is an application profile of SGML, ISO 8879:1986.)

A document model is an expression of the constraints to be placed on the structure and content of documents to be validated with the model. A number of technologies have been developed through various formal and informal consortia since the development of Document Type Definitions (DTDs) as part of ISO 8879, notably by the World Wide Web Consortium (W3C) and the Organization for the Advancement of Structured Information Standards (OASIS). A number of validation technologies are standardized in DSDL to complement those already available as standards or from industry.

To validate that a structured document conforms to specified constraints in structure and content relieves the potentially many applications acting on the document from having to duplicate the task of confirming that such requirements have been met. Historically, such tasks and expressions have been developed and utilized in isolation, without consideration for how the features and functionality available in other technologies might enhance validation objectives.

The primary objective of ISO/IEC 19757 is to bring together different validation-related tasks and expressions to form a single extensible framework that allows technologies to work in series or in parallel to produce a single or a set of validation results. The extensibility of DSDL accommodates validation technologies not yet designed or specified.

In the past, different design and use criteria have led users to choose different validation technologies for different portions of their information. Bringing together information within a single XML document sometimes prevents existing document models from being used to validate sections of data. By providing an integrated suite of constraint description languages that can be applied to different subsets of a single XML document, ISO/IEC 19757 allows different validation technologies to be integrated under a well-defined validation policy.

ISO/IEC 19757 integrates constraint description technologies into a suite that

- provides user control of names, order and repeatability of information objects (elements),
- allows users to identify restrictions on the co-concurrence of elements and/or element contents,
- allows specific subsets of structured documents to be validated,
- allows restrictions to be placed on the contents of specific elements, including restrictions based on the content of other elements in the same document,
- allows the character set that can be used within specific elements to be managed, based on the application of the ISO/IEC 10646 Universal Multiple-Octet Coded Character Set (UCS),
- allows default values to be assigned to element content and attribute values,
- allows SGML to be used to declare document structure constraints that extend DTDs to include functions such as namespace-controlled validation and datatypes.

Information technology — Document Schema Definition Languages (DSDL) —

Part 8: Document Semantics Renaming Language (DSRL)

1 Scope

This part of ISO/IEC 19757 specifies a mechanism that allows users to assign locally meaningful names to XML elements, attributes, entities and processing instructions, without having to completely rewrite the DTD or schema against which they are to be validated. In addition, this part of ISO/IEC 19757 provides an XML-based format for declaring the replacement text for entity references and provides a mechanism that allows users to define default values for both element content and attribute values.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE Each of the following documents that is not an International Standard has a unique identifier that is used to cite the document in the text. The unique identifier consists of the part of the reference up to the first comma.

IRI, IETF RFC 3987, *Internationalized Resource Identifiers (IRIs)*, Internet Standards Track Specification, January 2005, <http://www.ietf.org/rfc/rfc3987.txt>

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