ISO 19115-3:2023-08 (E)

Geographic information - Metadata - Part 3: XML schema implementation for fundamental concepts

Contents

Page

Foreword v

Introduction vii

1 Scope 1

2 Normative references 1

3 Terms,definitionsandabbreviatedterms 1
3.1 Terms and definitions 1
3.2 Abbreviated terms 2

4 Conventions 3
4.1 Availability of ISO/TC 211 resources 3
4.1.1 Maintenance agency for ISO/TC 211 resources 3
4.1.2 Resources provided by this document 3
4.2 Presentation of ISO/TC 211 resources 3
4.2.1 General 3
4.2.2 Provision classes and provisions 3
4.2.3 Conformance classes and conformance tests 4
4.3 Structure of URIs in ISO/TC 211 resources for implementation 5
4.3.1 General 5
4.3.2 Identified resources 5
4.3.3 Basic elements used in URI templates 5
4.3.4 XML schema namespace and location 5
4.3.5 Normative statements 6
4.3.6 Conformance classes and tests 7
4.4 Presentation of information resources in this document 7
4.4.1 General 7
4.4.2 Relations between information resources 7
4.4.3 Location of information resources 9

5 XML schemas 10
5.1 General 10
5.2 XML schemas belonging to the ISO 19115 series 11
5.3 XML schemas outside of the ISO 19115 series 17
5.4 XML schemas required for a minimum metadata interchange XML document 19

6 Requirements of ISO 19115-1:2014 and ISO 19115-2:2019 20
6.1 General 20
6.2 Metadata modules 20

7 Requirements for metadata interchange documents 26

8 RequirementsfordefinedXMLencodings 30
8.1 General 30
8.1.1 Approach 30
8.1.2 Grouping of requirements in XML 30
8.1.3 Executable test suite 31
8.2 Requirements not validated by this document 31
8.3 Using and extending XML resources 31

8.4 Requirements for XML validity 31
8.5 Requirements for metadata modules in XML 32
8.5.1 General 32
8.5.2 Derived from ISO 19115-1 32
8.5.3 Derived from ISO 19115-2 52
8.5.4 Derived from standards outside of the ISO 19115 series 52
8.6 Requirements for extended metadata records 53

9 Requirements dependency diagrams 55

10 Design goals and implementation 55
10.1 Introduction to design goals and decisions 55
10.2 Automated generation of XML schema 56
10.3 Multilingual adaptability and polymorphism 56
10.4 Core decisions 56
10.5 Extensions to the UML models in the ISO geographic information series of International Standards for this schema 57
10.6 UML packages and XML namespaces 57
10.7 UML model for XML implementation 57
10.8 Implementation approach for decoupling XML packages 57
10.8.1 General 57
10.8.2 Implementation approach to decouple optional classes 59
10.9 XML encoding rules 61
10.10 Default values 62

Annex A (normative) Conformance test suite 63

Annex B (informative) Supporting XML resources 94

Annex C (informative) Encoding descriptions 96

Annex D (informative) Implementation examples 98

Bibliography 99