

INTERNATIONAL STANDARD

ISO/IEC 22537

First edition
2006-02-15

Information technology — ECMAScript for XML (E4X) specification

*Technologies de l'information — ECMAScript pour spécification
XML (E4X)*

Reference number
ISO/IEC 22537:2006(E)



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Published in Switzerland

Contents

Foreword.....	v
Introduction	vi
1 Scope	1
2 References.....	1
2.1 Normative References	1
2.2 Informative References	1
3 Definitions	2
4 Conformance	3
5 Motivation	3
5.1 The Rise of XML Processing	3
5.2 Current XML Processing Approaches	3
5.3 The E4X Approach	4
6 Design Principles.....	4
7 Notational Conventions	5
7.1 Algorithm Conventions	5
8 Lexical Conventions	9
8.1 Context Keywords	10
8.2 Punctuators	10
8.3 XML Initialiser Input Elements.....	11
9 Types.....	12
9.1 The XML Type.....	12
9.2 The XMList Type	22
9.3 The AttributeName Type	29
9.4 The AnyName Type.....	30
10 Type Conversion.....	30
10.1 ToString	30
10.2 ToXMLString (input argument, [AncestorNamespaces], [IndentLevel])	32
10.3 ToXML	35
10.4 ToXMList.....	39
10.5 ToAttributeName.....	40
10.6 ToXMLName	41
11 Expressions.....	42
11.1 Primary Expressions	42
11.2 Left-Hand-Side Expressions.....	48
11.3 Unary Operators.....	55
11.4 Additive Operators.....	56
11.5 Equality Operators.....	57
11.6 Assignment Operators	58
12 Statements.....	62
12.1 The default xml namespace Statement	62
12.2 The for-in Statement.....	63
12.3 The for-each-in Statement	65
13 Native E4X Objects	67
13.1 The Global Object	67
13.2 Namespace Objects.....	68

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13.3	QName Objects	70
13.4	XML Objects.....	74
13.5	XMLList Objects	92
14	Errors.....	100
Annex A (normative)	Optional Features.....	101

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 22537 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology, Subcommittee SC 22, Programming languages, their environments and system software interfaces*, and was adopted (as Ecma-357), 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.

Introduction

On 13 June 2002, a group of companies led by BEA Systems proposed a set of programming language extensions adding native XML support to ECMAScript (ISO/IEC 16262). The programming language extensions were designed to provide a simple, familiar, general purpose XML programming model that flattens the XML learning curve by leveraging the existing skills and knowledge of one of the largest developer communities worldwide. The benefits of this XML programming model include reduced code complexity, tighter revision cycles, faster time to market, decreased XML footprint requirements and looser coupling between code and XML data.

The ECMAScript group (Ecma TC39-TG1) unanimously agreed to the proposal and established a sub-group to standardize the syntax and semantics of a general purpose, cross platform, vendor neutral set of programming language extensions called ECMAScript for XML (E4X). The development of this International Standard started on 8 August 2002. This Standard was developed as an extension to ECMAScript Edition 3, but may be applied to other versions of ECMAScript as well.

This International Standard adds native XML datatypes to the ECMAScript language, extends the semantics of familiar ECMAScript operators for manipulating XML data and adds a small set of new operators for common XML operations, such as searching and filtering. It also adds support for XML literals, namespaces, qualified names and other mechanisms to facilitate XML processing.

This International Standard will be integrated into future editions of ISO/IEC 16262 (ECMAScript). The ECMAScript group is working on significant enhancements for future editions of the ECMAScript language, including mechanisms for defining XML types using the XML Schema language and support for classes.

Information technology — ECMAScript for XML (E4X) specification

1 Scope

This International Standard defines the syntax and semantics of ECMAScript for XML (E4X), a set of programming language extensions adding native XML support to ECMAScript.

2 References

2.1 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 10646:2003, *Information Technology – Universal Multiple-Octet Coded Character Set (UCS)*.

ISO/IEC 16262:2001, *ECMAScript Language Specification – 2nd edition*.

Document Object Model (DOM) Level 2 Specifications, W3C Recommendation, 13 November 2000.

Extensible Markup Language 1.0 (Second Edition), W3C Recommendation 6 October 2000.

Namespaces in XML, W3C Recommendation, 14 January 1999.

Unicode Inc. (1996), *The Unicode Standard™*, Version 2.0. ISBN: 0-201-48345-9, Addison-Wesley Publishing Co., Menlo Park, California.

Unicode Inc. (1998), *Unicode Technical Report #8: The Unicode Standard™*, Version 2.1.

Unicode Inc. (1998), *Unicode Technical Report #15: Unicode Normalization Forms*.

XML Information Set, W3C Recommendation 24 October 2001.

XML Path Language (XPath) Version 1.0, W3C Recommendation 16 November 1999.

XML Schema Part 1: Structures, W3C Recommendation, 2 May 2001.

XML Schema Part 2: Datatypes, W3C Recommendation, 2 May 2001.

2.2 Informative References

The following are non-normative references

XSL Transformations (XSLT), W3C Recommendation 16 November 1999.