INTERNATIONAL STANDARD

ISO/IEC 29500-3

Third edition
2012-09-01

Information technology — Document description and processing languages — Office Open XML File Formats —

Part 3: Markup Compatibility and Extensibility

Technologies de l'information — Description des documents et langages de traitement — Formats de fichier "Office Open XML" — Partie 3: Compatibilité et extensibilité du balisage

Reference number
ISO/IEC 29500-3:2012(E)

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Published in Switzerland

Table of Contents

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.

Attention is drawn to the possibility that some of the elements of this document 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 29500-3 was prepared by ISO/IEC JTC 1, Information technology, Subcommittee SC 34, Document description and processing languages.

This third edition cancels and replaces the second edition (ISO/IEC 29500-3:2011), which has been technically revised by incorporation of the Technical Corrigendum ISO/IEC 29500-3:2011/Cor.1:2012.

ISO/IEC 29500 consists of the following parts, under the general title *Information technology — Document description and processing languages — Office Open XML File Formats*:

- *Part 1: Fundamentals and Markup Language Reference*
- *Part 2: Open Packaging Conventions*
- *Part 3: Markup Compatibility and Extensibility*
- *Part 4: Transitional Migration Features*

Annexes A and B are for information only.

Introduction

ISO/IEC 29500 specifies a family of XML schemas, collectively called *Office Open XML*, which define the XML vocabularies for word-processing, spreadsheet, and presentation documents, as well as the packaging of documents that conform to these schemas.

The goal is to enable the implementation of the Office Open XML formats by the widest set of tools and platforms, fostering interoperability across office productivity applications and line-of-business systems, as well as to support and strengthen document archival and preservation, all in a way that is fully compatible with the existing corpus of Microsoft Office documents.

The following organizations have participated in the creation of ISO/IEC 29500 and their contributions are gratefully acknowledged:

Apple, Barclays Capital, BP, The British Library, Essilor, Intel, Microsoft, NextPage, Novell, Statoil, Toshiba, and the United States Library of Congress

Information technology — Document description and processing languages — Office Open XML File Formats

Part 3:

Markup Compatibility and Extensibility

1. Scope

This Part of ISO/IEC 29500 describes a set of conventions that are used by Office Open XML documents to clearly mark elements and attributes introduced by future versions or extensions of Office Open XML documents, while providing a method by which consumers can obtain a baseline version of the Office Open XML document (a version without extensions) for interoperability.

2. Conformance

The text in this Part of ISO/IEC 29500 is divided into *normative* and *informative* categories. Unless documented otherwise, any feature shall be implemented as specified by the normative text describing that feature in this Part of ISO/IEC 29500. Text marked informative (using the mechanisms described in §7) is for information purposes only. Unless stated otherwise, all text is normative.

Use of the word “shall” indicates required behavior.

Each Part of this multi-part standard has its own conformance clause. The term *conformance class* is used to disambiguate conformance within different Parts of this multi-part standard. This Part of ISO/IEC 29500 has only one conformance class, *MCE* (that is, Markup Compatibility and Extensibility). As such, conformance to that class implies conformance to the whole Part.

2.1 Document Conformance

A document has conformance class MCE if it satisfies the syntax constraints on elements and attributes defined in this Part of ISO/IEC 29500. Document conformance to this Part of ISO/IEC 29500 is purely syntactic.

2.2 Application Conformance

An application implementing this Part of ISO/IEC 29500 has conformance class MCE if any one of the following is true:

- The application is a markup consumer that does not reject any documents of conformance class MCE; or
- The application is a markup producer that is able to produce documents of conformance class MCE

Application conformance to this Part of ISO/IEC 29500 is purely syntactic.

[*Note*: Application conformance to this Part of ISO/IEC 29500 cannot be based on semantics, since the semantics depend on the choice of application-defined extension elements. *end note*]

3. 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.

ISO/IEC 2382-1:1993, *Information technology — Vocabulary — Part 1: Fundamental terms*.

ISO/IEC 10646, *Information technology — Universal Coded Character Set (UCS)*.

ISO/IEC 19757-4:2006, *Information technology — Document Schema Definition Languages (DSDL) — Part 4: Namespace-based Validation Dispatching Language (NVDL)*.

RFC 3986 *Uniform Resource Identifier (URI): Generic Syntax,* The Internet Society, Berners-Lee, T., R. Fielding, and L. Masinter, 2005, http://www.ietf.org/rfc/rfc3986.txt.

RFC 4234 *Augmented BNF for Syntax Specifications: ABNF,* The Internet Society, Crocker, D., P. Overell, 2005, http://www.ietf.org/rfc/rfc4234.txt

The Unicode Consortium. The Unicode Standard, http://www.unicode.org/standard/standard.html.

XML, Tim Bray, Jean Paoli, Eve Maler, C. M. Sperberg-McQueen, and François Yergeau (editors). Extensible Markup Language (XML) 1.0, Fourth Edition.1 World Wide Web Consortium. 2006. http://www.w3.org/TR/2006/REC-xml-20060816/ [Implementers should be aware that a further correction of the normative reference to XML to refer to the 5th Edition will be necessary when the related Reference Specifications to which this International Standard also makes normative reference and which also depend upon XML, such as XSLT, XML Namespaces and XML Base, are all aligned with the 5th Edition.]

XML Base, Marsh, Jonathan. *XML Base*. World Wide Web Consortium. 2001. http://www.w3.org/TR/2001/REC-xmlbase-20010627/

XML Namespaces, Tim Bray, Dave Hollander, Andrew Layman, and Richard Tobin (editors). *Namespaces in XML 1.0* (Third Edition), 8 December 2009. World Wide Web Consortium. http://www.w3.org/TR/2009/REC-xml-names-20091208/

XML Schema Part 0: Primer (Second Edition), W3C Recommendation 28 October 2004, http://www.w3.org/TR/xmlschema-0/

XML Schema Part 1: Structures (Second Edition), W3C Recommendation 28 October 2004, http://www.w3.org/TR/xmlschema-1/

XML Schema Part 2: Datatypes (Second Edition), W3C Recommendation 28 October 2004, http://www.w3.org/TR/xmlschema-2/

4. Terms and Definitions

For the purposes of this document, the following terms and definitions apply. Other terms are defined where they appear in *italics* typeface. Terms not explicitly defined in this Part of ISO/IEC 29500 are not to be presumed to refer implicitly to similar terms defined elsewhere.

Throughout this Part of ISO/IEC 29500, the terms *namespace declaration*, *namespace name*, *qualified name*, *expanded name*, *prefixed name*, *unprefixed name*, and *local name* shall have the meanings as defined in the W3C Recommendation, "Namespaces in XML."

alternate content — A set of alternatives of XML markup and character data, of which no more than one shall be processed by a markup consumer. A markup consumer chooses from among the alternatives based upon its set of understood namespaces.

byte — A sequence of 8 bits treated as a unit.

compatibility-rule attribute — An XML attribute described in this Part of ISO/IEC 29500 that expresses rules governing markup consumers' behavior when encountering XML elements and attributes from non-understood namespaces.

id — In some XML-related technologies, the term *id* implies use of the xsd:ID data type. In this international standard, this term is used to refer to a variety of different identification schemes. See *unique identifier*.

ignore — To disregard the presence of an element or attribute, processing the markup as if that element or attribute did not exist.

markup consumer — A tool that can read and parse a markup document and further conforms to the requirements of a markup specification. [*Note*: Because a markup consumer might be implemented as a markup pre-processor, this term is not coalesced with the definition for a consumer, which would process the XML document output by the markup pre-processor. *end note*]

markup document — An XML document that conforms to the requirements of a markup specification.

markup preprocessor — A software module, designed for use in the implementation of markup consumers, that follows the rules of this Part of ISO/IEC 29500 to remove or replace all elements and attributes from the Markup Compatibility namespace, all elements and attributes from ignorable non-understood namespaces, and all elements and attributes from subsumed namespaces.

markup producer — A tool that can generate a markup document, and conforms to a markup specification.

markup specification — An XML-based format definition that incorporates all of the namespaces, elements, attributes, and requirements specified in this Part of ISO/IEC 29500.

namespace, ignorable — A namespace, identified in markup, whose elements and attributes shall be ignored by a markup consumer that does not understand that namespace.

namespace, understood — An XML namespace containing any recognized XML elements or attributes.

qualified attribute name — An attribute's qualified name.

qualified element name — An element's qualified name.

recognize — To identify that an XML element, XML attribute, or attribute-value is defined in this Part of ISO/IEC 29500 or in the markup specification against which the containing XML document purports to be conformant.

unique identifier — In some XML-related technologies, the term *unique identifier* implies use of the xsd:ID data type. In this international standard, this term is used to refer to a variety of different identification schemes. See *id*.

5. Notational Conventions

The following typographical conventions are used in ISO/IEC 29500:

1. The first occurrence of a new term is written in italics. [*Example*: The text in ISO/IEC 29500 is divided into *normative* and *informative* categories. *end example*]
2. In each definition of a term in §4 (Terms and Definitions), the term is written in bold. [*Example*: **behavior** — External appearance or action. *end example*]
3. The tag name of an XML element is written using a distinct style and typeface. [*Example*: The bookmarkStart and bookmarkEnd elements specify … *end example*]
4. The name of an XML attribute is written using a distinct style and typeface. [*Example*: The dropCap attribute specifies … *end example*]
5. The value of an XML attribute is written using a constant-width style. [*Example*: The attribute value of `auto` specifies … *end example*]
6. The qualified or unqualified name of a simple type, complex type, or base datatype is written using a distinct style and typeface. [*Example*: The possible values for this attribute are defined by the ST_HexColor simple type. *end example*]

6. Acronyms and Abbreviations

This clause is informative

The following acronyms and abbreviations are used throughout this Part of ISO/IEC 29500

IEC — the International Electrotechnical Commission

ISO — the International Organization for Standardization

W3C — World Wide Web Consortium

End of informative text