

ISO 19136-2:2015-08 (E)

Geographic information - Geography Markup Language (GML) - Part 2: Extended schemas and encoding rules

Contents		Page
Foreword		vi
Introduction		vii
1	Scope	1
2	Conformance	1
3	Normative references	2
4	Terms, definitions, symbols and abbreviated terms	2
4.1	General	2
4.2	Terms and definitions	2
4.3	Symbols and abbreviated terms	3
5	Conventions	3
5.1	MIME media types	3
5.2	XML namespaces	3
5.3	Deprecated parts of previous versions of GML	4
6	Additional base types	5
6.1	Target namespace	5
6.2	Localisable strings	5
6.2.1	LanguageStringType	5
6.2.2	Additional types based on LanguageStringType	5
6.3	TimePositionUnion	5
6.4	Requirements class	7
6.5	Conformance	7
7	Compact Encodings of Commonly Used GML Geometries	8
7.1	Target namespace	8
7.2	Introduction	8
7.3	SimplePolygon	8
7.4	SimpleRectangle	9
7.5	SimpleTriangle	10
7.6	SimpleArcString	10
7.7	SimpleArc	11
7.8	SimpleArcByCenterPoint	11
7.9	SimpleArcStringByBulge	12
7.10	SimpleArcByBulge	12
7.11	SimpleCircle	13
7.12	SimpleCircleByCenterPoint	13
7.13	SimpleMultiPoint	14
7.14	MultiPointPropertyType	14
7.15	Requirements class	14
7.16	Conformance	14
8	Triangulated Irregular Networks	15
8.1	Target namespace	15
8.2	Introduction	15
8.3	TriangulatedSurface	15

8.4	SimpleTrianglePatch	15
8.5	TIN	16
8.6	TINElement	16
8.7	TINElementPropertyType	17
8.8	TINElementTypeType	17
8.9	Requirements class	19
8.10	Conformance	20
9	Linear Referencing	20
9.1	Target namespaces	20
9.2	Introduction	20
9.3	Basic Linear Referencing	21
9.3.1	Target namespace	21
9.3.2	Introduction	21
9.3.3	PositionExpression	21
9.3.4	PositionExpressionPropertyType	21
9.3.5	LinearElement	22
9.3.6	LinearElementPropertyType	23
9.3.7	StartValueType	23
9.3.8	LinearReferencingMethod	23
9.3.9	LinearReferencingMethodPropertyType	24
9.3.10	DistanceExpressionType	24
9.3.11	DistanceExpressionPropertyType	25
9.3.12	AlongReferent	25
9.3.13	AlongReferentPropertyType	25
9.3.14	Referent	26
9.3.15	ReferentPropertyType	27
9.3.16	MeasureType	27
9.3.17	LRMNameType	27
9.3.18	LRMTypeType	31
9.3.19	ReferentTypeType	32
9.3.20	LinearSRS	33
9.3.21	LinearSRSPPropertyType	33
9.4	Linear Referencing Towards Referent	34
9.4.1	Target namespace	34
9.4.2	Introduction	34
9.4.3	DualAlongReferent	34
9.4.4	DualAlongReferentPropertyType	34
9.5	Linear Referencing Offset	35
9.5.1	Target namespace	35
9.5.2	Introduction	35
9.5.3	LRMWithOffset	35
9.5.4	LRMWithOffsetPropertyType	35
9.5.5	LateralOffsetDistanceExpressionType	36
9.5.6	LateralOffsetExpressionType	36
9.5.7	VerticalOffsetExpressionType	37
9.5.8	LateralOffsetDirectionType	38
9.5.9	VerticalOffsetDirectionType	39
9.5.10	LateralOffsetLinearSRS	39
9.5.11	LateralOffsetLinearSRSPPropertyType	40
9.6	Linear Referencing Offset Vectors	41
9.6.1	Target namespace	41
9.6.2	Introduction	41
9.6.3	VectorOffsetDistanceExpressionType	41
9.6.4	VectorOffsetExpressionType	41
9.6.5	VectorOffsetLinearSRS	42
9.6.6	VectorOffsetLinearSRSPPropertyType	45
9.7	Requirements classes	45
9.8	Conformance	47
10	ReferenceableGrid	48

10.1	Target namespace	48
10.3	AbstractReferenceableGrid	49
10.4	ReferenceableGridByArray	50
10.5	ReferenceableGridByVectorsType, ReferenceableGridByVectors	51
10.6	ReferenceableGridByTransformation	57
10.7	gridCRS	58
10.8	Coverages using ReferenceableGrid	58
10.9	Requirements classes	58
10.10	Conformance	59
11	Codelists,dictionariesanddefinitions	60
11.1	Overview	60
11.2	Requirements class	61
11.3	Conformance	62
12	Encoding rule	62
12.1	Target namespace	62
12.2	Improved conversion rule	62
12.2.1	Conversion rule changes	62
12.2.2	Requirements class	64
12.2.3	Conformance	65
12.3	Association class conversion rule	67
12.3.1	Overview	67
12.3.2	Requirements class	68
12.3.3	Conformance	69
12.4	Encoding rule extensions	70
12.4.1	Overview	70
12.4.2	gmlexr:extendedEncodingRule	70
12.4.3	Requirements class	70
12.4.4	Conformance class	71
	Annex A (informative) Linear referencing method examples	73
	Bibliography	78