

# ISO 19115-3:2023-08 (E)

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

---

<b>Contents</b>		<b>Page</b>
Foreword .....		v
Introduction .....		vii
1	Scope .....	1
2	Normative references .....	1
3	Terms, definitions and abbreviated terms .....	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	Requirements for defined XML encodings .....	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