Schema documentation for S121.xsd

june 12, 2020

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Namespace: "http://www.iho.int/S-121"

Schema(s)

Main schema S121.xsd

Namespace	http://www.iho.int/S-121	
Properties	attribute form default:	unqualified
	element form default:	qualified
	version:	1.0

Element(s)

Element geographicFeatureType / label

Namespace	http://www.iho.int/S-121
Diagram	
Type	xs:string
Properties	content: simple minOccurs: 0
Source	`<xs:element name="label" type="xs:string" minOccurs="0"/>`

Element geographicFeatureType / collectionName

Namespace	http://www.iho.int/S-121
Diagram	
Type	xs:string
Properties	content: simple minOccurs: 0
Source	`<xs:element minOccurs="0" name="collectionName" type="xs:string"/>`

Element geographicFeatureType / featureName

Namespace	http://www.iho.int/S-121
Diagram	
Type	featureNameType
Properties	content: complex minOccurs: 0 maxOccurs: unbounded
Model	displayName{0,1} , Language , Name
Children	Language, Name, displayName
Instance	`<featureName xmlns="http://www.iho.int/S-121">`

```
  <displayName>{0,1}</displayName>
  <Language>{1,1}</Language>
  <Name>{1,1}</Name>
</featureName>
```

Source

```
<xs:element maxOccurs="unbounded" name="featureName" type="featureNameType" minOccurs="0"/>
```

Element featureNameType / displayName

Namespace: http://www.iho.int/S-121

Diagram

Type: xs:boolean

Properties

content:	simple
minOccurs:	0

Source

```
<xs:element minOccurs="0" name="displayName" type="xs:boolean"/>
```

Element featureNameType / Language

Namespace: http://www.iho.int/S-121

Diagram

Type: xs:string

Properties

content:	simple

Source

```
<xs:element name="Language" type="xs:string"/>
```

Element featureNameType / Name

Namespace: http://www.iho.int/S-121

Diagram

Type: xs:string

Properties

content:	simple

Source

```
<xs:element name="Name" type="xs:string"/>
```

Element geographicFeatureType / context

Namespace: http://www.iho.int/S-121

Diagram

Type	xs:string
Properties	content: simple minOccurs: 0
Source	`<xs:element minOccurs="0" name="context" type="xs:string"/>`

Element geographicFeatureType / startLifespan

Namespace	http://www.iho.int/S-121
Diagram	
Type	xs:date
Properties	content: simple minOccurs: 0
Source	`<xs:element minOccurs="0" name="startLifespan" type="xs:date"/>`

Element geographicFeatureType / endLifespan

Namespace	http://www.iho.int/S-121
Diagram	
Type	xs:date
Properties	content: simple minOccurs: 0
Source	`<xs:element minOccurs="0" name="endLifespan" type="xs:date"/>`

Element geographicFeatureType / releasabilityType

Namespace	http://www.iho.int/S-121
Diagram	
Type	releasabilityTypeType
Properties	content: simple minOccurs: 0
Facets	enumeration Internal enumeration Official enumeration Controlled
Source	`<xs:element minOccurs="0" name="releasabilityType" type="releasabilityTypeType"/>`

Element geographicFeatureType / source

Namespace	http://www.iho.int/S-121
Annotations	association to a SourceType information type which represents the source of the feature

Diagram	
Type	gml:ReferenceType
Properties	content: `complex` minOccurs: `0` maxOccurs: `unbounded`
Model	
Attributes	

QName	Type	Fixed	Default	Use	
nilReason	gml:NilReasonType			optional	
owns	boolean		false	optional	
xlink:actuate	xlink:actuateType			optional	
xlink:arcrole	xlink:arcroleType			optional	
xlink:href	xlink:hrefType			optional	
xlink:role	xlink:roleType			optional	
xlink:show	xlink:showType			optional	
xlink:title	xlink:titleAttrType			optional	
xlink:type	xlink:typeType	simple		optional	

Source

```
<xs:element minOccurs="0" name="source" type="gml:ReferenceType" maxOccurs="unbounded">
  <xs:annotation>
    <xs:documentation>association to a SourceType information type which represents the source of
 the feature</xs:documentation>
  </xs:annotation>
</xs:element>
```

Element `geographicFeatureType / administration`

Namespace	http://www.iho.int/S-121
Annotations	`association with a BAU information type`

Diagram	
Type	gml:ReferenceType
Properties	content: `complex` minOccurs: `0`
Model	
Attributes	

QName	Type	Fixed	Default	Use	
nilReason	gml:NilReasonType			optional	
owns	boolean		false	optional	
xlink:actuate	xlink:actuateType			optional	
xlink:arcrole	xlink:arcroleType			optional	
xlink:href	xlink:hrefType			optional	
xlink:role	xlink:roleType			optional	
xlink:show	xlink:showType			optional	
xlink:title	xlink:titleAttrType			optional	
xlink:type	xlink:typeType	simple		optional	

Source

```
<xs:element minOccurs="0" name="administration" type="gml:ReferenceType">
  <xs:annotation>
    <xs:documentation>association with a BAU information type</xs:documentation>
  </xs:annotation>
</xs:element>
```

Element `geographicFeatureType / refersTo`

Namespace	http://www.iho.int/S-121
Annotations	`Association with additional spatial information information types. Used to associate a geogrpahic feature with an alternative (textual) description of its location.`

Diagram	
Type	gml:ReferenceType
Properties	content: `complex` minOccurs: `0` maxOccurs: `unbounded`
Model	
Attributes	

QName	Type	Fixed	Default	Use	
nilReason	gml:NilReasonType			optional	
owns	boolean		false	optional	
xlink:actuate	xlink:actuateType			optional	
xlink:arcrole	xlink:arcroleType			optional	
xlink:href	xlink:hrefType			optional	
xlink:role	xlink:roleType			optional	
xlink:show	xlink:showType			optional	
xlink:title	xlink:titleAttrType			optional	
xlink:type	xlink:typeType	simple		optional	

Source

```
<xs:element minOccurs="0" name="refersTo" type="gml:ReferenceType" maxOccurs="unbounded">
  <xs:annotation>
    <xs:documentation>Association with additional spatial information information types. Used
 to associate a geogrpahic feature with an alternative (textual) description of its location.</
xs:documentation>
  </xs:annotation>
</xs:element>
```

Element `geographicFeatureType / locationReference`

Namespace	http://www.iho.int/S-121

Diagram	
Type	locationReferenceType
Properties	content: complex minOccurs: 0 maxOccurs: unbounded
Model	categoryOfLocation{0,1} , locationByText{0,1} , textLat{0,1} , textLon{0,1} , referenceSystem{0,1}
Children	categoryOfLocation, locationByText, referenceSystem, textLat, textLon

Instance	`<locationReference xmlns="http://www.iho.int/S-121">`
	`  <categoryOfLocation>{0,1}</categoryOfLocation>`
	`  <locationByText>{0,1}</locationByText>`
	`  <textLat>{0,1}</textLat>`
	`  <textLon>{0,1}</textLon>`
	`  <referenceSystem>{0,1}</referenceSystem>`
	`</locationReference>`

Source	`<xs:element minOccurs="0" name="locationReference" type="locationReferenceType"` ` maxOccurs="unbounded"/>`

Element locationReferenceType / categoryOfLocation

Namespace	http://www.iho.int/S-121
Diagram	
Type	restriction of xs:string
Properties	content: simple minOccurs: 0
Facets	enumeration: AdditionalSpatialInformation enumeration: OriginalLocation enumeration: OfficialLocation enumeration: CommonLocation enumeration: GlobalLocation enumeration: WGS84Location

Source	`<xs:element minOccurs="0" name="categoryOfLocation">`
	`  <xs:simpleType>`
	`  <xs:restriction base="xs:string">`
	`  <xs:enumeration value="AdditionalSpatialInformation"/>`
	`  <xs:enumeration value="OriginalLocation"/>`
	`  <xs:enumeration value="OfficialLocation"/>`
	`  <xs:enumeration value="CommonLocation"/>`

```
      <xs:enumeration value="GlobalLocation"/>
      <xs:enumeration value="WGS84Location"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
```

Element locationReferenceType / locationByText

Namespace	http://www.iho.int/S-121
Diagram	
Type	xs:string
Properties	content: simple minOccurs: 0
Source	`<xs:element minOccurs="0" name="locationByText" type="xs:string"/>`

Element locationReferenceType / textLat

Namespace	http://www.iho.int/S-121
Diagram	
Type	xs:string
Properties	content: simple minOccurs: 0
Source	`<xs:element name="textLat" type="xs:string" minOccurs="0"/>`

Element locationReferenceType / textLon

Namespace	http://www.iho.int/S-121
Diagram	
Type	xs:string
Properties	content: simple minOccurs: 0
Source	`<xs:element minOccurs="0" name="textLon" type="xs:string"/>`

Element locationReferenceType / referenceSystem

Namespace	http://www.iho.int/S-121
Diagram	
Type	xs:string
Properties	content: simple

	minOccurs: 0
Source	`<xs:element name="referenceSystem" type="xs:string" minOccurs="0"/>`

Element geographicFeatureType / componentOf

Namespace	http://www.iho.int/S-121
Annotations	Generic association between geographic features
Diagram	
Type	gml:ReferenceType
Properties	content: complex minOccurs: 0 maxOccurs: unbounded
Model	
Attributes	

QName	Type	Fixed	Default	Use
nilReason	gml:NilReasonType			optional
owns	boolean		false	optional
xlink:actuate	xlink:actuateType			optional
xlink:arcrole	xlink:arcroleType			optional
xlink:href	xlink:hrefType			optional
xlink:role	xlink:roleType			optional
xlink:show	xlink:showType			optional
xlink:title	xlink:titleAttrType			optional
xlink:type	xlink:typeType	simple		optional

Source

```
<xs:element maxOccurs="unbounded" minOccurs="0" name="componentOf" type="gml:ReferenceType">
  <xs:annotation>
    <xs:documentation>Generic association between geographic features</xs:documentation>
  </xs:annotation>
</xs:element>
```

Element geographicFeatureType / consistsOf

Namespace	http://www.iho.int/S-121

Annotations	`inverse generic association between geographic features`
Diagram	
Type	gml:ReferenceType
Properties	content: `complex` minOccurs: `0` maxOccurs: `unbounded`
Model	
Attributes	

QName	Type	Fixed	Default	Use	
nilReason	gml:NilReasonType			optional	
owns	boolean		false	optional	
xlink:actuate	xlink:actuateType			optional	
xlink:arcrole	xlink:arcroleType			optional	
xlink:href	xlink:hrefType			optional	
xlink:role	xlink:roleType			optional	
xlink:show	xlink:showType			optional	
xlink:title	xlink:titleAttrType			optional	
xlink:type	xlink:typeType	simple		optional	

Source

```
<xs:element maxOccurs="unbounded" minOccurs="0" name="consistsOf" type="gml:ReferenceType">
  <xs:annotation>
    <xs:documentation>inverse generic association between geographic features</xs:documentation>
  </xs:annotation>
</xs:element>
```

Element `locationType / interpolationType`

Namespace	http://www.iho.int/S-121
Annotations	`interpolation role (and pointType) are both from the S-121 model and only included in point features.`

Diagram	
Type	restriction of xs:string
Properties	content: `simple` minOccurs: `0`
Facets	enumeration `deflection` enumeration `densification`

Source	`<xs:element minOccurs="0" name="interpolationType">`
	`  <xs:annotation>`
	`  <xs:documentation>interpolation role (and pointType) are both from the S-121 model and only included in point features.</xs:documentation>`
	`  </xs:annotation>`
	`  <xs:simpleType>`
	`  <xs:restriction base="xs:string">`
	`  <xs:enumeration value="deflection"/>`
	`  <xs:enumeration value="densification"/>`
	`  </xs:restriction>`
	`  </xs:simpleType>`
	`</xs:element>`

Element `locationType / pointType`

Namespace	http://www.iho.int/S-121
Diagram	
Type	restriction of xs:string
Properties	content: `simple` minOccurs: `0`
Facets	enumeration `defined` enumeration `computed`

Source	`<xs:element name="pointType" minOccurs="0">`
	`  <xs:simpleType>`
	`  <xs:restriction base="xs:string">`
	`  <xs:enumeration value="defined"/>`
	`  <xs:enumeration value="computed"/>`
	`  </xs:restriction>`
	`  </xs:simpleType>`
	`</xs:element>`

Element `locationType / geometry`

Namespace	http://www.iho.int/S-121
Annotations	`We're using the gml:PointPropertyType becasue the S-100 namespace isn't recognised as a geometry column by the GDAL GMLAS driver.`

Diagram	
Type	gml:PointPropertyType
Properties	content: complex minOccurs: 0
Model	gml:Point
Children	gml:Point

Instance	`<geometry xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" xl`
	`www.iho.int/S-121" xmlns:gml="http://www.opengis.net/gml/3.2">`
	`  <gml:Point gml:id="" srsDimension="" srsName="">{1,1}</gml:Point>`
	`</geometry>`

Attributes

QName	Type	Fixed	Default	Use	
nilReason	gml:NilReasonType			optional	
owns	boolean		false	optional	
xlink:actuate	xlink:actuateType			optional	
xlink:arcrole	xlink:arcroleType			optional	
xlink:href	xlink:hrefType			optional	
xlink:role	xlink:roleType			optional	
xlink:show	xlink:showType			optional	
xlink:title	xlink:titleAttrType			optional	
xlink:type	xlink:typeType	simple		optional	

Source

```
<xs:element minOccurs="0" name="geometry" type="gml:PointPropertyType">
  <xs:annotation>
    <xs:documentation>We're using the gml:PointPropertyType becasue the S-100 namespace isn't
 recognised as a geometry column by the GDAL GMLAS driver.</xs:documentation>
  </xs:annotation>
</xs:element>
```

Element `limitType / arcGeometryType`

Namespace	http://www.iho.int/S-121

Diagram	
Type	arcGeometryTypeType
Properties	content: `simple` minOccurs: `0`
Facets	enumeration `geodesic` enumeration `loxodrome`
Source	`<xs:element minOccurs="0" name="arcGeometryType" type="arcGeometryTypeType"/>`

Element `limitType / geometry`

Namespace	http://www.iho.int/S-121
Annotations	`if you want inline geometry (which can be read by QGIS!)`
Diagram	
Type	gml:CurvePropertyType
Properties	content: `complex` minOccurs: `0`
Model	gml:AbstractCurve
Children	gml:AbstractCurve

Instance	`<geometry xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" xl`
	`www.iho.int/S-121" xmlns:gml="http://www.opengis.net/gml/3.2">`
	`  <gml:AbstractCurve gml:id="" srsDimension="" srsName="">{1,1}</gml:AbstractCurve>`
	`</geometry>`

Attributes

QName	Type	Fixed	Default	Use	
nilReason	gml:NilReasonType			optional	
owns	boolean		false	optional	
xlink:actuate	xlink:actuateType			optional	
xlink:arcrole	xlink:arcroleType			optional	
xlink:href	xlink:hrefType			optional	
xlink:role	xlink:roleType			optional	
xlink:show	xlink:showType			optional	

	QName	Type	Fixed	Default	Use	
	xlink:title	xlink:titleAttrType			optional	
	xlink:type	xlink:typeType	simple		optional	

Source

```
<xs:element minOccurs="0" name="geometry" type="gml:CurvePropertyType">
  <xs:annotation>
    <xs:documentation>if you want inline geometry (which can be read by QGIS!)</xs:documentation>
  </xs:annotation>
</xs:element>
```

Element zoneType / jurisdictionDomain

Namespace	http://www.iho.int/S-121
Diagram	
Type	restriction of xs:string
Properties	content: simple minOccurs: 0
Facets	enumeration airspace enumeration landsurface enumeration watersurface enumeration watercolumn enumeration seabedsurface enumeration subsoil

Source

```
<xs:element name="jurisdictionDomain" minOccurs="0">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:enumeration value="airspace"/>
      <xs:enumeration value="landsurface"/>
      <xs:enumeration value="watersurface"/>
      <xs:enumeration value="watercolumn"/>
      <xs:enumeration value="seabedsurface"/>
      <xs:enumeration value="subsoil"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
```

Element zoneType / geometry

Namespace	http://www.iho.int/S-121
Annotations	if you want inline geometry (which can be read by QGIS!)

Diagram	
Type	gml:SurfacePropertyType
Properties	content: complex minOccurs: 0
Model	gml:AbstractSurface
Children	gml:AbstractSurface

Instance	`<geometry xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" xl`
	`www.iho.int/S-121" xmlns:gml="http://www.opengis.net/gml/3.2">`
	`  <gml:AbstractSurface gml:id="" srsDimension="" srsName="">{1,1}</gml:AbstractSurface>`
	`</geometry>`

Attributes

QName	Type	Fixed	Default	Use	
nilReason	gml:NilReasonType			optional	
owns	boolean		false	optional	
xlink:actuate	xlink:actuateType			optional	
xlink:arcrole	xlink:arcroleType			optional	
xlink:href	xlink:hrefType			optional	
xlink:role	xlink:roleType			optional	
xlink:show	xlink:showType			optional	
xlink:title	xlink:titleAttrType			optional	
xlink:type	xlink:typeType	simple		optional	

Source

```
<xs:element minOccurs="0" name="geometry" type="gml:SurfacePropertyType">
  <xs:annotation>
    <xs:documentation>if you want inline geometry (which can be read by QGIS!)</xs:documentation>
  </xs:annotation>
</xs:element>
```

Element `BaselinePoint`

Namespace	http://www.iho.int/S-121

Diagram

locationType
Base Type geographicFeatureType
geographicFeatureType (extension base)
Base Type s100:AbstractFeatureType
Abstract true
s100:AbstractFeatureType (extension base)
gml:AbstractFeatureType (extension base)
gml:AbstractGMLType (extension base)
Attributes
gml:id
The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory...
gml:boundedBy
This property describes the minimum bounding box or rectangle that encloses the entire feature.
The basic feature model is given by the gml:AbstractFeatureType. The content model for gml:AbstractFeatureType adds two...
featureObjectIdentifier
0..∞ informationAssociation
0..∞ featureAssociation
0..∞ invFeatureAssociation
Abstract type for an S-100 feature. This is the base type from which domain application schemas derive definitions for...
label
Type xs:string
collectionName
Type xs:string
0..∞ featureName
Type featureNameType
context
Type xs:string
startLifespan
Type xs:date
endLifespan
Type xs:date
releasabilityType
Type releasabilityTypeType
0..∞ source
Type gml:ReferenceType
association to a SourceType information type which represents the source of the feature
administration
Type gml:ReferenceType

Type	locationType
Type hierarchy	• gml:AbstractGMLType • gml:AbstractFeatureType • AbstractFeatureType • geographicFeatureType • locationType
Properties	content: complex
Used by	Element Group Features
Model	gml:boundedBy{0,1} , featureObjectIdentifier{0,1} , informationAssociation* , featureAssociation* , invFeatureAssociation* , label{0,1} , collectionName{0,1} , featureName* , context{0,1} , startLifespan{0,1} , endLifespan{0,1} , releasabilityType{0,1} , source* , administration{0,1} , refersTo* , locationReference* , componentOf* , consistsOf* , interpolationType{0,1} , pointType{0,1} , geometry{0,1}
Children	administration, collectionName, componentOf, consistsOf, context, endLifespan, featureAssociation, featureName, featureObjectIdentifier, geometry, gml:boundedBy, informationAssociation, interpolationType, invFeatureAssociation, label, locationReference, pointType, refersTo, releasabilityType, source, startLifespan

Instance

```
<BaselinePoint gml:id="" xmlns="http://www.iho.int/S-121" xmlns:gml="http://www.opengis.net/
gml/3.2" xmlns:s100="http://www.iho.int/s100gml/1.0">
  <gml:boundedBy nilReason="">{0,1}</gml:boundedBy>
  <s100:featureObjectIdentifier>{0,1}</s100:featureObjectIdentifier>
  <s100:informationAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:informationAssociation>
  <s100:featureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="" xl
s100:featureAssociation>
  <s100:invFeatureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:invFeatureAssociation>
  <label>{0,1}</label>
  <collectionName>{0,1}</collectionName>
  <featureName>{0,unbounded}</featureName>
  <context>{0,1}</context>
  <startLifespan>{0,1}</startLifespan>
  <endLifespan>{0,1}</endLifespan>
  <releasabilityType>{0,1}</releasabilityType>
  <source xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" xl
source>
  <administration xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:sho
administration>
  <refersTo xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x
refersTo>
  <locationReference>{0,unbounded}</locationReference>
  <componentOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
componentOf>
  <consistsOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
consistsOf>
  <interpolationType>{0,1}</interpolationType>
  <pointType>{0,1}</pointType>
  <geometry xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x
geometry>
</BaselinePoint>
```

Attributes

QName	Type	Use	
gml:id	ID	required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		

Source

```
<xs:element name="BaselinePoint" type="locationType"/>
```

Element LimitPoint

Namespace	http://www.iho.int/S-121

Diagram

locationType
Base Type geographicFeatureType
geographicFeatureType (extension base)
Base Type s100:AbstractFeatureType
Abstract true
s100:AbstractFeatureType (extension base)
gml:AbstractFeatureType (extension base)
gml:AbstractGMLType (extension base)
Attributes
gml:id
The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory...
gml:boundedBy
This property describes the minimum bounding box or rectangle that encloses the entire feature.
The basic feature model is given by the gml:AbstractFeatureType. The content model for gml:AbstractFeatureType adds two...
featureObjectIdentifier
0..∞ informationAssociation
0..∞ featureAssociation
0..∞ invFeatureAssociation
Abstract type for an S-100 feature. This is the base type from which domain application schemas derive definitions for...
label
Type xs:string
collectionName
Type xs:string
0..∞ featureName
Type featureNameType
context
Type xs:string
startLifespan
Type xs:date
endLifespan
Type xs:date
releasabilityType
Type releasabilityTypeType
0..∞ source
Type gml:ReferenceType
association to a SourceType information type which represents the source of the feature
administration
Type gml:ReferenceType

Type	locationType
Type hierarchy	• gml:AbstractGMLType • gml:AbstractFeatureType • AbstractFeatureType • geographicFeatureType • locationType
Properties	content: complex
Used by	Element Group Features
Model	gml:boundedBy{0,1} , featureObjectIdentifier{0,1} , informationAssociation* , featureAssociation* , invFeatureAssociation* , label{0,1} , collectionName{0,1} , featureName* , context{0,1} , startLifespan{0,1} , endLifespan{0,1} , releasabilityType{0,1} , source* , administration{0,1} , refersTo* , locationReference* , componentOf* , consistsOf* , interpolationType{0,1} , pointType{0,1} , geometry{0,1}
Children	administration, collectionName, componentOf, consistsOf, context, endLifespan, featureAssociation, featureName, featureObjectIdentifier, geometry, gml:boundedBy, informationAssociation, interpolationType, invFeatureAssociation, label, locationReference, pointType, refersTo, releasabilityType, source, startLifespan

Instance

```
<LimitPoint gml:id="" xmlns="http://www.iho.int/S-121" xmlns:gml="http://www.opengis.net/
gml/3.2" xmlns:s100="http://www.iho.int/s100gml/1.0">
  <gml:boundedBy nilReason="">{0,1}</gml:boundedBy>
  <s100:featureObjectIdentifier>{0,1}</s100:featureObjectIdentifier>
  <s100:informationAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:informationAssociation>
  <s100:featureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="" xl
s100:featureAssociation>
  <s100:invFeatureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:invFeatureAssociation>
  <label>{0,1}</label>
  <collectionName>{0,1}</collectionName>
  <featureName>{0,unbounded}</featureName>
  <context>{0,1}</context>
  <startLifespan>{0,1}</startLifespan>
  <endLifespan>{0,1}</endLifespan>
  <releasabilityType>{0,1}</releasabilityType>
  <source xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" xl
source>
  <administration xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:sho
administration>
  <refersTo xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x
refersTo>
  <locationReference>{0,unbounded}</locationReference>
  <componentOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show=
componentOf>
  <consistsOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
consistsOf>
  <interpolationType>{0,1}</interpolationType>
  <pointType>{0,1}</pointType>
  <geometry xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x
geometry>
</LimitPoint>
```

Attributes

QName	Type	Use	
gml:id	ID	required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		

Source

```
<xs:element name="LimitPoint" type="locationType"/>
```

Element BoundaryPoint

Namespace	http://www.iho.int/S-121

Diagram

locationType
Base Type geographicFeatureType
geographicFeatureType (extension base)
Base Type s100:AbstractFeatureType
Abstract true
s100:AbstractFeatureType (extension base)
gml:AbstractFeatureType (extension base)
gml:AbstractGMLType (extension base)
Attributes
gml:id
The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory...
gml:boundedBy
This property describes the minimum bounding box or rectangle that encloses the entire feature.
The basic feature model is given by the gml:AbstractFeatureType. The content model for gml:AbstractFeatureType adds two...
featureObjectIdentifier
0..∞ informationAssociation
0..∞ featureAssociation
0..∞ invFeatureAssociation
Abstract type for an S-100 feature. This is the base type from which domain application schemas derive definitions for...
label Type xs:string
collectionName Type xs:string
0..∞ featureName Type featureNameType
context Type xs:string
startLifespan Type xs:date
endLifespan Type xs:date
releasabilityType Type releasabilityTypeType
0..∞ source Type gml:ReferenceType
association to a SourceType information type which represents the source of the feature
administration Type gml:ReferenceType

Type	locationType
Type hierarchy	• gml:AbstractGMLType • gml:AbstractFeatureType • AbstractFeatureType • geographicFeatureType • locationType
Properties	content: complex
Used by	Element Group Features
Model	gml:boundedBy{0,1} , featureObjectIdentifier{0,1} , informationAssociation* , featureAssociation* , invFeatureAssociation* , label{0,1} , collectionName{0,1} , featureName* , context{0,1} , startLifespan{0,1} , endLifespan{0,1} , releasabilityType{0,1} , source* , administration{0,1} , refersTo* , locationReference* , componentOf* , consistsOf* , interpolationType{0,1} , pointType{0,1} , geometry{0,1}
Children	administration, collectionName, componentOf, consistsOf, context, endLifespan, featureAssociation, featureName, featureObjectIdentifier, geometry, gml:boundedBy, informationAssociation, interpolationType, invFeatureAssociation, label, locationReference, pointType, refersTo, releasabilityType, source, startLifespan

Instance

```
<BoundaryPoint gml:id="" xmlns="http://www.iho.int/S-121" xmlns:gml="http://www.opengis.net/
gml/3.2" xmlns:s100="http://www.iho.int/s100gml/1.0">
  <gml:boundedBy nilReason="">{0,1}</gml:boundedBy>
  <s100:featureObjectIdentifier>{0,1}</s100:featureObjectIdentifier>
  <s100:informationAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:informationAssociation>
  <s100:featureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="" xl
s100:featureAssociation>
  <s100:invFeatureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:invFeatureAssociation>
  <label>{0,1}</label>
  <collectionName>{0,1}</collectionName>
  <featureName>{0,unbounded}</featureName>
  <context>{0,1}</context>
  <startLifespan>{0,1}</startLifespan>
  <endLifespan>{0,1}</endLifespan>
  <releasabilityType>{0,1}</releasabilityType>
  <source xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" xl
source>
  <administration xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:sho
administration>
  <refersTo xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x
refersTo>
  <locationReference>{0,unbounded}</locationReference>
  <componentOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show=
componentOf>
  <consistsOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
consistsOf>
  <interpolationType>{0,1}</interpolationType>
  <pointType>{0,1}</pointType>
  <geometry xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x
geometry>
</BoundaryPoint>
```

Attributes

QName	Type	Use	
gml:id	ID	required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		

Source

```
<xs:element name="BoundaryPoint" type="locationType"/>
```

Element ContributingPoint

Namespace	http://www.iho.int/S-121

Diagram

locationType
Base Type geographicFeatureType
geographicFeatureType (extension base)
Base Type s100:AbstractFeatureType
Abstract true
s100:AbstractFeatureType (extension base)
gml:AbstractFeatureType (extension base)
gml:AbstractGMLType (extension base)
Attributes
gml:id
The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory...
gml:boundedBy
This property describes the minimum bounding box or rectangle that encloses the entire feature.
The basic feature model is given by the gml:AbstractFeatureType. The content model for gml:AbstractFeatureType adds two...
featureObjectIdentifier
0..∞ informationAssociation
0..∞ featureAssociation
0..∞ invFeatureAssociation
Abstract type for an S-100 feature. This is the base type from which domain application schemas derive definitions for...
label
Type xs:string
collectionName
Type xs:string
0..∞ featureName
Type featureNameType
context
Type xs:string
startLifespan
Type xs:date
endLifespan
Type xs:date
releasabilityType
Type releasabilityTypeType
0..∞ source
Type gml:ReferenceType
association to a SourceType information type which represents the source of the feature
administration
Type gml:ReferenceType

Type	locationType
Type hierarchy	• gml:AbstractGMLType • gml:AbstractFeatureType • AbstractFeatureType • geographicFeatureType • locationType
Properties	content: complex
Used by	Element Group Features
Model	gml:boundedBy{0,1} , featureObjectIdentifier{0,1} , informationAssociation* , featureAssociation* , invFeatureAssociation* , label{0,1} , collectionName{0,1} , featureName* , context{0,1} , startLifespan{0,1} , endLifespan{0,1} , releasabilityType{0,1} , source* , administration{0,1} , refersTo* , locationReference* , componentOf* , consistsOf* , interpolationType{0,1} , pointType{0,1} , geometry{0,1}
Children	administration, collectionName, componentOf, consistsOf, context, endLifespan, featureAssociation, featureName, featureObjectIdentifier, geometry, gml:boundedBy, informationAssociation, interpolationType, invFeatureAssociation, label, locationReference, pointType, refersTo, releasabilityType, source, startLifespan

Instance

```
<ContributingPoint gml:id="" xmlns="http://www.iho.int/S-121" xmlns:gml="http://www.opengis.net/
gml/3.2" xmlns:s100="http://www.iho.int/s100gml/1.0">
  <gml:boundedBy nilReason="">{0,1}</gml:boundedBy>
  <s100:featureObjectIdentifier>{0,1}</s100:featureObjectIdentifier>
  <s100:informationAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:informationAssociation>
  <s100:featureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="" xl
s100:featureAssociation>
  <s100:invFeatureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:invFeatureAssociation>
  <label>{0,1}</label>
  <collectionName>{0,1}</collectionName>
  <featureName>{0,unbounded}</featureName>
  <context>{0,1}</context>
  <startLifespan>{0,1}</startLifespan>
  <endLifespan>{0,1}</endLifespan>
  <releasabilityType>{0,1}</releasabilityType>
  <source xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" xl
source>
  <administration xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:sho
administration>
  <refersTo xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x
refersTo>
  <locationReference>{0,unbounded}</locationReference>
  <componentOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show=
componentOf>
  <consistsOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
consistsOf>
  <interpolationType>{0,1}</interpolationType>
  <pointType>{0,1}</pointType>
  <geometry xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x
geometry>
</ContributingPoint>
```

Attributes

QName	Type	Use	
gml:id	ID	required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		

Source

```
<xs:element name="ContributingPoint" type="locationType"/>
```

Element Location

Namespace	http://www.iho.int/S-121

Diagram

locationType
Base Type geographicFeatureType
geographicFeatureType (extension base)
Base Type s100:AbstractFeatureType
Abstract true
s100:AbstractFeatureType (extension base)
gml:AbstractFeatureType (extension base)
gml:AbstractGMLType (extension base)
Attributes
gml:id
The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory...
gml:boundedBy
This property describes the minimum bounding box or rectangle that encloses the entire feature.
The basic feature model is given by the gml:AbstractFeatureType. The content model for gml:AbstractFeatureType adds two...
featureObjectIdentifier
0..∞ informationAssociation
0..∞ featureAssociation
0..∞ invFeatureAssociation
Abstract type for an S-100 feature. This is the base type from which domain application schemas derive definitions for...
label
Type xs:string
collectionName
Type xs:string
0..∞ featureName
Type featureNameType
context
Type xs:string
startLifespan
Type xs:date
endLifespan
Type xs:date
releasabilityType
Type releasabilityTypeType
0..∞ source
Type gml:ReferenceType
association to a SourceType information type which represents the source of the feature
administration
Type gml:ReferenceType

Type	locationType
Type hierarchy	• gml:AbstractGMLType • gml:AbstractFeatureType • AbstractFeatureType • geographicFeatureType • locationType
Properties	content: complex
Used by	Element Group Features
Model	gml:boundedBy{0,1} , featureObjectIdentifier{0,1} , informationAssociation* , featureAssociation* , invFeatureAssociation* , label{0,1} , collectionName{0,1} , featureName* , context{0,1} , startLifespan{0,1} , endLifespan{0,1} , releasabilityType{0,1} , source* , administration{0,1} , refersTo* , locationReference* , componentOf* , consistsOf* , interpolationType{0,1} , pointType{0,1} , geometry{0,1}
Children	administration, collectionName, componentOf, consistsOf, context, endLifespan, featureAssociation, featureName, featureObjectIdentifier, geometry, gml:boundedBy, informationAssociation, interpolationType, invFeatureAssociation, label, locationReference, pointType, refersTo, releasabilityType, source, startLifespan

Instance

```
<Location gml:id="" xmlns="http://www.iho.int/S-121" xmlns:gml="http://www.opengis.net/
gml/3.2" xmlns:s100="http://www.iho.int/s100gml/1.0">
  <gml:boundedBy nilReason="">{0,1}</gml:boundedBy>
  <s100:featureObjectIdentifier>{0,1}</s100:featureObjectIdentifier>
  <s100:informationAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:informationAssociation>
  <s100:featureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="" xl
s100:featureAssociation>
  <s100:invFeatureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:invFeatureAssociation>
  <label>{0,1}</label>
  <collectionName>{0,1}</collectionName>
  <featureName>{0,unbounded}</featureName>
  <context>{0,1}</context>
  <startLifespan>{0,1}</startLifespan>
  <endLifespan>{0,1}</endLifespan>
  <releasabilityType>{0,1}</releasabilityType>
  <source xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" xl
source>
  <administration xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:sho
administration>
  <refersTo xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x
refersTo>
  <locationReference>{0,unbounded}</locationReference>
  <componentOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
componentOf>
  <consistsOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
consistsOf>
  <interpolationType>{0,1}</interpolationType>
  <pointType>{0,1}</pointType>
  <geometry xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x
geometry>
</Location>
```

Attributes

QName	Type	Use	
gml:id	ID	required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		

Source

```
<xs:element name="Location" type="locationType"/>
```

Element Baseline

Namespace	http://www.iho.int/S-121

Diagram

limitType
Base Type geographicFeatureType
geographicFeatureType (extension base)
Base Type s100:AbstractFeatureType
Abstract true
s100:AbstractFeatureType (extension base)
gml:AbstractFeatureType (extension base)
gml:AbstractGMLType (extension base)
Attributes
gml:id
The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory...
gml:boundedBy
This property describes the minimum bounding box or rectangle that encloses the entire feature.
The basic feature model is given by the gml:AbstractFeatureType. The content model for gml:AbstractFeatureType adds two...
featureObjectIdentifier
0..∞ informationAssociation
0..∞ featureAssociation
0..∞ invFeatureAssociation
Abstract type for an S-100 feature. This is the base type from which domain application schemas derive definitions for...
label
Type xs:string
collectionName
Type xs:string
0..∞ featureName
Type featureNameType
context
Type xs:string
startLifespan
Type xs:date
endLifespan
Type xs:date
releasabilityType
Type releasabilityTypeType
0..∞ source
Type gml:ReferenceType
association to a SourceType information type which represents the source of the feature
administration

Type	limitType
Type hierarchy	• gml:AbstractGMLType • gml:AbstractFeatureType • AbstractFeatureType • geographicFeatureType • limitType
Properties	content: complex
Used by	Element Group Features
Model	gml:boundedBy{0,1} , featureObjectIdentifier{0,1} , informationAssociation* , featureAssociation* , invFeatureAssociation* , label{0,1} , collectionName{0,1} , featureName* , context{0,1} , startLifespan{0,1} , endLifespan{0,1} , releasabilityType{0,1} , source* , administration{0,1} , refersTo* , locationReference* , componentOf* , consistsOf* , arcGeometryType{0,1} , geometry{0,1}
Children	administration, arcGeometryType, collectionName, componentOf, consistsOf, context, endLifespan, featureAssociation, featureName, featureObjectIdentifier, geometry, gml:boundedBy, informationAssociation, invFeatureAssociation, label, locationReference, refersTo, releasabilityType, source, startLifespan

Instance

```
<Baseline gml:id="" xmlns="http://www.iho.int/S-121" xmlns:gml="http://www.opengis.net/
gml/3.2" xmlns:s100="http://www.iho.int/s100gml/1.0">
  <gml:boundedBy nilReason="">{0,1}</gml:boundedBy>
  <s100:featureObjectIdentifier>{0,1}</s100:featureObjectIdentifier>
  <s100:informationAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:informationAssociation>
  <s100:featureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="" xl
s100:featureAssociation>
  <s100:invFeatureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:invFeatureAssociation>
  <label>{0,1}</label>
  <collectionName>{0,1}</collectionName>
  <featureName>{0,unbounded}</featureName>
  <context>{0,1}</context>
  <startLifespan>{0,1}</startLifespan>
  <endLifespan>{0,1}</endLifespan>
  <releasabilityType>{0,1}</releasabilityType>
  <source xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" xl
source>
  <administration xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:sho
administration>
  <refersTo xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x
refersTo>
  <locationReference>{0,unbounded}</locationReference>
  <componentOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show=
componentOf>
  <consistsOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
consistsOf>
  <arcGeometryType>{0,1}</arcGeometryType>
  <geometry xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x
geometry>
</Baseline>
```

Attributes

QName	Type	Use	
gml:id	ID	required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		

Source

```
<xs:element name="Baseline" type="limitType"/>
```

Element NormalBaseline

Namespace	http://www.iho.int/S-121

Diagram

limitType
Base Type geographicFeatureType
geographicFeatureType (extension base)
Base Type s100:AbstractFeatureType
Abstract true
s100:AbstractFeatureType (extension base)
gml:AbstractFeatureType (extension base)
gml:AbstractGMLType (extension base)
Attributes
gml:id
The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory...
gml:boundedBy
This property describes the minimum bounding box or rectangle that encloses the entire feature.
The basic feature model is given by the gml:AbstractFeatureType. The content model for gml:AbstractFeatureType adds two...
featureObjectIdentifier
0..∞ informationAssociation
0..∞ featureAssociation
0..∞ invFeatureAssociation
Abstract type for an S-100 feature. This is the base type from which domain application schemas derive definitions for...
label
Type xs:string
collectionName
Type xs:string
0..∞ featureName
Type featureNameType
context
Type xs:string
startLifespan
Type xs:date
endLifespan
Type xs:date
releasabilityType
Type releasabilityTypeType
0..∞ source
Type gml:ReferenceType
association to a SourceType information type which represents the source of the feature
administration

Type	limitType
Type hierarchy	• gml:AbstractGMLType • gml:AbstractFeatureType • AbstractFeatureType • geographicFeatureType • limitType
Properties	content: complex
Used by	Element Group Features
Model	gml:boundedBy{0,1} , featureObjectIdentifier{0,1} , informationAssociation* , featureAssociation* , invFeatureAssociation* , label{0,1} , collectionName{0,1} , featureName* , context{0,1} , startLifespan{0,1} , endLifespan{0,1} , releasabilityType{0,1} , source* , administration{0,1} , refersTo* , locationReference* , componentOf* , consistsOf* , arcGeometryType{0,1} , geometry{0,1}
Children	administration, arcGeometryType, collectionName, componentOf, consistsOf, context, endLifespan, featureAssociation, featureName, featureObjectIdentifier, geometry, gml:boundedBy, informationAssociation, invFeatureAssociation, label, locationReference, refersTo, releasabilityType, source, startLifespan

Instance

```
<NormalBaseline gml:id="" xmlns="http://www.iho.int/S-121" xmlns:gml="http://www.opengis.net/
gml/3.2" xmlns:s100="http://www.iho.int/s100gml/1.0">
  <gml:boundedBy nilReason="">{0,1}</gml:boundedBy>
  <s100:featureObjectIdentifier>{0,1}</s100:featureObjectIdentifier>
  <s100:informationAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:informationAssociation>
  <s100:featureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="" xl
s100:featureAssociation>
  <s100:invFeatureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:invFeatureAssociation>
  <label>{0,1}</label>
  <collectionName>{0,1}</collectionName>
  <featureName>{0,unbounded}</featureName>
  <context>{0,1}</context>
  <startLifespan>{0,1}</startLifespan>
  <endLifespan>{0,1}</endLifespan>
  <releasabilityType>{0,1}</releasabilityType>
  <source xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" xl
source>
  <administration xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:sho
administration>
  <refersTo xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x
refersTo>
  <locationReference>{0,unbounded}</locationReference>
  <componentOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
componentOf>
  <consistsOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
consistsOf>
  <arcGeometryType>{0,1}</arcGeometryType>
  <geometry xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x
geometry>
</NormalBaseline>
```

Attributes

QName	Type	Use	
gml:id	ID	required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		

Source

```
<xs:element name="NormalBaseline" type="limitType"/>
```

Element StraightBaseline

Namespace	http://www.iho.int/S-121

Diagram

limitType
Base Type geographicFeatureType
geographicFeatureType (extension base)
Base Type s100:AbstractFeatureType
Abstract true
s100:AbstractFeatureType (extension base)
gml:AbstractFeatureType (extension base)
gml:AbstractGMLType (extension base)
Attributes
gml:id
The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory...
gml:boundedBy
This property describes the minimum bounding box or rectangle that encloses the entire feature.
The basic feature model is given by the gml:AbstractFeatureType. The content model for gml:AbstractFeatureType adds two...
featureObjectIdentifier
0..∞ informationAssociation
0..∞ featureAssociation
0..∞ invFeatureAssociation
Abstract type for an S-100 feature. This is the base type from which domain application schemas derive definitions for...
label
Type xs:string
collectionName
Type xs:string
0..∞ featureName
Type featureNameType
context
Type xs:string
startLifespan
Type xs:date
endLifespan
Type xs:date
releasabilityType
Type releasabilityTypeType
0..∞ source
Type gml:ReferenceType
association to a SourceType information type which represents the source of the feature
administration

Type	limitType
Type hierarchy	• gml:AbstractGMLType • gml:AbstractFeatureType • AbstractFeatureType • geographicFeatureType • limitType
Properties	content: complex
Used by	Element Group Features
Model	gml:boundedBy{0,1} , featureObjectIdentifier{0,1} , informationAssociation* , featureAssociation* , invFeatureAssociation* , label{0,1} , collectionName{0,1} , featureName* , context{0,1} , startLifespan{0,1} , endLifespan{0,1} , releasabilityType{0,1} , source* , administration{0,1} , refersTo* , locationReference* , componentOf* , consistsOf* , arcGeometryType{0,1} , geometry{0,1}
Children	administration, arcGeometryType, collectionName, componentOf, consistsOf, context, endLifespan, featureAssociation, featureName, featureObjectIdentifier, geometry, gml:boundedBy, informationAssociation, invFeatureAssociation, label, locationReference, refersTo, releasabilityType, source, startLifespan

Instance

```
<StraightBaseline gml:id="" xmlns="http://www.iho.int/S-121" xmlns:gml="http://www.opengis.net/
gml/3.2" xmlns:s100="http://www.iho.int/s100gml/1.0">
  <gml:boundedBy nilReason="">{0,1}</gml:boundedBy>
  <s100:featureObjectIdentifier>{0,1}</s100:featureObjectIdentifier>
  <s100:informationAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:informationAssociation>
  <s100:featureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="" xl
s100:featureAssociation>
  <s100:invFeatureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:invFeatureAssociation>
  <label>{0,1}</label>
  <collectionName>{0,1}</collectionName>
  <featureName>{0,unbounded}</featureName>
  <context>{0,1}</context>
  <startLifespan>{0,1}</startLifespan>
  <endLifespan>{0,1}</endLifespan>
  <releasabilityType>{0,1}</releasabilityType>
  <source xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" xl
source>
  <administration xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:sho
administration>
  <refersTo xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x
refersTo>
  <locationReference>{0,unbounded}</locationReference>
  <componentOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
componentOf>
  <consistsOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
consistsOf>
  <arcGeometryType>{0,1}</arcGeometryType>
  <geometry xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x
geometry>
</StraightBaseline>
```

Attributes

QName	Type	Use	
gml:id	ID	required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		

Source

```
<xs:element name="StraightBaseline" type="limitType"/>
```

Element ArchipelagicBaseline

Namespace	http://www.iho.int/S-121

Diagram

ArchipelagicBaseline

Type	limitType
Type hierarchy	• gml:AbstractGMLType • gml:AbstractFeatureType • AbstractFeatureType • geographicFeatureType • limitType
Properties	content: complex
Used by	Element Group Features
Model	gml:boundedBy{0,1} , featureObjectIdentifier{0,1} , informationAssociation* , featureAssociation* , invFeatureAssociation* , label{0,1} , collectionName{0,1} , featureName* , context{0,1} , startLifespan{0,1} , endLifespan{0,1} , releasabilityType{0,1} , source* , administration{0,1} , refersTo* , locationReference* , componentOf* , consistsOf* , arcGeometryType{0,1} , geometry{0,1}
Children	administration, arcGeometryType, collectionName, componentOf, consistsOf, context, endLifespan, featureAssociation, featureName, featureObjectIdentifier, geometry, gml:boundedBy, informationAssociation, invFeatureAssociation, label, locationReference, refersTo, releasabilityType, source, startLifespan

Instance

```
<ArchipelagicBaseline gml:id="" xmlns="http://www.iho.int/S-121" xmlns:gml="http://www.opengis.net/
gml/3.2" xmlns:s100="http://www.iho.int/s100gml/1.0">
  <gml:boundedBy nilReason="">{0,1}</gml:boundedBy>
  <s100:featureObjectIdentifier>{0,1}</s100:featureObjectIdentifier>
  <s100:informationAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:informationAssociation>
  <s100:featureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="" xl
s100:featureAssociation>
  <s100:invFeatureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:invFeatureAssociation>
  <label>{0,1}</label>
  <collectionName>{0,1}</collectionName>
  <featureName>{0,unbounded}</featureName>
  <context>{0,1}</context>
  <startLifespan>{0,1}</startLifespan>
  <endLifespan>{0,1}</endLifespan>
  <releasabilityType>{0,1}</releasabilityType>
  <source xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" xl
source>
  <administration xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:sho
administration>
  <refersTo xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x
refersTo>
  <locationReference>{0,unbounded}</locationReference>
  <componentOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show=
componentOf>
  <consistsOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
consistsOf>
  <arcGeometryType>{0,1}</arcGeometryType>
  <geometry xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x
geometry>
</ArchipelagicBaseline>
```

Attributes

QName	Type	Use	
gml:id	ID	required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		

Source

```
<xs:element name="ArchipelagicBaseline" type="limitType"/>
```

Element LowTideElevationBaseline

Namespace	http://www.iho.int/S-121

Diagram

limitType
Base Type geographicFeatureType
geographicFeatureType (extension base)
Base Type s100:AbstractFeatureType
Abstract true
s100:AbstractFeatureType (extension base)
gml:AbstractFeatureType (extension base)
gml:AbstractGMLType (extension base)
Attributes
gml:id
The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory...
gml:boundedBy
This property describes the minimum bounding box or rectangle that encloses the entire feature.
The basic feature model is given by the gml:AbstractFeatureType. The content model for gml:AbstractFeatureType adds two...
featureObjectIdentifier
0..∞ informationAssociation
0..∞ featureAssociation
0..∞ invFeatureAssociation
Abstract type for an S-100 feature. This is the base type from which domain application schemas derive definitions for...
label Type xs:string
collectionName Type xs:string
0..∞ featureName Type featureNameType
context Type xs:string
startLifespan Type xs:date
endLifespan Type xs:date
releasabilityType Type releasabilityTypeType
0..∞ source Type gml:ReferenceType
association to a SourceType information type which represents the source of the feature
administration Type gml:ReferenceType
association with a BAU information type
0..∞ refersTo Type gml:ReferenceType
LowTideElevationBaseline Type limitType

Type	limitType
Type hierarchy	• gml:AbstractGMLType • gml:AbstractFeatureType • AbstractFeatureType • geographicFeatureType • limitType
Properties	content: complex
Used by	Element Group Features
Model	gml:boundedBy{0,1} , featureObjectIdentifier{0,1} , informationAssociation* , featureAssociation* , invFeatureAssociation* , label{0,1} , collectionName{0,1} , featureName* , context{0,1} , startLifespan{0,1} , endLifespan{0,1} , releasabilityType{0,1} , source* , administration{0,1} , refersTo* , locationReference* , componentOf* , consistsOf* , arcGeometryType{0,1} , geometry{0,1}
Children	administration, arcGeometryType, collectionName, componentOf, consistsOf, context, endLifespan, featureAssociation, featureName, featureObjectIdentifier, geometry, gml:boundedBy, informationAssociation, invFeatureAssociation, label, locationReference, refersTo, releasabilityType, source, startLifespan

Instance

```
<LowTideElevationBaseline gml:id="" xmlns="http://www.iho.int/S-121" xmlns:gml="http://
www.opengis.net/gml/3.2" xmlns:s100="http://www.iho.int/s100gml/1.0">
  <gml:boundedBy nilReason="">{0,1}</gml:boundedBy>
  <s100:featureObjectIdentifier>{0,1}</s100:featureObjectIdentifier>
  <s100:informationAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:informationAssociation>
  <s100:featureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="" xl
s100:featureAssociation>
  <s100:invFeatureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:invFeatureAssociation>
  <label>{0,1}</label>
  <collectionName>{0,1}</collectionName>
  <featureName>{0,unbounded}</featureName>
  <context>{0,1}</context>
  <startLifespan>{0,1}</startLifespan>
  <endLifespan>{0,1}</endLifespan>
  <releasabilityType>{0,1}</releasabilityType>
  <source xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" xl
source>
  <administration xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:sho
administration>
  <refersTo xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x
refersTo>
  <locationReference>{0,unbounded}</locationReference>
  <componentOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
componentOf>
  <consistsOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
consistsOf>
  <arcGeometryType>{0,1}</arcGeometryType>
  <geometry xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x
geometry>
</LowTideElevationBaseline>
```

Attributes

QName	Type	Use	
gml:id	ID	required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		

Source

```
<xs:element name="LowTideElevationBaseline" type="limitType"/>
```

Element MouthOfRiversBaseline

Namespace	http://www.iho.int/S-121

Diagram

limitType
Base Type geographicFeatureType
geographicFeatureType (extension base)
Base Type s100:AbstractFeatureType
Abstract true
s100:AbstractFeatureType (extension base)
gml:AbstractFeatureType (extension base)
gml:AbstractGMLType (extension base)
Attributes
gml:id
The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory...
gml:boundedBy
This property describes the minimum bounding box or rectangle that encloses the entire feature.
The basic feature model is given by the gml:AbstractFeatureType. The content model for gml:AbstractFeatureType adds two...
featureObjectIdentifier
0..∞ informationAssociation
0..∞ featureAssociation
0..∞ invFeatureAssociation
Abstract type for an S-100 feature. This is the base type from which domain application schemas derive definitions for...
label
Type xs:string
collectionName
Type xs:string
0..∞ featureName
Type featureNameType
context
Type xs:string
startLifespan
Type xs:date
endLifespan
Type xs:date
releasabilityType
Type releasabilityTypeType
0..∞ source
Type gml:ReferenceType
association to a SourceType information type which represents the source of the feature
administration
Type gml:ReferenceType
association with a BAU information type
0..∞ refersTo
MouthOfRiversBaseline
Type limitType

Type	limitType
Type hierarchy	• gml:AbstractGMLType • gml:AbstractFeatureType • AbstractFeatureType • geographicFeatureType • limitType
Properties	content: complex
Used by	Element Group Features
Model	gml:boundedBy{0,1} , featureObjectIdentifier{0,1} , informationAssociation* , featureAssociation* , invFeatureAssociation* , label{0,1} , collectionName{0,1} , featureName* , context{0,1} , startLifespan{0,1} , endLifespan{0,1} , releasabilityType{0,1} , source* , administration{0,1} , refersTo* , locationReference* , componentOf* , consistsOf* , arcGeometryType{0,1} , geometry{0,1}
Children	administration, arcGeometryType, collectionName, componentOf, consistsOf, context, endLifespan, featureAssociation, featureName, featureObjectIdentifier, geometry, gml:boundedBy, informationAssociation, invFeatureAssociation, label, locationReference, refersTo, releasabilityType, source, startLifespan

Instance

```
<MouthOfRiversBaseline gml:id="" xmlns="http://www.iho.int/S-121" xmlns:gml="http://www.opengis.net/
gml/3.2" xmlns:s100="http://www.iho.int/s100gml/1.0">
  <gml:boundedBy nilReason="">{0,1}</gml:boundedBy>
  <s100:featureObjectIdentifier>{0,1}</s100:featureObjectIdentifier>
  <s100:informationAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:informationAssociation>
  <s100:featureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="" xl
s100:featureAssociation>
  <s100:invFeatureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:invFeatureAssociation>
  <label>{0,1}</label>
  <collectionName>{0,1}</collectionName>
  <featureName>{0,unbounded}</featureName>
  <context>{0,1}</context>
  <startLifespan>{0,1}</startLifespan>
  <endLifespan>{0,1}</endLifespan>
  <releasabilityType>{0,1}</releasabilityType>
  <source xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" xl
source>
  <administration xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:sho
administration>
  <refersTo xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x
refersTo>
  <locationReference>{0,unbounded}</locationReference>
  <componentOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show=
componentOf>
  <consistsOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
consistsOf>
  <arcGeometryType>{0,1}</arcGeometryType>
  <geometry xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x
geometry>
</MouthOfRiversBaseline>
```

Attributes

QName	Type	Use	
gml:id	ID	required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		

Source

```
<xs:element name="MouthOfRiversBaseline" type="limitType"/>
```

Element BayBaseline

Namespace	http://www.iho.int/S-121

Diagram

limitType
Base Type geographicFeatureType
geographicFeatureType (extension base)
Base Type s100:AbstractFeatureType
Abstract true
s100:AbstractFeatureType (extension base)
gml:AbstractFeatureType (extension base)
gml:AbstractGMLType (extension base)
Attributes
gml:id
The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory...
gml:boundedBy
This property describes the minimum bounding box or rectangle that encloses the entire feature.
The basic feature model is given by the gml:AbstractFeatureType. The content model for gml:AbstractFeatureType adds two...
featureObjectIdentifier
0..∞ informationAssociation
0..∞ featureAssociation
0..∞ invFeatureAssociation
Abstract type for an S-100 feature. This is the base type from which domain application schemas derive definitions for...
label
Type xs:string
collectionName
Type xs:string
0..∞ featureName
Type featureNameType
context
Type xs:string
startLifespan
Type xs:date
endLifespan
Type xs:date
releasabilityType
Type releasabilityTypeType
0..∞ source
Type gml:ReferenceType
association to a SourceType information type which represents the source of the feature
administration

Type	limitType
Type hierarchy	• gml:AbstractGMLType • gml:AbstractFeatureType • AbstractFeatureType • geographicFeatureType • limitType
Properties	content: complex
Used by	Element Group Features
Model	gml:boundedBy{0,1} , featureObjectIdentifier{0,1} , informationAssociation* , featureAssociation* , invFeatureAssociation* , label{0,1} , collectionName{0,1} , featureName* , context{0,1} , startLifespan{0,1} , endLifespan{0,1} , releasabilityType{0,1} , source* , administration{0,1} , refersTo* , locationReference* , componentOf* , consistsOf* , arcGeometryType{0,1} , geometry{0,1}
Children	administration, arcGeometryType, collectionName, componentOf, consistsOf, context, endLifespan, featureAssociation, featureName, featureObjectIdentifier, geometry, gml:boundedBy, informationAssociation, invFeatureAssociation, label, locationReference, refersTo, releasabilityType, source, startLifespan

Instance

```
<BayBaseline gml:id="" xmlns="http://www.iho.int/S-121" xmlns:gml="http://www.opengis.net/
gml/3.2" xmlns:s100="http://www.iho.int/s100gml/1.0">
  <gml:boundedBy nilReason="">{0,1}</gml:boundedBy>
  <s100:featureObjectIdentifier>{0,1}</s100:featureObjectIdentifier>
  <s100:informationAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:informationAssociation>
  <s100:featureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="" xl
s100:featureAssociation>
  <s100:invFeatureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:invFeatureAssociation>
  <label>{0,1}</label>
  <collectionName>{0,1}</collectionName>
  <featureName>{0,unbounded}</featureName>
  <context>{0,1}</context>
  <startLifespan>{0,1}</startLifespan>
  <endLifespan>{0,1}</endLifespan>
  <releasabilityType>{0,1}</releasabilityType>
  <source xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" xl
source>
  <administration xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:sho
administration>
  <refersTo xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x
refersTo>
  <locationReference>{0,unbounded}</locationReference>
  <componentOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
componentOf>
  <consistsOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
consistsOf>
  <arcGeometryType>{0,1}</arcGeometryType>
  <geometry xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x
geometry>
</BayBaseline>
```

Attributes

QName	Type	Use	
gml:id	ID	required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		

Source

```
<xs:element name="BayBaseline" type="limitType"/>
```

Element PortBaseline

Namespace	http://www.iho.int/S-121

Diagram

limitType
Base Type geographicFeatureType
geographicFeatureType (extension base)
Base Type s100:AbstractFeatureType
Abstract true
s100:AbstractFeatureType (extension base)
gml:AbstractFeatureType (extension base)
gml:AbstractGMLType (extension base)
Attributes
gml:id
The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory...
gml:boundedBy
This property describes the minimum bounding box or rectangle that encloses the entire feature.
The basic feature model is given by the gml:AbstractFeatureType. The content model for gml:AbstractFeatureType adds two...
featureObjectIdentifier
0..∞ informationAssociation
0..∞ featureAssociation
0..∞ invFeatureAssociation
Abstract type for an S-100 feature. This is the base type from which domain application schemas derive definitions for...
label
Type xs:string
collectionName
Type xs:string
0..∞ featureName
Type featureNameType
context
Type xs:string
startLifespan
Type xs:date
endLifespan
Type xs:date
releasabilityType
Type releasabilityTypeType
0..∞ source
Type gml:ReferenceType
association to a SourceType information type which represents the source of the feature
administration

Type	limitType
Type hierarchy	• gml:AbstractGMLType • gml:AbstractFeatureType • AbstractFeatureType • geographicFeatureType • limitType
Properties	content: complex
Used by	Element Group Features
Model	gml:boundedBy{0,1} , featureObjectIdentifier{0,1} , informationAssociation* , featureAssociation* , invFeatureAssociation* , label{0,1} , collectionName{0,1} , featureName* , context{0,1} , startLifespan{0,1} , endLifespan{0,1} , releasabilityType{0,1} , source* , administration{0,1} , refersTo* , locationReference* , componentOf* , consistsOf* , arcGeometryType{0,1} , geometry{0,1}
Children	administration, arcGeometryType, collectionName, componentOf, consistsOf, context, endLifespan, featureAssociation, featureName, featureObjectIdentifier, geometry, gml:boundedBy, informationAssociation, invFeatureAssociation, label, locationReference, refersTo, releasabilityType, source, startLifespan

Instance

```
<PortBaseline gml:id="" xmlns="http://www.iho.int/S-121" xmlns:gml="http://www.opengis.net/
gml/3.2" xmlns:s100="http://www.iho.int/s100gml/1.0">
  <gml:boundedBy nilReason="">{0,1}</gml:boundedBy>
  <s100:featureObjectIdentifier>{0,1}</s100:featureObjectIdentifier>
  <s100:informationAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:informationAssociation>
  <s100:featureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="" xl
s100:featureAssociation>
  <s100:invFeatureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:invFeatureAssociation>
  <label>{0,1}</label>
  <collectionName>{0,1}</collectionName>
  <featureName>{0,unbounded}</featureName>
  <context>{0,1}</context>
  <startLifespan>{0,1}</startLifespan>
  <endLifespan>{0,1}</endLifespan>
  <releasabilityType>{0,1}</releasabilityType>
  <source xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" xl
source>
  <administration xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:sho
administration>
  <refersTo xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x
refersTo>
  <locationReference>{0,unbounded}</locationReference>
  <componentOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show=
componentOf>
  <consistsOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
consistsOf>
  <arcGeometryType>{0,1}</arcGeometryType>
  <geometry xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x
geometry>
</PortBaseline>
```

Attributes

QName	Type	Use	
gml:id	ID	required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		

Source

```
<xs:element name="PortBaseline" type="limitType"/>
```

Element ReefBaseline

Namespace	http://www.iho.int/S-121

Diagram

limitType
Base Type geographicFeatureType
geographicFeatureType (extension base)
Base Type s100:AbstractFeatureType
Abstract true
s100:AbstractFeatureType (extension base)
gml:AbstractFeatureType (extension base)
gml:AbstractGMLType (extension base)
Attributes
gml:id
The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory...
gml:boundedBy
This property describes the minimum bounding box or rectangle that encloses the entire feature.
The basic feature model is given by the gml:AbstractFeatureType. The content model for gml:AbstractFeatureType adds two...
featureObjectIdentifier
0..∞ informationAssociation
0..∞ featureAssociation
0..∞ invFeatureAssociation
Abstract type for an S-100 feature. This is the base type from which domain application schemas derive definitions for...
label
Type xs:string
collectionName
Type xs:string
0..∞ featureName
Type featureNameType
context
Type xs:string
startLifespan
Type xs:date
endLifespan
Type xs:date
releasabilityType
Type releasabilityTypeType
0..∞ source
Type gml:ReferenceType
association to a SourceType information type which represents the source of the feature
administration

Type	limitType
Type hierarchy	• gml:AbstractGMLType • gml:AbstractFeatureType • AbstractFeatureType • geographicFeatureType • limitType
Properties	content: complex
Used by	Element Group Features
Model	gml:boundedBy{0,1} , featureObjectIdentifier{0,1} , informationAssociation* , featureAssociation* , invFeatureAssociation* , label{0,1} , collectionName{0,1} , featureName* , context{0,1} , startLifespan{0,1} , endLifespan{0,1} , releasabilityType{0,1} , source* , administration{0,1} , refersTo* , locationReference* , componentOf* , consistsOf* , arcGeometryType{0,1} , geometry{0,1}
Children	administration, arcGeometryType, collectionName, componentOf, consistsOf, context, endLifespan, featureAssociation, featureName, featureObjectIdentifier, geometry, gml:boundedBy, informationAssociation, invFeatureAssociation, label, locationReference, refersTo, releasabilityType, source, startLifespan

Instance

```
<ReefBaseline gml:id="" xmlns="http://www.iho.int/S-121" xmlns:gml="http://www.opengis.net/
gml/3.2" xmlns:s100="http://www.iho.int/s100gml/1.0">
  <gml:boundedBy nilReason="">{0,1}</gml:boundedBy>
  <s100:featureObjectIdentifier>{0,1}</s100:featureObjectIdentifier>
  <s100:informationAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:informationAssociation>
  <s100:featureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="" xl
s100:featureAssociation>
  <s100:invFeatureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:invFeatureAssociation>
  <label>{0,1}</label>
  <collectionName>{0,1}</collectionName>
  <featureName>{0,unbounded}</featureName>
  <context>{0,1}</context>
  <startLifespan>{0,1}</startLifespan>
  <endLifespan>{0,1}</endLifespan>
  <releasabilityType>{0,1}</releasabilityType>
  <source xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" xl
source>
  <administration xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:sho
administration>
  <refersTo xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x
refersTo>
  <locationReference>{0,unbounded}</locationReference>
  <componentOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
componentOf>
  <consistsOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
consistsOf>
  <arcGeometryType>{0,1}</arcGeometryType>
  <geometry xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x
geometry>
</ReefBaseline>
```

Attributes

QName	Type	Use	
gml:id	ID	required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		

Source

```
<xs:element name="ReefBaseline" type="limitType"/>
```

Element Boundary

Namespace	http://www.iho.int/S-121

Diagram

limitType
Base Type geographicFeatureType
geographicFeatureType (extension base)
Base Type s100:AbstractFeatureType
Abstract true
s100:AbstractFeatureType (extension base)
gml:AbstractFeatureType (extension base)
gml:AbstractGMLType (extension base)
Attributes
gml:id
The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory...
gml:boundedBy
This property describes the minimum bounding box or rectangle that encloses the entire feature.
The basic feature model is given by the gml:AbstractFeatureType. The content model for gml:AbstractFeatureType adds two...
featureObjectIdentifier
0..∞ informationAssociation
0..∞ featureAssociation
0..∞ invFeatureAssociation
Abstract type for an S-100 feature. This is the base type from which domain application schemas derive definitions for...
label
Type xs:string
collectionName
Type xs:string
0..∞ featureName
Type featureNameType
context
Type xs:string
startLifespan
Type xs:date
endLifespan
Type xs:date
releasabilityType
Type releasabilityTypeType
0..∞ source
Type gml:ReferenceType
association to a SourceType information type which represents the source of the feature
administration

Type	limitType
Type hierarchy	• gml:AbstractGMLType • gml:AbstractFeatureType • AbstractFeatureType • geographicFeatureType • limitType
Properties	content: complex
Used by	Element Group Features
Model	gml:boundedBy{0,1} , featureObjectIdentifier{0,1} , informationAssociation* , featureAssociation* , invFeatureAssociation* , label{0,1} , collectionName{0,1} , featureName* , context{0,1} , startLifespan{0,1} , endLifespan{0,1} , releasabilityType{0,1} , source* , administration{0,1} , refersTo* , locationReference* , componentOf* , consistsOf* , arcGeometryType{0,1} , geometry{0,1}
Children	administration, arcGeometryType, collectionName, componentOf, consistsOf, context, endLifespan, featureAssociation, featureName, featureObjectIdentifier, geometry, gml:boundedBy, informationAssociation, invFeatureAssociation, label, locationReference, refersTo, releasabilityType, source, startLifespan

Instance

```
<Boundary gml:id="" xmlns="http://www.iho.int/S-121" xmlns:gml="http://www.opengis.net/
gml/3.2" xmlns:s100="http://www.iho.int/s100gml/1.0">
  <gml:boundedBy nilReason="">{0,1}</gml:boundedBy>
  <s100:featureObjectIdentifier>{0,1}</s100:featureObjectIdentifier>
  <s100:informationAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:informationAssociation>
  <s100:featureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="" xl
s100:featureAssociation>
  <s100:invFeatureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:invFeatureAssociation>
  <label>{0,1}</label>
  <collectionName>{0,1}</collectionName>
  <featureName>{0,unbounded}</featureName>
  <context>{0,1}</context>
  <startLifespan>{0,1}</startLifespan>
  <endLifespan>{0,1}</endLifespan>
  <releasabilityType>{0,1}</releasabilityType>
  <source xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" xl
source>
  <administration xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:sho
administration>
  <refersTo xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x
refersTo>
  <locationReference>{0,unbounded}</locationReference>
  <componentOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show=
componentOf>
  <consistsOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
consistsOf>
  <arcGeometryType>{0,1}</arcGeometryType>
  <geometry xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x
geometry>
</Boundary>
```

Attributes

QName	Type	Use	
gml:id	ID	required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		

Source

```
<xs:element name="Boundary" type="limitType"/>
```

Element InternationalBoundary

Namespace	http://www.iho.int/S-121

Diagram

InternationalBoundary
Type limitType

Type	limitType
Type hierarchy	• gml:AbstractGMLType • gml:AbstractFeatureType • AbstractFeatureType • geographicFeatureType • limitType
Properties	content: complex
Used by	Element Group Features
Model	gml:boundedBy{0,1} , featureObjectIdentifier{0,1} , informationAssociation* , featureAssociation* , invFeatureAssociation* , label{0,1} , collectionName{0,1} , featureName* , context{0,1} , startLifespan{0,1} , endLifespan{0,1} , releasabilityType{0,1} , source* , administration{0,1} , refersTo* , locationReference* , componentOf* , consistsOf* , arcGeometryType{0,1} , geometry{0,1}
Children	administration, arcGeometryType, collectionName, componentOf, consistsOf, context, endLifespan, featureAssociation, featureName, featureObjectIdentifier, geometry, gml:boundedBy, informationAssociation, invFeatureAssociation, label, locationReference, refersTo, releasabilityType, source, startLifespan

Instance

```
<InternationalBoundary gml:id="" xmlns="http://www.iho.int/S-121" xmlns:gml="http://www.opengis.net/
gml/3.2" xmlns:s100="http://www.iho.int/s100gml/1.0">
  <gml:boundedBy nilReason="">{0,1}</gml:boundedBy>
  <s100:featureObjectIdentifier>{0,1}</s100:featureObjectIdentifier>
  <s100:informationAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:informationAssociation>
  <s100:featureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="" xl
s100:featureAssociation>
  <s100:invFeatureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:invFeatureAssociation>
  <label>{0,1}</label>
  <collectionName>{0,1}</collectionName>
  <featureName>{0,unbounded}</featureName>
  <context>{0,1}</context>
  <startLifespan>{0,1}</startLifespan>
  <endLifespan>{0,1}</endLifespan>
  <releasabilityType>{0,1}</releasabilityType>
  <source xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" xl
source>
  <administration xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:sho
administration>
  <refersTo xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x
refersTo>
  <locationReference>{0,unbounded}</locationReference>
  <componentOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
componentOf>
  <consistsOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
consistsOf>
  <arcGeometryType>{0,1}</arcGeometryType>
  <geometry xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x
geometry>
</InternationalBoundary>
```

Attributes

QName	Type	Use	
gml:id	ID	required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		

Source

```
<xs:element name="InternationalBoundary" type="limitType"/>
```

Element Limit

Namespace	http://www.iho.int/S-121

Diagram

limitType
Base Type geographicFeatureType
geographicFeatureType (extension base)
Base Type s100:AbstractFeatureType
Abstract true
s100:AbstractFeatureType (extension base)
gml:AbstractFeatureType (extension base)
gml:AbstractGMLType (extension base)
Attributes
gml:id
The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory...
gml:boundedBy
This property describes the minimum bounding box or rectangle that encloses the entire feature.
The basic feature model is given by the gml:AbstractFeatureType. The content model for gml:AbstractFeatureType adds two...
featureObjectIdentifier
0..∞ informationAssociation
0..∞ featureAssociation
0..∞ invFeatureAssociation
Abstract type for an S-100 feature. This is the base type from which domain application schemas derive definitions for...
label
Type xs:string
collectionName
Type xs:string
0..∞ featureName
Type featureNameType
context
Type xs:string
startLifespan
Type xs:date
endLifespan
Type xs:date
releasabilityType
Type releasabilityTypeType
0..∞ source
Type gml:ReferenceType
association to a SourceType information type which represents the source of the feature
administration

Type	limitType
Type hierarchy	• gml:AbstractGMLType • gml:AbstractFeatureType • AbstractFeatureType • geographicFeatureType • limitType
Properties	content: complex
Used by	Element Group Features
Model	gml:boundedBy{0,1} , featureObjectIdentifier{0,1} , informationAssociation* , featureAssociation* , invFeatureAssociation* , label{0,1} , collectionName{0,1} , featureName* , context{0,1} , startLifespan{0,1} , endLifespan{0,1} , releasabilityType{0,1} , source* , administration{0,1} , refersTo* , locationReference* , componentOf* , consistsOf* , arcGeometryType{0,1} , geometry{0,1}
Children	administration, arcGeometryType, collectionName, componentOf, consistsOf, context, endLifespan, featureAssociation, featureName, featureObjectIdentifier, geometry, gml:boundedBy, informationAssociation, invFeatureAssociation, label, locationReference, refersTo, releasabilityType, source, startLifespan

Instance

```
<Limit gml:id="" xmlns="http://www.iho.int/S-121" xmlns:gml="http://www.opengis.net/
gml/3.2" xmlns:s100="http://www.iho.int/s100gml/1.0">
  <gml:boundedBy nilReason="">{0,1}</gml:boundedBy>
  <s100:featureObjectIdentifier>{0,1}</s100:featureObjectIdentifier>
  <s100:informationAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:informationAssociation>
  <s100:featureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="" xl
s100:featureAssociation>
  <s100:invFeatureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:invFeatureAssociation>
  <label>{0,1}</label>
  <collectionName>{0,1}</collectionName>
  <featureName>{0,unbounded}</featureName>
  <context>{0,1}</context>
  <startLifespan>{0,1}</startLifespan>
  <endLifespan>{0,1}</endLifespan>
  <releasabilityType>{0,1}</releasabilityType>
  <source xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" xl
source>
  <administration xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:sho
administration>
  <refersTo xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x
refersTo>
  <locationReference>{0,unbounded}</locationReference>
  <componentOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
componentOf>
  <consistsOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
consistsOf>
  <arcGeometryType>{0,1}</arcGeometryType>
  <geometry xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x
geometry>
</Limit>
```

Attributes

QName	Type	Use	
gml:id	ID	required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		

Source

```
<xs:element name="Limit" type="limitType"/>
```

Element OuterLimitOfTheTerritorialSea

Namespace	http://www.iho.int/S-121

Diagram

limitType
Base Type geographicFeatureType
geographicFeatureType (extension base)
Base Type s100:AbstractFeatureType
Abstract true
s100:AbstractFeatureType (extension base)
gml:AbstractFeatureType (extension base)
gml:AbstractGMLType (extension base)
Attributes
gml:id
The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory...
gml:boundedBy
This property describes the minimum bounding box or rectangle that encloses the entire feature.
The basic feature model is given by the gml:AbstractFeatureType. The content model for gml:AbstractFeatureType adds two...
featureObjectIdentifier
0..∞ informationAssociation
0..∞ featureAssociation
0..∞ invFeatureAssociation
Abstract type for an S-100 feature. This is the base type from which domain application schemas derive definitions for...
label
Type xs:string
collectionName
Type xs:string
0..∞ featureName
Type featureNameType
context
Type xs:string
startLifespan
Type xs:date
endLifespan
Type xs:date
releasabilityType
Type releasabilityTypeType
0..∞ source
Type gml:ReferenceType
association to a SourceType information type which represents the source of the feature
administration
Type gml:ReferenceType
association with a BAU information type
0..∞ refersTo
Type gml:ReferenceType
Association with additional spatial information information types. Used to associate a geogrpahic feature with an...
OuterLimitOfTheTerritorialSea
Type limitType

Type	limitType
Type hierarchy	• gml:AbstractGMLType • gml:AbstractFeatureType • AbstractFeatureType • geographicFeatureType • limitType
Properties	content: complex
Used by	Element Group Features
Model	gml:boundedBy{0,1} , featureObjectIdentifier{0,1} , informationAssociation* , featureAssociation* , invFeatureAssociation* , label{0,1} , collectionName{0,1} , featureName* , context{0,1} , startLifespan{0,1} , endLifespan{0,1} , releasabilityType{0,1} , source* , administration{0,1} , refersTo* , locationReference* , componentOf* , consistsOf* , arcGeometryType{0,1} , geometry{0,1}
Children	administration, arcGeometryType, collectionName, componentOf, consistsOf, context, endLifespan, featureAssociation, featureName, featureObjectIdentifier, geometry, gml:boundedBy, informationAssociation, invFeatureAssociation, label, locationReference, refersTo, releasabilityType, source, startLifespan

Instance

```
<OuterLimitOfTheTerritorialSea gml:id="" xmlns="http://www.iho.int/S-121" xmlns:gml="http://
www.opengis.net/gml/3.2" xmlns:s100="http://www.iho.int/s100gml/1.0">
  <gml:boundedBy nilReason="">{0,1}</gml:boundedBy>
  <s100:featureObjectIdentifier>{0,1}</s100:featureObjectIdentifier>
  <s100:informationAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:informationAssociation>
  <s100:featureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="" xl
s100:featureAssociation>
  <s100:invFeatureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:invFeatureAssociation>
  <label>{0,1}</label>
  <collectionName>{0,1}</collectionName>
  <featureName>{0,unbounded}</featureName>
  <context>{0,1}</context>
  <startLifespan>{0,1}</startLifespan>
  <endLifespan>{0,1}</endLifespan>
  <releasabilityType>{0,1}</releasabilityType>
  <source xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" xl
source>
  <administration xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:sho
administration>
  <refersTo xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x
refersTo>
  <locationReference>{0,unbounded}</locationReference>
  <componentOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
componentOf>
  <consistsOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
consistsOf>
  <arcGeometryType>{0,1}</arcGeometryType>
  <geometry xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x
geometry>
</OuterLimitOfTheTerritorialSea>
```

Attributes

QName	Type	Use	
gml:id	ID	required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		

Source

```
<xs:element name="OuterLimitOfTheTerritorialSea" type="limitType"/>
```

Element OuterLimitOfTheContiguousZone

Namespace	http://www.iho.int/S-121

Diagram

limitType
Base Type geographicFeatureType
geographicFeatureType (extension base)
Base Type s100:AbstractFeatureType
Abstract true
s100:AbstractFeatureType (extension base)
gml:AbstractFeatureType (extension base)
gml:AbstractGMLType (extension base)
Attributes
gml:id
The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory...
gml:boundedBy
This property describes the minimum bounding box or rectangle that encloses the entire feature.
The basic feature model is given by the gml:AbstractFeatureType. The content model for gml:AbstractFeatureType adds two...
featureObjectIdentifier
0..∞ informationAssociation
0..∞ featureAssociation
0..∞ invFeatureAssociation
Abstract type for an S-100 feature. This is the base type from which domain application schemas derive definitions for...
label Type xs:string
collectionName Type xs:string
0..∞ featureName Type featureNameType
context Type xs:string
startLifespan Type xs:date
endLifespan Type xs:date
releasabilityType Type releasabilityTypeType
0..∞ source Type gml:ReferenceType
association to a SourceType information type which represents the source of the feature
administration Type gml:ReferenceType
association with a BAU information type
0..∞ refersTo Type gml:ReferenceType
Association with additional spatial information information types. Used to associate a geogrpahic feature with an...
0..∞ locationReference Type locationReferenceType
OuterLimitOfTheContiguousZone Type limitType

Type	limitType
Type hierarchy	• gml:AbstractGMLType • gml:AbstractFeatureType • AbstractFeatureType • geographicFeatureType • limitType
Properties	content: complex
Used by	Element Group Features
Model	gml:boundedBy{0,1} , featureObjectIdentifier{0,1} , informationAssociation* , featureAssociation* , invFeatureAssociation* , label{0,1} , collectionName{0,1} , featureName* , context{0,1} , startLifespan{0,1} , endLifespan{0,1} , releasabilityType{0,1} , source* , administration{0,1} , refersTo* , locationReference* , componentOf* , consistsOf* , arcGeometryType{0,1} , geometry{0,1}
Children	administration, arcGeometryType, collectionName, componentOf, consistsOf, context, endLifespan, featureAssociation, featureName, featureObjectIdentifier, geometry, gml:boundedBy, informationAssociation, invFeatureAssociation, label, locationReference, refersTo, releasabilityType, source, startLifespan

Instance

```
<OuterLimitOfTheContiguousZone gml:id="" xmlns="http://www.iho.int/S-121" xmlns:gml="http://
www.opengis.net/gml/3.2" xmlns:s100="http://www.iho.int/s100gml/1.0">
  <gml:boundedBy nilReason="">{0,1}</gml:boundedBy>
  <s100:featureObjectIdentifier>{0,1}</s100:featureObjectIdentifier>
  <s100:informationAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:informationAssociation>
  <s100:featureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="" xl
s100:featureAssociation>
  <s100:invFeatureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:invFeatureAssociation>
  <label>{0,1}</label>
  <collectionName>{0,1}</collectionName>
  <featureName>{0,unbounded}</featureName>
  <context>{0,1}</context>
  <startLifespan>{0,1}</startLifespan>
  <endLifespan>{0,1}</endLifespan>
  <releasabilityType>{0,1}</releasabilityType>
  <source xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" xl
source>
  <administration xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:sho
administration>
  <refersTo xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x
refersTo>
  <locationReference>{0,unbounded}</locationReference>
  <componentOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show=
componentOf>
  <consistsOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
consistsOf>
  <arcGeometryType>{0,1}</arcGeometryType>
  <geometry xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x
geometry>
</OuterLimitOfTheContiguousZone>
```

Attributes

QName	Type	Use	
gml:id	ID	required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		

Source

```
<xs:element name="OuterLimitOfTheContiguousZone" type="limitType"/>
```

Element OuterLimitOfTheExclusiveEconomicZone

Namespace	http://www.iho.int/S-121

Diagram

limitType
Base Type geographicFeatureType
geographicFeatureType (extension base)
Base Type s100:AbstractFeatureType
Abstract true
s100:AbstractFeatureType (extension base)
gml:AbstractFeatureType (extension base)
gml:AbstractGMLType (extension base)
Attributes
gml:id
The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory...
gml:boundedBy
This property describes the minimum bounding box or rectangle that encloses the entire feature.
The basic feature model is given by the gml:AbstractFeatureType. The content model for gml:AbstractFeatureType adds two...
featureObjectIdentifier
0..∞ informationAssociation
0..∞ featureAssociation
0..∞ invFeatureAssociation
Abstract type for an S-100 feature. This is the base type from which domain application schemas derive definitions for...
label Type xs:string
collectionName Type xs:string
0..∞ featureName Type featureNameType
context Type xs:string
startLifespan Type xs:date
endLifespan Type xs:date
releasabilityType Type releasabilityTypeType
0..∞ source Type gml:ReferenceType
association to a SourceType information type which represents the source of the feature
administration Type gml:ReferenceType
association with a BAU information type
0..∞ refersTo Type gml:ReferenceType
Association with additional spatial information information types. Used to associate a geogrpahic feature with an...
0..∞ locationReference Type locationReferenceType
0..∞ componentOf Type gml:ReferenceType
Generic association between geographic features
OuterLimitOfTheExclusiveEconomicZone
Type limitType

Type	limitType
Type hierarchy	• gml:AbstractGMLType • gml:AbstractFeatureType • AbstractFeatureType • geographicFeatureType • limitType
Properties	content: complex
Used by	Element Group Features
Model	gml:boundedBy{0,1} , featureObjectIdentifier{0,1} , informationAssociation* , featureAssociation* , invFeatureAssociation* , label{0,1} , collectionName{0,1} , featureName* , context{0,1} , startLifespan{0,1} , endLifespan{0,1} , releasabilityType{0,1} , source* , administration{0,1} , refersTo* , locationReference* , componentOf* , consistsOf* , arcGeometryType{0,1} , geometry{0,1}
Children	administration, arcGeometryType, collectionName, componentOf, consistsOf, context, endLifespan, featureAssociation, featureName, featureObjectIdentifier, geometry, gml:boundedBy, informationAssociation, invFeatureAssociation, label, locationReference, refersTo, releasabilityType, source, startLifespan

Instance

```
<OuterLimitOfTheExclusiveEconomicZone gml:id="" xmlns="http://www.iho.int/S-121" xmlns:gml="http://
www.opengis.net/gml/3.2" xmlns:s100="http://www.iho.int/s100gml/1.0">
  <gml:boundedBy nilReason="">{0,1}</gml:boundedBy>
  <s100:featureObjectIdentifier>{0,1}</s100:featureObjectIdentifier>
  <s100:informationAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:informationAssociation>
  <s100:featureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="" xl
s100:featureAssociation>
  <s100:invFeatureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:invFeatureAssociation>
  <label>{0,1}</label>
  <collectionName>{0,1}</collectionName>
  <featureName>{0,unbounded}</featureName>
  <context>{0,1}</context>
  <startLifespan>{0,1}</startLifespan>
  <endLifespan>{0,1}</endLifespan>
  <releasabilityType>{0,1}</releasabilityType>
  <source xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" xl
source>
  <administration xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:sho
administration>
  <refersTo xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x
refersTo>
  <locationReference>{0,unbounded}</locationReference>
  <componentOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
componentOf>
  <consistsOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
consistsOf>
  <arcGeometryType>{0,1}</arcGeometryType>
  <geometry xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x
geometry>
</OuterLimitOfTheExclusiveEconomicZone>
```

Attributes

QName	Type	Use	
gml:id	ID	required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		

Source

```
<xs:element name="OuterLimitOfTheExclusiveEconomicZone" type="limitType"/>
```

Element OuterLimitOfTheContinentalShelf

Namespace	http://www.iho.int/S-121

Diagram

limitType
Base Type geographicFeatureType
geographicFeatureType (extension base)
Base Type s100:AbstractFeatureType
Abstract true
s100:AbstractFeatureType (extension base)
gml:AbstractFeatureType (extension base)
gml:AbstractGMLType (extension base)
Attributes
gml:id
The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory...
gml:boundedBy
This property describes the minimum bounding box or rectangle that encloses the entire feature.
The basic feature model is given by the gml:AbstractFeatureType. The content model for gml:AbstractFeatureType adds two...
featureObjectIdentifier
0..∞ informationAssociation
0..∞ featureAssociation
0..∞ invFeatureAssociation
Abstract type for an S-100 feature. This is the base type from which domain application schemas derive definitions for...
label Type xs:string
collectionName Type xs:string
0..∞ featureName Type featureNameType
context Type xs:string
startLifespan Type xs:date
endLifespan Type xs:date
releasabilityType Type releasabilityTypeType
0..∞ source Type gml:ReferenceType
association to a SourceType information type which represents the source of the feature
administration Type gml:ReferenceType
association with a BAU information type
0..∞ refersTo Type gml:ReferenceType
Association with additional spatial information information types. Used to associate a geogrpahic feature with an...
0..∞ locationReference
OuterLimitOfTheContinentalShelf Type limitType

Type	limitType
Type hierarchy	• gml:AbstractGMLType • gml:AbstractFeatureType • AbstractFeatureType • geographicFeatureType • limitType
Properties	content: complex
Used by	Element Group Features
Model	gml:boundedBy{0,1} , featureObjectIdentifier{0,1} , informationAssociation* , featureAssociation* , invFeatureAssociation* , label{0,1} , collectionName{0,1} , featureName* , context{0,1} , startLifespan{0,1} , endLifespan{0,1} , releasabilityType{0,1} , source* , administration{0,1} , refersTo* , locationReference* , componentOf* , consistsOf* , arcGeometryType{0,1} , geometry{0,1}
Children	administration, arcGeometryType, collectionName, componentOf, consistsOf, context, endLifespan, featureAssociation, featureName, featureObjectIdentifier, geometry, gml:boundedBy, informationAssociation, invFeatureAssociation, label, locationReference, refersTo, releasabilityType, source, startLifespan

Instance

```
<OuterLimitOfTheContinentalShelf gml:id="" xmlns="http://www.iho.int/S-121" xmlns:gml="http://
www.opengis.net/gml/3.2" xmlns:s100="http://www.iho.int/s100gml/1.0">
  <gml:boundedBy nilReason="">{0,1}</gml:boundedBy>
  <s100:featureObjectIdentifier>{0,1}</s100:featureObjectIdentifier>
  <s100:informationAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:informationAssociation>
  <s100:featureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="" xl
s100:featureAssociation>
  <s100:invFeatureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:invFeatureAssociation>
  <label>{0,1}</label>
  <collectionName>{0,1}</collectionName>
  <featureName>{0,unbounded}</featureName>
  <context>{0,1}</context>
  <startLifespan>{0,1}</startLifespan>
  <endLifespan>{0,1}</endLifespan>
  <releasabilityType>{0,1}</releasabilityType>
  <source xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" xl
source>
  <administration xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:sho
administration>
  <refersTo xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x
refersTo>
  <locationReference>{0,unbounded}</locationReference>
  <componentOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
componentOf>
  <consistsOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
consistsOf>
  <arcGeometryType>{0,1}</arcGeometryType>
  <geometry xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x
geometry>
</OuterLimitOfTheContinentalShelf>
```

Attributes

QName	Type	Use	
gml:id	ID	required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		

Source

```
<xs:element name="OuterLimitOfTheContinentalShelf" type="limitType"/>
```

Element OuterLimitOfTheRoadstead

Namespace	http://www.iho.int/S-121

Diagram

limitType
Base Type geographicFeatureType
geographicFeatureType (extension base)
Base Type s100:AbstractFeatureType
Abstract true
s100:AbstractFeatureType (extension base)
gml:AbstractFeatureType (extension base)
gml:AbstractGMLType (extension base)
Attributes
gml:id
The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory...
gml:boundedBy
This property describes the minimum bounding box or rectangle that encloses the entire feature.
The basic feature model is given by the gml:AbstractFeatureType. The content model for gml:AbstractFeatureType adds two...
featureObjectIdentifier
0..∞ informationAssociation
0..∞ featureAssociation
0..∞ invFeatureAssociation
Abstract type for an S-100 feature. This is the base type from which domain application schemas derive definitions for...
label
Type xs:string
collectionName
Type xs:string
0..∞ featureName
Type featureNameType
context
Type xs:string
startLifespan
Type xs:date
endLifespan
Type xs:date
releasabilityType
Type releasabilityTypeType
0..∞ source
Type gml:ReferenceType
association to a SourceType information type which represents the source of the feature
administration
Type gml:ReferenceType
association with a BAU information type
0..∞ refersTo
Type gml:ReferenceType
Association with additional spatial information information
OuterLimitOfTheRoadstead
Type limitType

Type	limitType
Type hierarchy	• gml:AbstractGMLType • gml:AbstractFeatureType • AbstractFeatureType • geographicFeatureType • limitType
Properties	content: complex
Used by	Element Group Features
Model	gml:boundedBy{0,1} , featureObjectIdentifier{0,1} , informationAssociation* , featureAssociation* , invFeatureAssociation* , label{0,1} , collectionName{0,1} , featureName* , context{0,1} , startLifespan{0,1} , endLifespan{0,1} , releasabilityType{0,1} , source* , administration{0,1} , refersTo* , locationReference* , componentOf* , consistsOf* , arcGeometryType{0,1} , geometry{0,1}
Children	administration, arcGeometryType, collectionName, componentOf, consistsOf, context, endLifespan, featureAssociation, featureName, featureObjectIdentifier, geometry, gml:boundedBy, informationAssociation, invFeatureAssociation, label, locationReference, refersTo, releasabilityType, source, startLifespan

Instance

```
<OuterLimitOfTheRoadstead gml:id="" xmlns="http://www.iho.int/S-121" xmlns:gml="http://
www.opengis.net/gml/3.2" xmlns:s100="http://www.iho.int/s100gml/1.0">
  <gml:boundedBy nilReason="">{0,1}</gml:boundedBy>
  <s100:featureObjectIdentifier>{0,1}</s100:featureObjectIdentifier>
  <s100:informationAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:informationAssociation>
  <s100:featureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="" xl
s100:featureAssociation>
  <s100:invFeatureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:invFeatureAssociation>
  <label>{0,1}</label>
  <collectionName>{0,1}</collectionName>
  <featureName>{0,unbounded}</featureName>
  <context>{0,1}</context>
  <startLifespan>{0,1}</startLifespan>
  <endLifespan>{0,1}</endLifespan>
  <releasabilityType>{0,1}</releasabilityType>
  <source xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" xl
source>
  <administration xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:sho
administration>
  <refersTo xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x
refersTo>
  <locationReference>{0,unbounded}</locationReference>
  <componentOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
componentOf>
  <consistsOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
consistsOf>
  <arcGeometryType>{0,1}</arcGeometryType>
  <geometry xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x
geometry>
</OuterLimitOfTheRoadstead>
```

Attributes

QName	Type	Use	
gml:id	ID	required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		

Source

```
<xs:element name="OuterLimitOfTheRoadstead" type="limitType"/>
```

Element ConstructionLine

Namespace	http://www.iho.int/S-121

Diagram

limitType
Base Type geographicFeatureType
geographicFeatureType (extension base)
Base Type s100:AbstractFeatureType
Abstract true
s100:AbstractFeatureType (extension base)
gml:AbstractFeatureType (extension base)
gml:AbstractGMLType (extension base)
Attributes
gml:id
The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory...
gml:boundedBy
This property describes the minimum bounding box or rectangle that encloses the entire feature.
The basic feature model is given by the gml:AbstractFeatureType. The content model for gml:AbstractFeatureType adds two...
featureObjectIdentifier
0..∞ informationAssociation
0..∞ featureAssociation
0..∞ invFeatureAssociation
Abstract type for an S-100 feature. This is the base type from which domain application schemas derive definitions for...
label Type xs:string
collectionName Type xs:string
0..∞ featureName Type featureNameType
context Type xs:string
startLifespan Type xs:date
endLifespan Type xs:date
releasabilityType Type releasabilityTypeType
0..∞ source Type gml:ReferenceType
association to a SourceType information type which represents the source of the feature
administration

Type	limitType
Type hierarchy	• gml:AbstractGMLType • gml:AbstractFeatureType • AbstractFeatureType • geographicFeatureType • limitType
Properties	content: complex
Used by	Element Group Features
Model	gml:boundedBy{0,1} , featureObjectIdentifier{0,1} , informationAssociation* , featureAssociation* , invFeatureAssociation* , label{0,1} , collectionName{0,1} , featureName* , context{0,1} , startLifespan{0,1} , endLifespan{0,1} , releasabilityType{0,1} , source* , administration{0,1} , refersTo* , locationReference* , componentOf* , consistsOf* , arcGeometryType{0,1} , geometry{0,1}
Children	administration, arcGeometryType, collectionName, componentOf, consistsOf, context, endLifespan, featureAssociation, featureName, featureObjectIdentifier, geometry, gml:boundedBy, informationAssociation, invFeatureAssociation, label, locationReference, refersTo, releasabilityType, source, startLifespan

Instance

```
<ConstructionLine gml:id="" xmlns="http://www.iho.int/S-121" xmlns:gml="http://www.opengis.net/
gml/3.2" xmlns:s100="http://www.iho.int/s100gml/1.0">
  <gml:boundedBy nilReason="">{0,1}</gml:boundedBy>
  <s100:featureObjectIdentifier>{0,1}</s100:featureObjectIdentifier>
  <s100:informationAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:informationAssociation>
  <s100:featureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="" xl
s100:featureAssociation>
  <s100:invFeatureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:invFeatureAssociation>
  <label>{0,1}</label>
  <collectionName>{0,1}</collectionName>
  <featureName>{0,unbounded}</featureName>
  <context>{0,1}</context>
  <startLifespan>{0,1}</startLifespan>
  <endLifespan>{0,1}</endLifespan>
  <releasabilityType>{0,1}</releasabilityType>
  <source xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" xl
source>
  <administration xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:sho
administration>
  <refersTo xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x
refersTo>
  <locationReference>{0,unbounded}</locationReference>
  <componentOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
componentOf>
  <consistsOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
consistsOf>
  <arcGeometryType>{0,1}</arcGeometryType>
  <geometry xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x
geometry>
</ConstructionLine>
```

Attributes

QName	Type	Use	
gml:id	ID	required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		

Source

```
<xs:element name="ConstructionLine" type="limitType"/>
```

Element Zone

Namespace	http://www.iho.int/S-121

Diagram

zoneType
Base Type geographicFeatureType
geographicFeatureType (extension base)
Base Type s100:AbstractFeatureType
Abstract true
s100:AbstractFeatureType (extension base)
gml:AbstractFeatureType (extension base)
gml:AbstractGMLType (extension base)
Attributes
gml:id
The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory...
gml:boundedBy
This property describes the minimum bounding box or rectangle that encloses the entire feature.
The basic feature model is given by the gml:AbstractFeatureType. The content model for gml:AbstractFeatureType adds two...
featureObjectIdentifier
0..∞ informationAssociation
0..∞ featureAssociation
0..∞ invFeatureAssociation
Abstract type for an S-100 feature. This is the base type from which domain application schemas derive definitions for...
label Type xs:string
collectionName Type xs:string
0..∞ featureName Type featureNameType
context Type xs:string
startLifespan Type xs:date
endLifespan Type xs:date
releasabilityType Type releasabilityTypeType
0..∞ source Type gml:ReferenceType
association to a SourceType information type which represents the source of the feature
administration

Type	zoneType
Type hierarchy	• gml:AbstractGMLType • gml:AbstractFeatureType • AbstractFeatureType • geographicFeatureType • zoneType
Properties	content: complex
Used by	Element Group Features
Model	gml:boundedBy{0,1} , featureObjectIdentifier{0,1} , informationAssociation* , featureAssociation* , invFeatureAssociation* , label{0,1} , collectionName{0,1} , featureName* , context{0,1} , startLifespan{0,1} , endLifespan{0,1} , releasabilityType{0,1} , source* , administration{0,1} , refersTo* , locationReference* , componentOf* , consistsOf* , jurisdictionDomain{0,1} , geometry{0,1}
Children	administration, collectionName, componentOf, consistsOf, context, endLifespan, featureAssociation, featureName, featureObjectIdentifier, geometry, gml:boundedBy, informationAssociation, invFeatureAssociation, jurisdictionDomain, label, locationReference, refersTo, releasabilityType, source, startLifespan
Instance	<Zone gml:id="" xmlns="http://www.iho.int/S-121" xmlns:gml="http://www.opengis.net/gml/3.2" xmlns:s100="http://www.iho.int/s100gml/1.0"> <gml:boundedBy nilReason="">{0,1}</gml:boundedBy> <s100:featureObjectIdentifier>{0,1}</s100:featureObjectIdentifier> <s100:informationAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="" s100:informationAssociation> <s100:featureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="" xl s100:featureAssociation> <s100:invFeatureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="" s100:invFeatureAssociation> <label>{0,1}</label> <collectionName>{0,1}</collectionName> <featureName>{0,unbounded}</featureName> <context>{0,1}</context> <startLifespan>{0,1}</startLifespan> <endLifespan>{0,1}</endLifespan> <releasabilityType>{0,1}</releasabilityType> <source xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" xl source> <administration xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:sho administration> <refersTo xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x refersTo> <locationReference>{0,unbounded}</locationReference> <componentOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show= componentOf> <consistsOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" consistsOf> <jurisdictionDomain>{0,1}</jurisdictionDomain> <geometry xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x geometry> </Zone>
Attributes	**QName** / **Type** / **Use** **gml:id** / ID / required The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.
Source	<xs:element name="Zone" type="zoneType"/>

Element TerritorialSea

Namespace	http://www.iho.int/S-121

Diagram

zoneType
Base Type geographicFeatureType
geographicFeatureType (extension base)
Base Type s100:AbstractFeatureType
Abstract true
s100:AbstractFeatureType (extension base)
gml:AbstractFeatureType (extension base)
gml:AbstractGMLType (extension base)
Attributes
gml:id
The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory...
gml:boundedBy
This property describes the minimum bounding box or rectangle that encloses the entire feature.
The basic feature model is given by the gml:AbstractFeatureType. The content model for gml:AbstractFeatureType adds two...
featureObjectIdentifier
0..∞ informationAssociation
0..∞ featureAssociation
0..∞ invFeatureAssociation
Abstract type for an S-100 feature. This is the base type from which domain application schemas derive definitions for...
label Type xs:string
collectionName Type xs:string
0..∞ featureName Type featureNameType
context Type xs:string
startLifespan Type xs:date
endLifespan Type xs:date
releasabilityType Type releasabilityTypeType
0..∞ source Type gml:ReferenceType
association to a SourceType information type which represents the source of the feature
administration

Type	zoneType
Type hierarchy	• gml:AbstractGMLType • gml:AbstractFeatureType • AbstractFeatureType • geographicFeatureType • zoneType
Properties	content: complex
Used by	Element Group Features
Model	gml:boundedBy{0,1} , featureObjectIdentifier{0,1} , informationAssociation* , featureAssociation* , invFeatureAssociation* , label{0,1} , collectionName{0,1} , featureName* , context{0,1} , startLifespan{0,1} , endLifespan{0,1} , releasabilityType{0,1} , source* , administration{0,1} , refersTo* , locationReference* , componentOf* , consistsOf* , jurisdictionDomain{0,1} , geometry{0,1}
Children	administration, collectionName, componentOf, consistsOf, context, endLifespan, featureAssociation, featureName, featureObjectIdentifier, geometry, gml:boundedBy, informationAssociation, invFeatureAssociation, jurisdictionDomain, label, locationReference, refersTo, releasabilityType, source, startLifespan

Instance

```
<TerritorialSea gml:id="" xmlns="http://www.iho.int/S-121" xmlns:gml="http://www.opengis.net/
gml/3.2" xmlns:s100="http://www.iho.int/s100gml/1.0">
  <gml:boundedBy nilReason="">{0,1}</gml:boundedBy>
  <s100:featureObjectIdentifier>{0,1}</s100:featureObjectIdentifier>
  <s100:informationAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:informationAssociation>
  <s100:featureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="" xl
s100:featureAssociation>
  <s100:invFeatureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:invFeatureAssociation>
  <label>{0,1}</label>
  <collectionName>{0,1}</collectionName>
  <featureName>{0,unbounded}</featureName>
  <context>{0,1}</context>
  <startLifespan>{0,1}</startLifespan>
  <endLifespan>{0,1}</endLifespan>
  <releasabilityType>{0,1}</releasabilityType>
  <source xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" xl
source>
  <administration xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:sho
administration>
  <refersTo xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x
refersTo>
  <locationReference>{0,unbounded}</locationReference>
  <componentOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
componentOf>
  <consistsOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
consistsOf>
  <jurisdictionDomain>{0,1}</jurisdictionDomain>
  <geometry xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x
geometry>
</TerritorialSea>
```

Attributes

QName	Type	Use	
gml:id	ID	required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		

Source

```
<xs:element name="TerritorialSea" type="zoneType"/>
```

Element ContiguousZone

Namespace	http://www.iho.int/S-121

Diagram

zoneType
Base Type geographicFeatureType
geographicFeatureType (extension base)
Base Type s100:AbstractFeatureType
Abstract true
s100:AbstractFeatureType (extension base)
gml:AbstractFeatureType (extension base)
gml:AbstractGMLType (extension base)
Attributes
gml:id
The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory...
gml:boundedBy
This property describes the minimum bounding box or rectangle that encloses the entire feature.
The basic feature model is given by the gml:AbstractFeatureType. The content model for gml:AbstractFeatureType adds two...
featureObjectIdentifier
0..∞ informationAssociation
0..∞ featureAssociation
0..∞ invFeatureAssociation
Abstract type for an S-100 feature. This is the base type from which domain application schemas derive definitions for...
label
Type xs:string
collectionName
Type xs:string
0..∞ featureName
Type featureNameType
context
Type xs:string
startLifespan
Type xs:date
endLifespan
Type xs:date
releasabilityType
Type releasabilityTypeType
0..∞ source
Type gml:ReferenceType
association to a SourceType information type which represents the source of the feature
administration

Type	zoneType
Type hierarchy	• gml:AbstractGMLType • gml:AbstractFeatureType • AbstractFeatureType • geographicFeatureType • zoneType
Properties	content: complex
Used by	Element Group Features
Model	gml:boundedBy{0,1} , featureObjectIdentifier{0,1} , informationAssociation* , featureAssociation* , invFeatureAssociation* , label{0,1} , collectionName{0,1} , featureName* , context{0,1} , startLifespan{0,1} , endLifespan{0,1} , releasabilityType{0,1} , source* , administration{0,1} , refersTo* , locationReference* , componentOf* , consistsOf* , jurisdictionDomain{0,1} , geometry{0,1}
Children	administration, collectionName, componentOf, consistsOf, context, endLifespan, featureAssociation, featureName, featureObjectIdentifier, geometry, gml:boundedBy, informationAssociation, invFeatureAssociation, jurisdictionDomain, label, locationReference, refersTo, releasabilityType, source, startLifespan

Instance

```
<ContiguousZone gml:id="" xmlns="http://www.iho.int/S-121" xmlns:gml="http://www.opengis.net/
gml/3.2" xmlns:s100="http://www.iho.int/s100gml/1.0">
  <gml:boundedBy nilReason="">{0,1}</gml:boundedBy>
  <s100:featureObjectIdentifier>{0,1}</s100:featureObjectIdentifier>
  <s100:informationAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:informationAssociation>
  <s100:featureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="" xl
s100:featureAssociation>
  <s100:invFeatureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:invFeatureAssociation>
  <label>{0,1}</label>
  <collectionName>{0,1}</collectionName>
  <featureName>{0,unbounded}</featureName>
  <context>{0,1}</context>
  <startLifespan>{0,1}</startLifespan>
  <endLifespan>{0,1}</endLifespan>
  <releasabilityType>{0,1}</releasabilityType>
  <source xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" xl
source>
  <administration xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:sho
administration>
  <refersTo xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x
refersTo>
  <locationReference>{0,unbounded}</locationReference>
  <componentOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
componentOf>
  <consistsOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
consistsOf>
  <jurisdictionDomain>{0,1}</jurisdictionDomain>
  <geometry xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x
geometry>
</ContiguousZone>
```

Attributes

QName	Type	Use	
gml:id	ID	required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		

Source

```
<xs:element name="ContiguousZone" type="zoneType"/>
```

Element ExclusiveEconomicZone

Namespace	http://www.iho.int/S-121

Diagram

zoneType
Base Type geographicFeatureType
geographicFeatureType (extension base)
Base Type s100:AbstractFeatureType
Abstract true
s100:AbstractFeatureType (extension base)
gml:AbstractFeatureType (extension base)
gml:AbstractGMLType (extension base)
Attributes
gml:id
The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory...
gml:boundedBy
This property describes the minimum bounding box or rectangle that encloses the entire feature.
The basic feature model is given by the gml:AbstractFeatureType. The content model for gml:AbstractFeatureType adds two...
featureObjectIdentifier
0..∞ informationAssociation
0..∞ featureAssociation
0..∞ invFeatureAssociation
Abstract type for an S-100 feature. This is the base type from which domain application schemas derive definitions for...
label
Type xs:string
collectionName
Type xs:string
0..∞ featureName
Type featureNameType
context
Type xs:string
startLifespan
Type xs:date
endLifespan
Type xs:date
releasabilityType
Type releasabilityTypeType
0..∞ source
Type gml:ReferenceType
association to a SourceType information type which represents the source of the feature
administration
Type gml:ReferenceType
association with a BAU information type
0..∞ refersTo
Type gml:ReferenceType
ExclusiveEconomicZone
Type zoneType

Type	zoneType
Type hierarchy	• gml:AbstractGMLType • gml:AbstractFeatureType • AbstractFeatureType • geographicFeatureType • zoneType
Properties	content: complex
Used by	Element Group Features
Model	gml:boundedBy{0,1} , featureObjectIdentifier{0,1} , informationAssociation* , featureAssociation* , invFeatureAssociation* , label{0,1} , collectionName{0,1} , featureName* , context{0,1} , startLifespan{0,1} , endLifespan{0,1} , releasabilityType{0,1} , source* , administration{0,1} , refersTo* , locationReference* , componentOf* , consistsOf* , jurisdictionDomain{0,1} , geometry{0,1}
Children	administration, collectionName, componentOf, consistsOf, context, endLifespan, featureAssociation, featureName, featureObjectIdentifier, geometry, gml:boundedBy, informationAssociation, invFeatureAssociation, jurisdictionDomain, label, locationReference, refersTo, releasabilityType, source, startLifespan

Instance

```
<ExclusiveEconomicZone gml:id="" xmlns="http://www.iho.int/S-121" xmlns:gml="http://www.opengis.net/
gml/3.2" xmlns:s100="http://www.iho.int/s100gml/1.0">
  <gml:boundedBy nilReason="">{0,1}</gml:boundedBy>
  <s100:featureObjectIdentifier>{0,1}</s100:featureObjectIdentifier>
  <s100:informationAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:informationAssociation>
  <s100:featureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="" xl
s100:featureAssociation>
  <s100:invFeatureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:invFeatureAssociation>
  <label>{0,1}</label>
  <collectionName>{0,1}</collectionName>
  <featureName>{0,unbounded}</featureName>
  <context>{0,1}</context>
  <startLifespan>{0,1}</startLifespan>
  <endLifespan>{0,1}</endLifespan>
  <releasabilityType>{0,1}</releasabilityType>
  <source xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" xl
source>
  <administration xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:sho
administration>
  <refersTo xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x
refersTo>
  <locationReference>{0,unbounded}</locationReference>
  <componentOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
componentOf>
  <consistsOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
consistsOf>
  <jurisdictionDomain>{0,1}</jurisdictionDomain>
  <geometry xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x
geometry>
</ExclusiveEconomicZone>
```

Attributes

QName	Type	Use	
gml:id	ID	required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		

Source

```
<xs:element name="ExclusiveEconomicZone" type="zoneType"/>
```

Element ContinentalShelf

Namespace	http://www.iho.int/S-121

Diagram

zoneType
Base Type geographicFeatureType
geographicFeatureType (extension base)
Base Type s100:AbstractFeatureType
Abstract true
s100:AbstractFeatureType (extension base)
gml:AbstractFeatureType (extension base)
gml:AbstractGMLType (extension base)
Attributes
gml:id
The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory...
gml:boundedBy
This property describes the minimum bounding box or rectangle that encloses the entire feature.
The basic feature model is given by the gml:AbstractFeatureType. The content model for gml:AbstractFeatureType adds two...
featureObjectIdentifier
0..∞ informationAssociation
0..∞ featureAssociation
0..∞ invFeatureAssociation
Abstract type for an S-100 feature. This is the base type from which domain application schemas derive definitions for...
label
Type xs:string
collectionName
Type xs:string
0..∞ featureName
Type featureNameType
context
Type xs:string
startLifespan
Type xs:date
endLifespan
Type xs:date
releasabilityType
Type releasabilityTypeType
0..∞ source
Type gml:ReferenceType
association to a SourceType information type which represents the source of the feature
administration

Type	zoneType
Type hierarchy	• gml:AbstractGMLType • gml:AbstractFeatureType • AbstractFeatureType • geographicFeatureType • zoneType
Properties	content: complex
Used by	Element Group Features
Model	gml:boundedBy{0,1} , featureObjectIdentifier{0,1} , informationAssociation* , featureAssociation* , invFeatureAssociation* , label{0,1} , collectionName{0,1} , featureName* , context{0,1} , startLifespan{0,1} , endLifespan{0,1} , releasabilityType{0,1} , source* , administration{0,1} , refersTo* , locationReference* , componentOf* , consistsOf* , jurisdictionDomain{0,1} , geometry{0,1}
Children	administration, collectionName, componentOf, consistsOf, context, endLifespan, featureAssociation, featureName, featureObjectIdentifier, geometry, gml:boundedBy, informationAssociation, invFeatureAssociation, jurisdictionDomain, label, locationReference, refersTo, releasabilityType, source, startLifespan

Instance

```
<ContinentalShelf gml:id="" xmlns="http://www.iho.int/S-121" xmlns:gml="http://www.opengis.net/
gml/3.2" xmlns:s100="http://www.iho.int/s100gml/1.0">
  <gml:boundedBy nilReason="">{0,1}</gml:boundedBy>
  <s100:featureObjectIdentifier>{0,1}</s100:featureObjectIdentifier>
  <s100:informationAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:informationAssociation>
  <s100:featureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="" xl
s100:featureAssociation>
  <s100:invFeatureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:invFeatureAssociation>
  <label>{0,1}</label>
  <collectionName>{0,1}</collectionName>
  <featureName>{0,unbounded}</featureName>
  <context>{0,1}</context>
  <startLifespan>{0,1}</startLifespan>
  <endLifespan>{0,1}</endLifespan>
  <releasabilityType>{0,1}</releasabilityType>
  <source xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" xl
source>
  <administration xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:sho
administration>
  <refersTo xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x
refersTo>
  <locationReference>{0,unbounded}</locationReference>
  <componentOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
componentOf>
  <consistsOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
consistsOf>
  <jurisdictionDomain>{0,1}</jurisdictionDomain>
  <geometry xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x
geometry>
</ContinentalShelf>
```

Attributes

QName	Type	Use	
gml:id	ID	required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		

Source

```
<xs:element name="ContinentalShelf" type="zoneType"/>
```

Element Roadstead

Namespace	http://www.iho.int/S-121

Diagram

zoneType
Base Type geographicFeatureType
geographicFeatureType (extension base)
Base Type s100:AbstractFeatureType
Abstract true
s100:AbstractFeatureType (extension base)
gml:AbstractFeatureType (extension base)
gml:AbstractGMLType (extension base)
Attributes
gml:id
The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory...
gml:boundedBy
This property describes the minimum bounding box or rectangle that encloses the entire feature.
The basic feature model is given by the gml:AbstractFeatureType. The content model for gml:AbstractFeatureType adds two...
featureObjectIdentifier
0..∞ informationAssociation
0..∞ featureAssociation
0..∞ invFeatureAssociation
Abstract type for an S-100 feature. This is the base type from which domain application schemas derive definitions for...
label Type xs:string
collectionName Type xs:string
0..∞ featureName Type featureNameType
context Type xs:string
startLifespan Type xs:date
endLifespan Type xs:date
releasabilityType Type releasabilityTypeType
0..∞ source Type gml:ReferenceType
association to a SourceType information type which represents the source of the feature
administration

Type	zoneType
Type hierarchy	• gml:AbstractGMLType • gml:AbstractFeatureType • AbstractFeatureType • geographicFeatureType • zoneType
Properties	content: complex
Used by	Element Group Features
Model	gml:boundedBy{0,1} , featureObjectIdentifier{0,1} , informationAssociation* , featureAssociation* , invFeatureAssociation* , label{0,1} , collectionName{0,1} , featureName* , context{0,1} , startLifespan{0,1} , endLifespan{0,1} , releasabilityType{0,1} , source* , administration{0,1} , refersTo* , locationReference* , componentOf* , consistsOf* , jurisdictionDomain{0,1} , geometry{0,1}
Children	administration, collectionName, componentOf, consistsOf, context, endLifespan, featureAssociation, featureName, featureObjectIdentifier, geometry, gml:boundedBy, informationAssociation, invFeatureAssociation, jurisdictionDomain, label, locationReference, refersTo, releasabilityType, source, startLifespan

Instance	`<Roadstead gml:id="" xmlns="http://www.iho.int/S-121" xmlns:gml="http://www.opengis.net/gml/3.2" xmlns:s100="http://www.iho.int/s100gml/1.0">`
	`<gml:boundedBy nilReason="">{0,1}</gml:boundedBy>`
	`<s100:featureObjectIdentifier>{0,1}</s100:featureObjectIdentifier>`
	`<s100:informationAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="" s100:informationAssociation>`
	`<s100:featureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="" xl s100:featureAssociation>`
	`<s100:invFeatureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="" s100:invFeatureAssociation>`
	`<label>{0,1}</label>`
	`<collectionName>{0,1}</collectionName>`
	`<featureName>{0,unbounded}</featureName>`
	`<context>{0,1}</context>`
	`<startLifespan>{0,1}</startLifespan>`
	`<endLifespan>{0,1}</endLifespan>`
	`<releasabilityType>{0,1}</releasabilityType>`
	`<source xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" xl source>`
	`<administration xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:sho administration>`
	`<refersTo xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x refersTo>`
	`<locationReference>{0,unbounded}</locationReference>`
	`<componentOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show= componentOf>`
	`<consistsOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" consistsOf>`
	`<jurisdictionDomain>{0,1}</jurisdictionDomain>`
	`<geometry xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x geometry>`
	`</Roadstead>`

Attributes	**QName** / **Type** / **Use** **gml:id** / ID / required The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.
Source	`<xs:element name="Roadstead" type="zoneType"/>`

Element InternalWaters

Namespace	http://www.iho.int/S-121

Diagram

zoneType
Base Type geographicFeatureType
geographicFeatureType (extension base)
Base Type s100:AbstractFeatureType
Abstract true
s100:AbstractFeatureType (extension base)
gml:AbstractFeatureType (extension base)
gml:AbstractGMLType (extension base)
Attributes
gml:id
The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory...
gml:boundedBy
This property describes the minimum bounding box or rectangle that encloses the entire feature.
The basic feature model is given by the gml:AbstractFeatureType. The content model for gml:AbstractFeatureType adds two...
featureObjectIdentifier
0..∞ informationAssociation
0..∞ featureAssociation
0..∞ invFeatureAssociation
Abstract type for an S-100 feature. This is the base type from which domain application schemas derive definitions for...
label Type xs:string
collectionName Type xs:string
0..∞ featureName Type featureNameType
context Type xs:string
startLifespan Type xs:date
endLifespan Type xs:date
releasabilityType Type releasabilityTypeType
0..∞ source Type gml:ReferenceType
association to a SourceType information type which represents the source of the feature
administration

Type	zoneType
Type hierarchy	• gml:AbstractGMLType • gml:AbstractFeatureType • AbstractFeatureType • geographicFeatureType • zoneType
Properties	content: complex
Used by	Element Group Features
Model	gml:boundedBy{0,1} , featureObjectIdentifier{0,1} , informationAssociation* , featureAssociation* , invFeatureAssociation* , label{0,1} , collectionName{0,1} , featureName* , context{0,1} , startLifespan{0,1} , endLifespan{0,1} , releasabilityType{0,1} , source* , administration{0,1} , refersTo* , locationReference* , componentOf* , consistsOf* , jurisdictionDomain{0,1} , geometry{0,1}
Children	administration, collectionName, componentOf, consistsOf, context, endLifespan, featureAssociation, featureName, featureObjectIdentifier, geometry, gml:boundedBy, informationAssociation, invFeatureAssociation, jurisdictionDomain, label, locationReference, refersTo, releasabilityType, source, startLifespan
Instance	<InternalWaters gml:id="" xmlns="http://www.iho.int/S-121" xmlns:gml="http://www.opengis.net/gml/3.2" xmlns:s100="http://www.iho.int/s100gml/1.0"> <gml:boundedBy nilReason="">{0,1}</gml:boundedBy> <s100:featureObjectIdentifier>{0,1}</s100:featureObjectIdentifier> <s100:informationAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="" s100:informationAssociation> <s100:featureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="" xl s100:featureAssociation> <s100:invFeatureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="" s100:invFeatureAssociation> <label>{0,1}</label> <collectionName>{0,1}</collectionName> <featureName>{0,unbounded}</featureName> <context>{0,1}</context> <startLifespan>{0,1}</startLifespan> <endLifespan>{0,1}</endLifespan> <releasabilityType>{0,1}</releasabilityType> <source xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" xl source> <administration xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:sho administration> <refersTo xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" refersTo> <locationReference>{0,unbounded}</locationReference> <componentOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show= componentOf> <consistsOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" consistsOf> <jurisdictionDomain>{0,1}</jurisdictionDomain> <geometry xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" geometry> </InternalWaters>
Attributes	**QName** / **Type** / **Use** **gml:id** / ID / required The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.
Source	<xs:element name="InternalWaters" type="zoneType"/>

Element TheArea

Namespace	http://www.iho.int/S-121

Diagram

zoneType
Base Type geographicFeatureType
geographicFeatureType (extension base)
Base Type s100:AbstractFeatureType
Abstract true
s100:AbstractFeatureType (extension base)
gml:AbstractFeatureType (extension base)
gml:AbstractGMLType (extension base)
Attributes
gml:id
The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory...
gml:boundedBy
This property describes the minimum bounding box or rectangle that encloses the entire feature.
The basic feature model is given by the gml:AbstractFeatureType. The content model for gml:AbstractFeatureType adds two...
featureObjectIdentifier
0..∞ informationAssociation
0..∞ featureAssociation
0..∞ invFeatureAssociation
Abstract type for an S-100 feature. This is the base type from which domain application schemas derive definitions for...
label Type xs:string
collectionName Type xs:string
0..∞ featureName Type featureNameType
context Type xs:string
startLifespan Type xs:date
endLifespan Type xs:date
releasabilityType Type releasabilityTypeType
0..∞ source Type gml:ReferenceType
association to a SourceType information type which represents the source of the feature
administration

Type	zoneType
Type hierarchy	• gml:AbstractGMLType • gml:AbstractFeatureType • AbstractFeatureType • geographicFeatureType • zoneType
Properties	content: complex
Used by	Element Group Features
Model	gml:boundedBy{0,1} , featureObjectIdentifier{0,1} , informationAssociation* , featureAssociation* , invFeatureAssociation* , label{0,1} , collectionName{0,1} , featureName* , context{0,1} , startLifespan{0,1} , endLifespan{0,1} , releasabilityType{0,1} , source* , administration{0,1} , refersTo* , locationReference* , componentOf* , consistsOf* , jurisdictionDomain{0,1} , geometry{0,1}
Children	administration, collectionName, componentOf, consistsOf, context, endLifespan, featureAssociation, featureName, featureObjectIdentifier, geometry, gml:boundedBy, informationAssociation, invFeatureAssociation, jurisdictionDomain, label, locationReference, refersTo, releasabilityType, source, startLifespan

Instance

```
<TheArea gml:id="" xmlns="http://www.iho.int/S-121" xmlns:gml="http://www.opengis.net/
gml/3.2" xmlns:s100="http://www.iho.int/s100gml/1.0">
  <gml:boundedBy nilReason="">{0,1}</gml:boundedBy>
  <s100:featureObjectIdentifier>{0,1}</s100:featureObjectIdentifier>
  <s100:informationAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:informationAssociation>
  <s100:featureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="" xl
s100:featureAssociation>
  <s100:invFeatureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:invFeatureAssociation>
  <label>{0,1}</label>
  <collectionName>{0,1}</collectionName>
  <featureName>{0,unbounded}</featureName>
  <context>{0,1}</context>
  <startLifespan>{0,1}</startLifespan>
  <endLifespan>{0,1}</endLifespan>
  <releasabilityType>{0,1}</releasabilityType>
  <source xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" xl
source>
  <administration xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:sho
administration>
  <refersTo xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x
refersTo>
  <locationReference>{0,unbounded}</locationReference>
  <componentOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
componentOf>
  <consistsOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
consistsOf>
  <jurisdictionDomain>{0,1}</jurisdictionDomain>
  <geometry xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x
geometry>
</TheArea>
```

Attributes

QName	Type	Use	
gml:id	ID	required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		

Source

```
<xs:element name="TheArea" type="zoneType"/>
```

Element HighSeas

Namespace	http://www.iho.int/S-121

Diagram

zoneType
Base Type geographicFeatureType
geographicFeatureType (extension base)
Base Type s100:AbstractFeatureType
Abstract true
s100:AbstractFeatureType (extension base)
gml:AbstractFeatureType (extension base)
gml:AbstractGMLType (extension base)
Attributes
gml:id
The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory...
gml:boundedBy
This property describes the minimum bounding box or rectangle that encloses the entire feature.
The basic feature model is given by the gml:AbstractFeatureType. The content model for gml:AbstractFeatureType adds two...
featureObjectIdentifier
0..∞ informationAssociation
0..∞ featureAssociation
0..∞ invFeatureAssociation
Abstract type for an S-100 feature. This is the base type from which domain application schemas derive definitions for...
label Type xs:string
collectionName Type xs:string
0..∞ featureName Type featureNameType
context Type xs:string
startLifespan Type xs:date
endLifespan Type xs:date
releasabilityType Type releasabilityTypeType
0..∞ source Type gml:ReferenceType
association to a SourceType information type which represents the source of the feature
administration

Type	zoneType
Type hierarchy	• gml:AbstractGMLType • gml:AbstractFeatureType • AbstractFeatureType • geographicFeatureType • zoneType
Properties	content: complex
Used by	Element Group Features
Model	gml:boundedBy{0,1} , featureObjectIdentifier{0,1} , informationAssociation* , featureAssociation* , invFeatureAssociation* , label{0,1} , collectionName{0,1} , featureName* , context{0,1} , startLifespan{0,1} , endLifespan{0,1} , releasabilityType{0,1} , source* , administration{0,1} , refersTo* , locationReference* , componentOf* , consistsOf* , jurisdictionDomain{0,1} , geometry{0,1}
Children	administration, collectionName, componentOf, consistsOf, context, endLifespan, featureAssociation, featureName, featureObjectIdentifier, geometry, gml:boundedBy, informationAssociation, invFeatureAssociation, jurisdictionDomain, label, locationReference, refersTo, releasabilityType, source, startLifespan

Instance

```
<HighSeas gml:id="" xmlns="http://www.iho.int/S-121" xmlns:gml="http://www.opengis.net/
gml/3.2" xmlns:s100="http://www.iho.int/s100gml/1.0">
  <gml:boundedBy nilReason="">{0,1}</gml:boundedBy>
  <s100:featureObjectIdentifier>{0,1}</s100:featureObjectIdentifier>
  <s100:informationAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:informationAssociation>
  <s100:featureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="" xl
s100:featureAssociation>
  <s100:invFeatureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:invFeatureAssociation>
  <label>{0,1}</label>
  <collectionName>{0,1}</collectionName>
  <featureName>{0,unbounded}</featureName>
  <context>{0,1}</context>
  <startLifespan>{0,1}</startLifespan>
  <endLifespan>{0,1}</endLifespan>
  <releasabilityType>{0,1}</releasabilityType>
  <source xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" xl
source>
  <administration xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:sho
administration>
  <refersTo xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x
refersTo>
  <locationReference>{0,unbounded}</locationReference>
  <componentOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
componentOf>
  <consistsOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
consistsOf>
  <jurisdictionDomain>{0,1}</jurisdictionDomain>
  <geometry xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x
geometry>
</HighSeas>
```

Attributes

QName	Type	Use	
gml:id	ID	required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		

Source

```
<xs:element name="HighSeas" type="zoneType"/>
```

Element ArchipelagicWaters

Namespace	http://www.iho.int/S-121

Diagram

ArchipelagicWaters

Type	zoneType
Type hierarchy	• gml:AbstractGMLType • gml:AbstractFeatureType • AbstractFeatureType • geographicFeatureType • zoneType
Properties	content: complex
Used by	Element Group Features
Model	gml:boundedBy{0,1} , featureObjectIdentifier{0,1} , informationAssociation* , featureAssociation* , invFeatureAssociation* , label{0,1} , collectionName{0,1} , featureName* , context{0,1} , startLifespan{0,1} , endLifespan{0,1} , releasabilityType{0,1} , source* , administration{0,1} , refersTo* , locationReference* , componentOf* , consistsOf* , jurisdictionDomain{0,1} , geometry{0,1}
Children	administration, collectionName, componentOf, consistsOf, context, endLifespan, featureAssociation, featureName, featureObjectIdentifier, geometry, gml:boundedBy, informationAssociation, invFeatureAssociation, jurisdictionDomain, label, locationReference, refersTo, releasabilityType, source, startLifespan

Instance

```
<ArchipelagicWaters gml:id="" xmlns="http://www.iho.int/S-121" xmlns:gml="http://www.opengis.net/
gml/3.2" xmlns:s100="http://www.iho.int/s100gml/1.0">
  <gml:boundedBy nilReason="">{0,1}</gml:boundedBy>
  <s100:featureObjectIdentifier>{0,1}</s100:featureObjectIdentifier>
  <s100:informationAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:informationAssociation>
  <s100:featureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="" xl
s100:featureAssociation>
  <s100:invFeatureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:invFeatureAssociation>
  <label>{0,1}</label>
  <collectionName>{0,1}</collectionName>
  <featureName>{0,unbounded}</featureName>
  <context>{0,1}</context>
  <startLifespan>{0,1}</startLifespan>
  <endLifespan>{0,1}</endLifespan>
  <releasabilityType>{0,1}</releasabilityType>
  <source xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" xl
source>
  <administration xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:sho
administration>
  <refersTo xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x
refersTo>
  <locationReference>{0,unbounded}</locationReference>
  <componentOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
componentOf>
  <consistsOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
consistsOf>
  <jurisdictionDomain>{0,1}</jurisdictionDomain>
  <geometry xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x
geometry>
</ArchipelagicWaters>
```

Attributes

QName	Type	Use	
gml:id	ID	required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		

Source

```
<xs:element name="ArchipelagicWaters" type="zoneType"/>
```

Element Strait

Namespace	http://www.iho.int/S-121

Diagram

zoneType
Base Type geographicFeatureType
geographicFeatureType (extension base)
Base Type s100:AbstractFeatureType
Abstract true
s100:AbstractFeatureType (extension base)
gml:AbstractFeatureType (extension base)
gml:AbstractGMLType (extension base)
Attributes
gml:id
The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory...
gml:boundedBy
This property describes the minimum bounding box or rectangle that encloses the entire feature.
The basic feature model is given by the gml:AbstractFeatureType. The content model for gml:AbstractFeatureType adds two...
featureObjectIdentifier
0..∞ informationAssociation
0..∞ featureAssociation
0..∞ invFeatureAssociation
Abstract type for an S-100 feature. This is the base type from which domain application schemas derive definitions for...
label Type xs:string
collectionName Type xs:string
0..∞ featureName Type featureNameType
context Type xs:string
startLifespan Type xs:date
endLifespan Type xs:date
releasabilityType Type releasabilityTypeType
0..∞ source Type gml:ReferenceType
association to a SourceType information type which represents the source of the feature
administration

Type	zoneType
Type hierarchy	• gml:AbstractGMLType • gml:AbstractFeatureType • AbstractFeatureType • geographicFeatureType • zoneType
Properties	content: complex
Used by	Element Group Features
Model	gml:boundedBy{0,1} , featureObjectIdentifier{0,1} , informationAssociation* , featureAssociation* , invFeatureAssociation* , label{0,1} , collectionName{0,1} , featureName* , context{0,1} , startLifespan{0,1} , endLifespan{0,1} , releasabilityType{0,1} , source* , administration{0,1} , refersTo* , locationReference* , componentOf* , consistsOf* , jurisdictionDomain{0,1} , geometry{0,1}
Children	administration, collectionName, componentOf, consistsOf, context, endLifespan, featureAssociation, featureName, featureObjectIdentifier, geometry, gml:boundedBy, informationAssociation, invFeatureAssociation, jurisdictionDomain, label, locationReference, refersTo, releasabilityType, source, startLifespan

Instance

```
<Strait gml:id="" xmlns="http://www.iho.int/S-121" xmlns:gml="http://www.opengis.net/
gml/3.2" xmlns:s100="http://www.iho.int/s100gml/1.0">
  <gml:boundedBy nilReason="">{0,1}</gml:boundedBy>
  <s100:featureObjectIdentifier>{0,1}</s100:featureObjectIdentifier>
  <s100:informationAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:informationAssociation>
  <s100:featureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="" xl
s100:featureAssociation>
  <s100:invFeatureAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:invFeatureAssociation>
  <label>{0,1}</label>
  <collectionName>{0,1}</collectionName>
  <featureName>{0,unbounded}</featureName>
  <context>{0,1}</context>
  <startLifespan>{0,1}</startLifespan>
  <endLifespan>{0,1}</endLifespan>
  <releasabilityType>{0,1}</releasabilityType>
  <source xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" xl
source>
  <administration xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:sho
administration>
  <refersTo xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x
refersTo>
  <locationReference>{0,unbounded}</locationReference>
  <componentOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
componentOf>
  <consistsOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
consistsOf>
  <jurisdictionDomain>{0,1}</jurisdictionDomain>
  <geometry xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x
geometry>
</Strait>
```

Attributes

QName	Type	Use	
gml:id	ID	required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		

Source

```
<xs:element name="Strait" type="zoneType"/>
```

Element BasicAdministrativeUnit

Namespace	http://www.iho.int/S-121

Diagram

bauType
Base Type informationType
informationType (extension base)
Base Type s100:AbstractInformationType
s100:AbstractInformationType (extension base)
gml:AbstractGMLType (extension base)
Attributes
gml:id
The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory...
0..∞ informationAssociation
0..∞ invInformationAssociation
Abstract type for an S-100 information type. This is the base type from which domain application schemas derive...
0..∞ source
Type gml:ReferenceType
association to a SourceType information type which represents the source of the information type
0..∞ componentOf
Type gml:ReferenceType
Generic association between information types
0..∞ consistsOf
Type gml:ReferenceType
inverse generic association between information types
startLifespan
Type xs:date
endLifespan
Type xs:date
BasicAdministrativeUnit
Type bauType
0..∞ featureName
Type featureNameType
basicAdministrativeUnitName
Type xs:string
basicAdministrativeUnitType
Type basicAdministrativeUnitTypeType
basicAdministrativeUnitContext
Type xs:string
0..∞ administrationOf
Type gml:ReferenceType
association between a BAU and its defining geographic feature(s)
0..∞ right
Type gml:ReferenceType
0..∞ responsibility
Type gml:ReferenceType
0..∞ restriction
Type gml:ReferenceType

Type	bauType
Type hierarchy	• gml:AbstractGMLType • AbstractInformationType • informationType • bauType
Properties	content: complex
Used by	Element Group Features
Model	informationAssociation* , invInformationAssociation* , source* , componentOf* , consistsOf* , startLifespan{0,1} , endLifespan{0,1} , featureName* , basicAdministrativeUnitName{0,1} , basicAdministrativeUnitType{0,1} , basicAdministrativeUnitContext{0,1} , administrationOf* , right* , responsibility* , restriction* , party*
Children	administrationOf, basicAdministrativeUnitContext, basicAdministrativeUnitName, basicAdministrativeUnitType, componentOf, consistsOf, endLifespan, featureName, informationAssociation, invInformationAssociation, party, responsibility, restriction, right, source, startLifespan

Instance

```
<BasicAdministrativeUnit gml:id="" xmlns="http://www.iho.int/S-121" xmlns:s100="http://www.iho.int/
s100gml/1.0">
  <s100:informationAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:informationAssociation>
  <s100:invInformationAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role
s100:invInformationAssociation>
  <source xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" xli
source>
  <componentOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
componentOf>
  <consistsOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
consistsOf>
  <startLifespan>{0,1}</startLifespan>
  <endLifespan>{0,1}</endLifespan>
  <featureName>{0,unbounded}</featureName>
  <basicAdministrativeUnitName>{0,1}</basicAdministrativeUnitName>
  <basicAdministrativeUnitType>{0,1}</basicAdministrativeUnitType>
  <basicAdministrativeUnitContext>{0,1}</basicAdministrativeUnitContext>
  <administrationOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:s
administrationOf>
  <right xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" xlin
right>
  <responsibility xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:sho
responsibility>
  <restriction xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
restriction>
  <party xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" xlin
party>
</BasicAdministrativeUnit>
```

Attributes

QName	Type	Use	
gml:id	ID	required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		

Source

```
<xs:element name="BasicAdministrativeUnit" type="bauType"/>
```

Element informationType / source

Namespace	http://www.iho.int/S-121
Annotations	association to a SourceType information type which represents the source of the information type

Diagram	
Type	gml:ReferenceType
Properties	content: `complex` minOccurs: `0` maxOccurs: `unbounded`
Model	
Attributes	

QName	Type	Fixed	Default	Use	
nilReason	gml:NilReasonType			optional	
owns	boolean		false	optional	
xlink:actuate	xlink:actuateType			optional	
xlink:arcrole	xlink:arcroleType			optional	
xlink:href	xlink:hrefType			optional	
xlink:role	xlink:roleType			optional	
xlink:show	xlink:showType			optional	
xlink:title	xlink:titleAttrType			optional	
xlink:type	xlink:typeType	simple		optional	

Source

```
<xs:element minOccurs="0" name="source" type="gml:ReferenceType" maxOccurs="unbounded">
  <xs:annotation>
    <xs:documentation>association to a SourceType information type which represents the source of
 the information type</xs:documentation>
  </xs:annotation>
</xs:element>
```

Element `informationType / componentOf`

Namespace	http://www.iho.int/S-121
Annotations	`Generic association between information types`

Diagram	
Type	gml:ReferenceType
Properties	content: `complex` minOccurs: `0` maxOccurs: `unbounded`
Model	
Attributes	

QName	Type	Fixed	Default	Use	
nilReason	gml:NilReasonType			optional	
owns	boolean		false	optional	
xlink:actuate	xlink:actuateType			optional	
xlink:arcrole	xlink:arcroleType			optional	
xlink:href	xlink:hrefType			optional	
xlink:role	xlink:roleType			optional	
xlink:show	xlink:showType			optional	
xlink:title	xlink:titleAttrType			optional	
xlink:type	xlink:typeType	simple		optional	

Source

```
<xs:element maxOccurs="unbounded" minOccurs="0" name="componentOf" type="gml:ReferenceType">
  <xs:annotation>
    <xs:documentation>Generic association between information types</xs:documentation>
  </xs:annotation>
</xs:element>
```

Element `informationType / consistsOf`

Namespace	http://www.iho.int/S-121
Annotations	`inverse generic association between information types`

Diagram	
Type	gml:ReferenceType
Properties	content: `complex` minOccurs: `0` maxOccurs: `unbounded`
Model	
Attributes	

QName	Type	Fixed	Default	Use	
nilReason	gml:NilReasonType			optional	
owns	boolean		false	optional	
xlink:actuate	xlink:actuateType			optional	
xlink:arcrole	xlink:arcroleType			optional	
xlink:href	xlink:hrefType			optional	
xlink:role	xlink:roleType			optional	
xlink:show	xlink:showType			optional	
xlink:title	xlink:titleAttrType			optional	
xlink:type	xlink:typeType	simple		optional	

Source

```
<xs:element maxOccurs="unbounded" minOccurs="0" name="consistsOf" type="gml:ReferenceType">
  <xs:annotation>
    <xs:documentation>inverse generic association between information types</xs:documentation>
  </xs:annotation>
</xs:element>
```

Element `informationType / startLifespan`

Namespace	http://www.iho.int/S-121
Diagram	
Type	xs:date

Properties	content:	simple
	minOccurs:	0
Source	`<xs:element minOccurs="0" name="startLifespan" type="xs:date"/>`	

Element informationType / endLifespan

Namespace	http://www.iho.int/S-121
Diagram	
Type	xs:date
Properties	content: simple
	minOccurs: 0
Source	`<xs:element minOccurs="0" name="endLifespan" type="xs:date"/>`

Element bauType / featureName

Namespace	http://www.iho.int/S-121
Diagram	
Type	featureNameType
Properties	content: complex
	minOccurs: 0
	maxOccurs: unbounded
Model	displayName{0,1} , Language , Name
Children	Language, Name, displayName

Instance	`<featureName xmlns="http://www.iho.int/S-121">`
	`  <displayName>{0,1}</displayName>`
	`  <Language>{1,1}</Language>`
	`  <Name>{1,1}</Name>`
	`</featureName>`

Source	`<xs:element maxOccurs="unbounded" minOccurs="0" name="featureName" type="featureNameType"/>`

Element bauType / basicAdministrativeUnitName

Namespace	http://www.iho.int/S-121
Diagram	

Type	xs:string
Properties	content: simple minOccurs: 0
Source	`<xs:element minOccurs="0" name="basicAdministrativeUnitName" type="xs:string"/>`

Element bauType / basicAdministrativeUnitType

Namespace	http://www.iho.int/S-121
Diagram	
Type	basicAdministrativeUnitTypeType
Properties	content: simple minOccurs: 0
Facets	enumeration Maritime Limits and Boundaries
Source	`<xs:element minOccurs="0" name="basicAdministrativeUnitType" type="basicAdministrativeUnitTypeType"/>`

Element bauType / basicAdministrativeUnitContext

Namespace	http://www.iho.int/S-121
Diagram	
Type	xs:string
Properties	content: simple minOccurs: 0
Source	`<xs:element minOccurs="0" name="basicAdministrativeUnitContext" type="xs:string"/>`

Element bauType / administrationOf

Namespace	http://www.iho.int/S-121
Annotations	association between a BAU and its defining geographic feature(s)

Diagram	
Type	gml:ReferenceType
Properties	content: `complex` minOccurs: `0` maxOccurs: `unbounded`
Model	
Attributes	

QName	Type	Fixed	Default	Use	
nilReason	gml:NilReasonType			optional	
owns	boolean		false	optional	
xlink:actuate	xlink:actuateType			optional	
xlink:arcrole	xlink:arcroleType			optional	
xlink:href	xlink:hrefType			optional	
xlink:role	xlink:roleType			optional	
xlink:show	xlink:showType			optional	
xlink:title	xlink:titleAttrType			optional	
xlink:type	xlink:typeType	simple		optional	

Source

```
<xs:element minOccurs="0" name="administrationOf" type="gml:ReferenceType" maxOccurs="unbounded">
  <xs:annotation>
    <xs:documentation>association between a BAU and its defining geographic feature(s)</
xs:documentation>
  </xs:annotation>
</xs:element>
```

Element bauType / right

Namespace	http://www.iho.int/S-121

Diagram	
Type	gml:ReferenceType
Properties	content: `complex` minOccurs: `0` maxOccurs: `unbounded`
Model	
Attributes	

QName	Type	Fixed	Default	Use	
nilReason	gml:NilReasonType			optional	
owns	boolean		false	optional	
xlink:actuate	xlink:actuateType			optional	
xlink:arcrole	xlink:arcroleType			optional	
xlink:href	xlink:hrefType			optional	
xlink:role	xlink:roleType			optional	
xlink:show	xlink:showType			optional	
xlink:title	xlink:titleAttrType			optional	
xlink:type	xlink:typeType	simple		optional	

Source

```
<xs:element minOccurs="0" name="right" type="gml:ReferenceType" maxOccurs="unbounded"/>
```

Element bauType / responsibility

Namespace	http://www.iho.int/S-121

Diagram	
Type	gml:ReferenceType
Properties	content: `complex` minOccurs: `0` maxOccurs: `unbounded`
Model	
Attributes	

QName	Type	Fixed	Default	Use	
nilReason	gml:NilReasonType			optional	
owns	boolean		false	optional	
xlink:actuate	xlink:actuateType			optional	
xlink:arcrole	xlink:arcroleType			optional	
xlink:href	xlink:hrefType			optional	
xlink:role	xlink:roleType			optional	
xlink:show	xlink:showType			optional	
xlink:title	xlink:titleAttrType			optional	
xlink:type	xlink:typeType	simple		optional	

Source

```
<xs:element minOccurs="0" name="responsibility" type="gml:ReferenceType" maxOccurs="unbounded"/>
```

Element bauType / restriction

Namespace	http://www.iho.int/S-121

Diagram	
Type	gml:ReferenceType
Properties	content: `complex` minOccurs: `0` maxOccurs: `unbounded`
Model	
Attributes	

QName	Type	Fixed	Default	Use	
nilReason	gml:NilReasonType			optional	
owns	boolean		false	optional	
xlink:actuate	xlink:actuateType			optional	
xlink:arcrole	xlink:arcroleType			optional	
xlink:href	xlink:hrefType			optional	
xlink:role	xlink:roleType			optional	
xlink:show	xlink:showType			optional	
xlink:title	xlink:titleAttrType			optional	
xlink:type	xlink:typeType	simple		optional	

Source

```
<xs:element minOccurs="0" name="restriction" type="gml:ReferenceType" maxOccurs="unbounded"/>
```

Element bauType / party

Namespace	http://www.iho.int/S-121

Diagram	
Type	gml:ReferenceType
Properties	content: `complex` minOccurs: `0` maxOccurs: `unbounded`
Model	
Attributes	

QName	Type	Fixed	Default	Use	
nilReason	gml:NilReasonType			optional	
owns	boolean		false	optional	
xlink:actuate	xlink:actuateType			optional	
xlink:arcrole	xlink:arcroleType			optional	
xlink:href	xlink:hrefType			optional	
xlink:role	xlink:roleType			optional	
xlink:show	xlink:showType			optional	
xlink:title	xlink:titleAttrType			optional	
xlink:type	xlink:typeType	simple		optional	

Source

```
<xs:element minOccurs="0" name="party" type="gml:ReferenceType" maxOccurs="unbounded"/>
```

Element `Right`

Namespace	http://www.iho.int/S-121

Diagram

rightType
Base Type informationType
informationType (extension base)
Base Type s100:AbstractInformationType
s100:AbstractInformationType (extension base)
gml:AbstractGMLType (extension base)
Attributes
gml:id
The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory...
0..∞ informationAssociation
0..∞ invInformationAssociation
Abstract type for an S-100 information type. This is the base type from which domain application schemas derive...
0..∞ source
Type gml:ReferenceType
association to a SourceType information type which represents the source of the information type
0..∞ componentOf
Type gml:ReferenceType
Generic association between information types
0..∞ consistsOf
Type gml:ReferenceType
inverse generic association between information types
startLifespan
Type xs:date
endLifespan
Type xs:date
Right
Type rightType
categoryOfRight
Type Restriction of 'xs:string'
rrrDescription
Type xs:string
rrrShare
Type xs:double
rrrTimespec
Type xs:dateTime
0..∞ rightFor
Type gml:ReferenceType

Type	rightType
Type hierarchy	• gml:AbstractGMLType • AbstractInformationType • informationType • rightType
Properties	content: complex
Used by	Element Group Features
Model	informationAssociation* , invInformationAssociation* , source* , componentOf* , consistsOf* , startLifespan{0,1} , endLifespan{0,1} , categoryOfRight , rrrDescription{0,1} , rrrShare{0,1} , rrrTimespec{0,1} , rightFor*
Children	categoryOfRight, componentOf, consistsOf, endLifespan, informationAssociation, invInformationAssociation, rightFor, rrrDescription, rrrShare, rrrTimespec, source, startLifespan

Instance

```
<Right gml:id="" xmlns="http://www.iho.int/S-121" xmlns:s100="http://www.iho.int/s100gml/1.0">
  <s100:informationAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:informationAssociation>
  <s100:invInformationAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role
s100:invInformationAssociation>
  <source xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" xl
source>
  <componentOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show=
componentOf>
  <consistsOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
consistsOf>
  <startLifespan>{0,1}</startLifespan>
  <endLifespan>{0,1}</endLifespan>
  <categoryOfRight>{1,1}</categoryOfRight>
  <rrrDescription>{0,1}</rrrDescription>
  <rrrShare>{0,1}</rrrShare>
  <rrrTimespec>{0,1}</rrrTimespec>
  <rightFor xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x
rightFor>
</Right>
```

Attributes

QName	Type	Use	
gml:id	ID	required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		

Source

```
<xs:element name="Right" type="rightType"/>
```

Element rightType / categoryOfRight

Namespace	http://www.iho.int/S-121
Diagram	
Type	restriction of xs:string
Properties	content: simple

Facets

enumeration	sovereign
enumeration	sovereignRight
enumeration	accessRight
enumeration	easementRight
enumeration	harvestRight
enumeration	contiguousRight

Source

```
<xs:element name="categoryOfRight">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:enumeration value="sovereign"/>
      <xs:enumeration value="sovereignRight"/>
```

```
        <xs:enumeration value="accessRight"/>
        <xs:enumeration value="easementRight"/>
        <xs:enumeration value="harvestRight"/>
        <xs:enumeration value="contiguousRight"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:element>
```

Element rightType / rrrDescription

Namespace	http://www.iho.int/S-121
Diagram	
Type	xs:string
Properties	content: simple minOccurs: 0
Source	`<xs:element minOccurs="0" name="rrrDescription" type="xs:string"/>`

Element rightType / rrrShare

Namespace	http://www.iho.int/S-121
Diagram	
Type	xs:double
Properties	content: simple minOccurs: 0
Source	`<xs:element minOccurs="0" name="rrrShare" type="xs:double"/>`

Element rightType / rrrTimespec

Namespace	http://www.iho.int/S-121
Diagram	
Type	xs:dateTime
Properties	content: simple minOccurs: 0
Source	`<xs:element minOccurs="0" name="rrrTimespec" type="xs:dateTime"/>`

Element rightType / rightFor

Namespace	http://www.iho.int/S-121

Diagram	
Type	gml:ReferenceType
Properties	content: `complex` minOccurs: `0` maxOccurs: `unbounded`
Model	
Attributes	

QName	Type	Fixed	Default	Use	
nilReason	gml:NilReasonType			optional	
owns	boolean		false	optional	
xlink:actuate	xlink:actuateType			optional	
xlink:arcrole	xlink:arcroleType			optional	
xlink:href	xlink:hrefType			optional	
xlink:role	xlink:roleType			optional	
xlink:show	xlink:showType			optional	
xlink:title	xlink:titleAttrType			optional	
xlink:type	xlink:typeType	simple		optional	

Source

```
<xs:element minOccurs="0" name="rightFor" type="gml:ReferenceType" maxOccurs="unbounded"/>
```

Element `Restriction`

Namespace	http://www.iho.int/S-121

Diagram	
Type	restrictionType

Type hierarchy	• gml:AbstractGMLType • AbstractInformationType • informationType • restrictionType
Properties	content: complex
Used by	Element Group Features
Model	informationAssociation* , invInformationAssociation* , source* , componentOf* , consistsOf* , startLifespan{0,1} , endLifespan{0,1} , categoryOfRestriction , rrrDescription{0,1} , rrrShare{0,1} , rrrTimespec{0,1} , restrictionFor*
Children	categoryOfRestriction, componentOf, consistsOf, endLifespan, informationAssociation, invInformationAssociation, restrictionFor, rrrDescription, rrrShare, rrrTimespec, source, startLifespan

Instance

```
<Restriction gml:id="" xmlns="http://www.iho.int/S-121" xmlns:s100="http://www.iho.int/s100gml/1.0">
  <s100:informationAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role=""
s100:informationAssociation>
  <s100:invInformationAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role
s100:invInformationAssociation>
  <source xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" xli
source>
  <componentOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
componentOf>
  <consistsOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
consistsOf>
  <startLifespan>{0,1}</startLifespan>
  <endLifespan>{0,1}</endLifespan>
  <categoryOfRestriction>{1,1}</categoryOfRestriction>
  <rrrDescription>{0,1}</rrrDescription>
  <rrrShare>{0,1}</rrrShare>
  <rrrTimespec>{0,1}</rrrTimespec>
  <restrictionFor xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:sho
restrictionFor>
</Restriction>
```

Attributes

QName	Type	Use
gml:id	ID	required
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.	

Source

```
<xs:element name="Restriction" type="restrictionType"/>
```

Element restrictionType / categoryOfRestriction

Namespace	http://www.iho.int/S-121
Diagram	
Type	restriction of xs:string
Properties	content: simple
Facets	enumeration accessRestriction enumeration jurisdictionRestriction enumeration passageRestriction enumeration resourceRestriction enumeration timeBasedRestriction enumeration useRestriction

Source

```
<xs:element name="categoryOfRestriction">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:enumeration value="accessRestriction"/>
      <xs:enumeration value="jurisdictionRestriction"/>
      <xs:enumeration value="passageRestriction"/>
      <xs:enumeration value="resourceRestriction"/>
```

```
      <xs:enumeration value="timeBasedRestriction"/>
      <xs:enumeration value="useRestriction"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
```

Element restrictionType / rrrDescription

Namespace	http://www.iho.int/S-121
Diagram	
Type	xs:string
Properties	content: simple minOccurs: 0
Source	`<xs:element minOccurs="0" name="rrrDescription" type="xs:string"/>`

Element restrictionType / rrrShare

Namespace	http://www.iho.int/S-121
Diagram	
Type	xs:double
Properties	content: simple minOccurs: 0
Source	`<xs:element minOccurs="0" name="rrrShare" type="xs:double"/>`

Element restrictionType / rrrTimespec

Namespace	http://www.iho.int/S-121
Diagram	
Type	xs:dateTime
Properties	content: simple minOccurs: 0
Source	`<xs:element minOccurs="0" name="rrrTimespec" type="xs:dateTime"/>`

Element restrictionType / restrictionFor

Namespace	http://www.iho.int/S-121

Diagram	
Type	gml:ReferenceType
Properties	content: `complex` minOccurs: `0` maxOccurs: `unbounded`
Model	
Attributes	

QName	Type	Fixed	Default	Use	
nilReason	gml:NilReasonType			optional	
owns	boolean		false	optional	
xlink:actuate	xlink:actuateType			optional	
xlink:arcrole	xlink:arcroleType			optional	
xlink:href	xlink:hrefType			optional	
xlink:role	xlink:roleType			optional	
xlink:show	xlink:showType			optional	
xlink:title	xlink:titleAttrType			optional	
xlink:type	xlink:typeType	simple		optional	

Source

```
<xs:element minOccurs="0" name="restrictionFor" type="gml:ReferenceType" maxOccurs="unbounded"/>
```

Element Responsibility

Namespace	http://www.iho.int/S-121

Diagram	
Type	responsibilityType

Type hierarchy	• gml:AbstractGMLType • AbstractInformationType • informationType • responsibilityType
Properties	content: complex
Used by	Element Group Features
Model	informationAssociation* , invInformationAssociation* , source* , componentOf* , consistsOf* , startLifespan{0,1} , endLifespan{0,1} , categoryOfResponsibility , rrrDescription{0,1} , rrrShare{0,1} , rrrTimespec{0,1} , responsibilityFor*
Children	categoryOfResponsibility, componentOf, consistsOf, endLifespan, informationAssociation, invInformationAssociation, responsibilityFor, rrrDescription, rrrShare, rrrTimespec, source, startLifespan

Instance

```
<Responsibility gml:id="" xmlns="http://www.iho.int/S-121" xmlns:s100="http://www.iho.int/
s100gml/1.0">
  <s100:informationAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:informationAssociation>
  <s100:invInformationAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role
s100:invInformationAssociation>
  <source xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" xli
source>
  <componentOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
componentOf>
  <consistsOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
consistsOf>
  <startLifespan>{0,1}</startLifespan>
  <endLifespan>{0,1}</endLifespan>
  <categoryOfResponsibility>{1,1}</categoryOfResponsibility>
  <rrrDescription>{0,1}</rrrDescription>
  <rrrShare>{0,1}</rrrShare>
  <rrrTimespec>{0,1}</rrrTimespec>
  <responsibilityFor xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink
responsibilityFor>
</Responsibility>
```

Attributes

QName	Type	Use	
gml:id	ID	required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		

Source

```
<xs:element name="Responsibility" type="responsibilityType"/>
```

Element responsibilityType / categoryOfResponsibility

Namespace	http://www.iho.int/S-121
Diagram	
Type	restriction of xs:string
Properties	content: simple
Facets	enumeration maintenanceResponsibility

Source

```
<xs:element name="categoryOfResponsibility">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:enumeration value="maintenanceResponsibility"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
```

Element responsibilityType / rrrDescription

Namespace	http://www.iho.int/S-121

Diagram	
Type	xs:string
Properties	content: simple minOccurs: 0
Source	`<xs:element minOccurs="0" name="rrrDescription" type="xs:string"/>`

Element `responsibilityType / rrrShare`

Namespace	http://www.iho.int/S-121
Diagram	
Type	xs:double
Properties	content: simple minOccurs: 0
Source	`<xs:element minOccurs="0" name="rrrShare" type="xs:double"/>`

Element `responsibilityType / rrrTimespec`

Namespace	http://www.iho.int/S-121
Diagram	
Type	xs:dateTime
Properties	content: simple minOccurs: 0
Source	`<xs:element minOccurs="0" name="rrrTimespec" type="xs:dateTime"/>`

Element `responsibilityType / responsibilityFor`

Namespace	http://www.iho.int/S-121

Diagram	
Type	gml:ReferenceType
Properties	content: `complex` minOccurs: `0` maxOccurs: `unbounded`
Model	
Attributes	

QName	Type	Fixed	Default	Use	
nilReason	gml:NilReasonType			optional	
owns	boolean		false	optional	
xlink:actuate	xlink:actuateType			optional	
xlink:arcrole	xlink:arcroleType			optional	
xlink:href	xlink:hrefType			optional	
xlink:role	xlink:roleType			optional	
xlink:show	xlink:showType			optional	
xlink:title	xlink:titleAttrType			optional	
xlink:type	xlink:typeType	simple		optional	

Source

```
<xs:element minOccurs="0" name="responsibilityFor" type="gml:ReferenceType" maxOccurs="unbounded"/>
```

Element Governance

Namespace	http://www.iho.int/S-121

Diagram

governanceType
Base Type informationType
informationType (extension base)
Base Type s100:AbstractInformationType
s100:AbstractInformationType (extension base)
gml:AbstractGMLType (extension base)
Attributes
gml:id
The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory...
0..∞ informationAssociation
0..∞ invInformationAssociation
Abstract type for an S-100 information type. This is the base type from which domain application schemas derive...
0..∞ source
Type gml:ReferenceType
association to a SourceType information type which represents the source of the information type
0..∞ componentOf
Type gml:ReferenceType
Generic association between information types
0..∞ consistsOf
Type gml:ReferenceType
inverse generic association between information types
startLifespan
Type xs:date
endLifespan
Type xs:date
Governance
Type governanceType
label
Type xs:string
referenceNumber
Type xs:string
featureName
Type InfofeatureNameType
governanceTitle
Type xs:string
governanceDescription
Type xs:string
releasabilityType
Type xs:string
dateApproved
Type xs:date
dateConsidered
Type xs:date
dateIntroduced

Type	governanceType

Type hierarchy	• gml:AbstractGMLType
	  • AbstractInformationType
	  • informationType
	  • governanceType

Properties	content: complex
Used by	Element Group Features
Model	informationAssociation* , invInformationAssociation* , source* , componentOf* , consistsOf* , startLifespan{0,1} , endLifespan{0,1} , label{0,1} , referenceNumber{0,1} , featureName{0,1} , governanceTitle{0,1} , governanceDescription{0,1} , releasabilityType{0,1} , dateApproved{0,1} , dateConsidered{0,1} , dateIntroduced{0,1} , governanceOf* , governanceFor*
Children	componentOf, consistsOf, dateApproved, dateConsidered, dateIntroduced, endLifespan, featureName, governanceDescription, governanceFor, governanceOf, governanceTitle, informationAssociation, invInformationAssociation, label, referenceNumber, releasabilityType, source, startLifespan

Instance

```
<Governance gml:id="" xmlns="http://www.iho.int/S-121" xmlns:s100="http://www.iho.int/s100gml/1.0">
  <s100:informationAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="
s100:informationAssociation>
  <s100:invInformationAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role
s100:invInformationAssociation>
  <source xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" xli
source>
  <componentOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
componentOf>
  <consistsOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
consistsOf>
  <startLifespan>{0,1}</startLifespan>
  <endLifespan>{0,1}</endLifespan>
  <label>{0,1}</label>
  <referenceNumber>{0,1}</referenceNumber>
  <featureName>{0,1}</featureName>
  <governanceTitle>{0,1}</governanceTitle>
  <governanceDescription>{0,1}</governanceDescription>
  <releasabilityType>{0,1}</releasabilityType>
  <dateApproved>{0,1}</dateApproved>
  <dateConsidered>{0,1}</dateConsidered>
  <dateIntroduced>{0,1}</dateIntroduced>
  <governanceOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show=
governanceOf>
  <governanceFor xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show
governanceFor>
</Governance>
```

Attributes

QName	Type	Use	
gml:id	ID	required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		

Source

```
<xs:element name="Governance" type="governanceType"/>
```

Element governanceType / label

Namespace	http://www.iho.int/S-121
Diagram	
Type	xs:string
Properties	content: simple minOccurs: 0 maxOccurs: 1

Source	`<xs:element name="label" type="xs:string" minOccurs="0" maxOccurs="1"/>`

Element governanceType / referenceNumber

Namespace	http://www.iho.int/S-121
Diagram	
Type	xs:string
Properties	content: simple minOccurs: 0 maxOccurs: 1
Source	`<xs:element name="referenceNumber" type="xs:string" minOccurs="0" maxOccurs="1"/>`

Element governanceType / featureName

Namespace	http://www.iho.int/S-121
Diagram	
Type	InfofeatureNameType
Properties	content: complex minOccurs: 0 maxOccurs: 1
Model	displayName{0,1} , language , Name
Children	Name, displayName, language

Instance	`<featureName xmlns="http://www.iho.int/S-121">`
	`  <displayName>{0,1}</displayName>`
	`  <language>{1,1}</language>`
	`  <Name>{1,1}</Name>`
	`</featureName>`

Source	`<xs:element name="featureName" type="InfofeatureNameType" minOccurs="0" maxOccurs="1"/>`

Element InfofeatureNameType / displayName

Namespace	http://www.iho.int/S-121
Diagram	
Type	xs:boolean

Properties	content:	simple
	minOccurs:	0
Source	`<xs:element minOccurs="0" name="displayName" type="xs:boolean"/>`	

Element InfofeatureNameType / language

Namespace	http://www.iho.int/S-121
Diagram	
Type	xs:string
Properties	content: simple
Source	`<xs:element name="language" type="xs:string"/>`

Element InfofeatureNameType / Name

Namespace	http://www.iho.int/S-121
Diagram	
Type	xs:string
Properties	content: simple
Source	`<xs:element name="Name" type="xs:string"/>`

Element governanceType / governanceTitle

Namespace	http://www.iho.int/S-121
Diagram	
Type	xs:string
Properties	content: simple minOccurs: 0 maxOccurs: 1
Source	`<xs:element name="governanceTitle" type="xs:string" minOccurs="0" maxOccurs="1"/>`

Element governanceType / governanceDescription

Namespace	http://www.iho.int/S-121
Diagram	
Type	xs:string
Properties	content: simple minOccurs: 0

	maxOccurs: 1
Source	`<xs:element name="governanceDescription" type="xs:string" minOccurs="0" maxOccurs="1"/>`

Element governanceType / releasabilityType

Namespace	http://www.iho.int/S-121
Diagram	
Type	xs:string
Properties	content: simple minOccurs: 0 maxOccurs: 1
Source	`<xs:element name="releasabilityType" type="xs:string" minOccurs="0" maxOccurs="1"/>`

Element governanceType / dateApproved

Namespace	http://www.iho.int/S-121
Diagram	
Type	xs:date
Properties	content: simple minOccurs: 0 maxOccurs: 1
Source	`<xs:element name="dateApproved" type="xs:date" minOccurs="0" maxOccurs="1"/>`

Element governanceType / dateConsidered

Namespace	http://www.iho.int/S-121
Diagram	
Type	xs:date
Properties	content: simple minOccurs: 0 maxOccurs: 1
Source	`<xs:element name="dateConsidered" type="xs:date" minOccurs="0" maxOccurs="1"/>`

Element governanceType / dateIntroduced

Namespace	http://www.iho.int/S-121
Diagram	

Type	xs:date
Properties	content: simple minOccurs: 0 maxOccurs: 1
Source	`<xs:element name="dateIntroduced" type="xs:date" minOccurs="0" maxOccurs="1"/>`

Element governanceType / governanceOf

Namespace	http://www.iho.int/S-121
Annotations	binding between a governance information type and a BAU information type
Diagram	
Type	gml:ReferenceType
Properties	content: complex minOccurs: 0 maxOccurs: unbounded
Model	
Attributes	
Source	

QName	Type	Fixed	Default	Use
nilReason	gml:NilReasonType			optional
owns	boolean		false	optional
xlink:actuate	xlink:actuateType			optional
xlink:arcrole	xlink:arcroleType			optional
xlink:href	xlink:hrefType			optional
xlink:role	xlink:roleType			optional
xlink:show	xlink:showType			optional
xlink:title	xlink:titleAttrType			optional
xlink:type	xlink:typeType	simple		optional

```
<xs:element minOccurs="0" name="governanceOf" type="gml:ReferenceType" maxOccurs="unbounded">
  <xs:annotation>
    <xs:documentation>binding between a governance information type and a BAU information type</
xs:documentation>
  </xs:annotation>
```

```
</xs:element>
```

Element governanceType / governanceFor

Namespace	http://www.iho.int/S-121
Annotations	hierarchical binding between a governance information type and a BAU information type
Diagram	
Type	gml:ReferenceType
Properties	content: complex minOccurs: 0 maxOccurs: unbounded
Model	
Attributes	

QName	Type	Fixed	Default	Use	
nilReason	gml:NilReasonType			optional	
owns	boolean		false	optional	
xlink:actuate	xlink:actuateType			optional	
xlink:arcrole	xlink:arcroleType			optional	
xlink:href	xlink:hrefType			optional	
xlink:role	xlink:roleType			optional	
xlink:show	xlink:showType			optional	
xlink:title	xlink:titleAttrType			optional	
xlink:type	xlink:typeType	simple		optional	

Source

```
<xs:element minOccurs="0" name="governanceFor" type="gml:ReferenceType" maxOccurs="unbounded">
  <xs:annotation>
    <xs:documentation>hierarchical binding between a governance information type and a BAU
 information type</xs:documentation>
  </xs:annotation>
</xs:element>
```

Element Source

Namespace	http://www.iho.int/S-121

Diagram

sourceType
Base Type informationType
informationType (extension base)
Base Type s100:AbstractInformationType
s100:AbstractInformationType (extension base)
gml:AbstractGMLType (extension base)
Attributes
gml:id
The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory...
0..∞ informationAssociation
0..∞ invInformationAssociation
Abstract type for an S-100 information type. This is the base type from which domain application schemas derive...
0..∞ source
Type gml:ReferenceType
association to a SourceType information type which represents the source of the information type
0..∞ componentOf
Type gml:ReferenceType
Generic association between information types
0..∞ consistsOf
Type gml:ReferenceType
inverse generic association between information types
startLifespan
Type xs:date
endLifespan
Type xs:date
responsibleParty
Type responsiblePartyType
sourceDocumentName
Type xs:string
sourceRegistryNumber
Type xs:string
sourceAvailabilityStatus
Type Restriction of 'xs:string'
administrativeSourceType
Type Restriction of 'xs:string'
spatialSourceType
Type Restriction of 'xs:string'
Source
Type sourceType
label
Type xs:string
onlineResource

Type	sourceType
Type hierarchy	• gml:AbstractGMLType • AbstractInformationType • informationType • sourceType
Properties	content: complex
Substitution Group Affiliation	• gml:AbstractGML
Used by	Element Group Features
Model	informationAssociation* , invInformationAssociation* , source* , componentOf* , consistsOf* , startLifespan{0,1} , endLifespan{0,1} , responsibleParty{0,1} , sourceDocumentName{0,1} , sourceRegistryNumber{0,1} , sourceAvailabilityStatus{0,1} , administrativeSourceType{0,1} , spatialSourceType{0,1} , label{0,1} , onlineResource{0,1} , administrativeDateStamp{0,1} , authoritativeDate{0,1} , sourceDocumentType{0,1} , sourceType{0,1} , sourceSubmissionDate{0,1} , sourceRecordationDate{0,1} , sourceOf{0,1}
Children	administrativeDateStamp, administrativeSourceType, authoritativeDate, componentOf, consistsOf, endLifespan, informationAssociation, invInformationAssociation, label, onlineResource, responsibleParty, source, sourceAvailabilityStatus, sourceDocumentName, sourceDocumentType, sourceOf, sourceRecordationDate, sourceRegistryNumber, sourceSubmissionDate, sourceType, spatialSourceType, startLifespan

Instance

```
<Source gml:id="" xmlns="http://www.iho.int/S-121" xmlns:s100="http://www.iho.int/s100gml/1.0">
  <s100:informationAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role=""
s100:informationAssociation>
  <s100:invInformationAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role
s100:invInformationAssociation>
  <source xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" xli
source>
  <componentOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
componentOf>
  <consistsOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="
consistsOf>
  <startLifespan>{0,1}</startLifespan>
  <endLifespan>{0,1}</endLifespan>
  <responsibleParty>{0,1}</responsibleParty>
  <sourceDocumentName>{0,1}</sourceDocumentName>
  <sourceRegistryNumber>{0,1}</sourceRegistryNumber>
  <sourceAvailabilityStatus>{0,1}</sourceAvailabilityStatus>
  <administrativeSourceType>{0,1}</administrativeSourceType>
  <spatialSourceType>{0,1}</spatialSourceType>
  <label>{0,1}</label>
  <onlineResource>{0,1}</onlineResource>
  <administrativeDateStamp>{0,1}</administrativeDateStamp>
  <authoritativeDate>{0,1}</authoritativeDate>
  <sourceDocumentType>{0,1}</sourceDocumentType>
  <sourceType>{0,1}</sourceType>
  <sourceSubmissionDate>{0,1}</sourceSubmissionDate>
  <sourceRecordationDate>{0,1}</sourceRecordationDate>
  <sourceOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" x
sourceOf>
</Source>
```

Attributes

QName	Type	Use	
gml:id	ID	required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		

Source

```
<xs:element name="Source" type="sourceType" substitutionGroup="gml:AbstractGML"/>
```

Element sourceType / responsibleParty

Namespace	http://www.iho.int/S-121

Diagram	
Type	responsiblePartyType
Properties	content: complex minOccurs: 0
Model	responsiblePartyIndividualName{0,1} , responsiblePartyOrganisationName{0,1} , responsiblePartyPositionName{0,1} , organisationalRole{0,1} , sourceContact{0,1}
Children	organisationalRole, responsiblePartyIndividualName, responsiblePartyOrganisationName, responsiblePartyPositionName, sourceContact

Instance	`<responsibleParty xmlns="http://www.iho.int/S-121">`
	`  <responsiblePartyIndividualName>{0,1}</responsiblePartyIndividualName>`
	`  <responsiblePartyOrganisationName>{0,1}</responsiblePartyOrganisationName>`
	`  <responsiblePartyPositionName>{0,1}</responsiblePartyPositionName>`
	`  <organisationalRole>{0,1}</organisationalRole>`
	`  <sourceContact>{0,1}</sourceContact>`
	`</responsibleParty>`

Source	`<xs:element name="responsibleParty" type="responsiblePartyType" minOccurs="0"/>`

Element responsiblePartyType / responsiblePartyIndividualName

Namespace	http://www.iho.int/S-121
Diagram	
Type	xs:string
Properties	content: simple minOccurs: 0 maxOccurs: 1

Source	`<xs:element name="responsiblePartyIndividualName" minOccurs="0" maxOccurs="1">`
	`  <xs:simpleType>`
	`  <xs:restriction base="xs:string"/>`
	`  </xs:simpleType>`
	`</xs:element>`

Element responsiblePartyType / responsiblePartyOrganisationName

Namespace	http://www.iho.int/S-121
Diagram	
Type	xs:string
Properties	content: simple minOccurs: 0

	maxOccurs: 1

Source	`<xs:element name="responsiblePartyOrganisationName" minOccurs="0" maxOccurs="1">`
	`  <xs:simpleType>`
	`  <xs:restriction base="xs:string"/>`
	`  </xs:simpleType>`
	`</xs:element>`

Element responsiblePartyType / responsiblePartyPositionName

Namespace	http://www.iho.int/S-121
Diagram	
Type	xs:string
Properties	content: simple minOccurs: 0 maxOccurs: 1

Source	`<xs:element name="responsiblePartyPositionName" minOccurs="0" maxOccurs="1">`
	`  <xs:simpleType>`
	`  <xs:restriction base="xs:string"/>`
	`  </xs:simpleType>`
	`</xs:element>`

Element responsiblePartyType / organisationalRole

Namespace	http://www.iho.int/S-121
Diagram	
Type	restriction of xs:string
Properties	content: simple minOccurs: 0 maxOccurs: 1
Facets	enumeration Resource Provider `<xs:Name>Resource Provider</xs:Name>` enumeration Custodian enumeration Owner enumeration User enumeration Distributor enumeration Originator enumeration Point Of Contact enumeration Principal Investigator enumeration Processor enumeration Publisher enumeration Author

Source	`<xs:element name="organisationalRole" minOccurs="0" maxOccurs="1">`
	`  <xs:simpleType>`
	`  <xs:restriction base="xs:string">`
	`  <xs:enumeration value=" Resource Provider">`
	`  <xs:annotation>`
	`  <xs:documentation>`
	`  <xs:Name>Resource Provider</xs:Name>`
	`  </xs:documentation>`
	`  </xs:annotation>`
	`  </xs:enumeration>`
	`  <xs:enumeration value="Custodian"/>`
	`  <xs:enumeration value="Owner"/>`
	`  <xs:enumeration value="User"/>`
	`  <xs:enumeration value="Distributor"/>`
	`  <xs:enumeration value="Originator"/>`
	`  <xs:enumeration value="Point Of Contact"/>`

```
      <xs:enumeration value="Principal Investigator"/>
      <xs:enumeration value="Processor"/>
      <xs:enumeration value="Publisher"/>
      <xs:enumeration value="Author"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
```

Element responsiblePartyType / sourceContact

Namespace	http://www.iho.int/S-121
Diagram	
Properties	content: complex minOccurs: 0 maxOccurs: 1
Model	contactPhoneNumber{0,1} , sourceAddress{0,1} , onlineResource{0,1}
Children	contactPhoneNumber, onlineResource, sourceAddress

Instance	`<sourceContact xmlns="http://www.iho.int/S-121">`
	`  <contactPhoneNumber>{0,1}</contactPhoneNumber>`
	`  <sourceAddress>{0,1}</sourceAddress>`
	`  <onlineResource>{0,1}</onlineResource>`
	`</sourceContact>`

Source

```
<xs:element name="sourceContact" minOccurs="0" maxOccurs="1">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="contactPhoneNumber" minOccurs="0" maxOccurs="1">
        <xs:simpleType>
          <xs:restriction base="xs:string"/>
        </xs:simpleType>
      </xs:element>
      <xs:element name="sourceAddress" minOccurs="0" maxOccurs="1">
        <xs:complexType>
          <xs:sequence>
            <xs:element name="addressDeliveryPoint" minOccurs="0" maxOccurs="1">
              <xs:simpleType>
                <xs:restriction base="xs:string"/>
              </xs:simpleType>
            </xs:element>
            <xs:element name="addressCity" minOccurs="0" maxOccurs="1">
              <xs:simpleType>
                <xs:restriction base="xs:string"/>
              </xs:simpleType>
            </xs:element>
            <xs:element name="addressAdministrativeArea" minOccurs="0" maxOccurs="1">
              <xs:simpleType>
                <xs:restriction base="xs:string"/>
              </xs:simpleType>
            </xs:element>
            <xs:element name="addressPostcode" minOccurs="0" maxOccurs="1">
              <xs:simpleType>
                <xs:restriction base="xs:string"/>
              </xs:simpleType>
            </xs:element>
            <xs:element name="addressCountry" minOccurs="0" maxOccurs="1">
              <xs:simpleType>
                <xs:restriction base="xs:string"/>
              </xs:simpleType>
            </xs:element>
            <xs:element name="addressEmailAddress" minOccurs="0" maxOccurs="1">
              <xs:simpleType>
                <xs:restriction base="xs:string">
                  <xs:enumeration value=""/>
                </xs:restriction>
              </xs:simpleType>
            </xs:element>
          </xs:sequence>
```

```
        </xs:complexType>
      </xs:element>
      <xs:element name="onlineResource" minOccurs="0" maxOccurs="1">
        <xs:complexType>
          <xs:sequence>
            <xs:element name="onlineResourceLinkageURL" minOccurs="0" maxOccurs="1">
              <xs:simpleType>
                <xs:restriction base="xs:string"/>
              </xs:simpleType>
            </xs:element>
            <xs:element name="onlineResourceProtocol" minOccurs="0" maxOccurs="1">
              <xs:simpleType>
                <xs:restriction base="xs:string"/>
              </xs:simpleType>
            </xs:element>
            <xs:element name="onlineResourceApplicationProfile" minOccurs="1" maxOccurs="1"
nillable="true">
              <xs:simpleType>
                <xs:restriction base="xs:string"/>
              </xs:simpleType>
            </xs:element>
            <xs:element name="onlineResourceName" minOccurs="1" maxOccurs="1" nillable="true">
              <xs:simpleType>
                <xs:restriction base="xs:string"/>
              </xs:simpleType>
            </xs:element>
            <xs:element name="onlineResourceDescription" minOccurs="1" maxOccurs="1"
nillable="true">
              <xs:simpleType>
                <xs:restriction base="xs:string"/>
              </xs:simpleType>
            </xs:element>
            <xs:element name="onlineResourceFunction" minOccurs="1" maxOccurs="1" nillable="true">
              <xs:simpleType>
                <xs:restriction base="xs:string">
                  <xs:enumeration value="1">
                    <xs:annotation>
                      <xs:documentation>
                        <xs:Name>download</xs:Name>
                      </xs:documentation>
                    </xs:annotation>
                  </xs:enumeration>
                  <xs:enumeration value="2">
                    <xs:annotation>
                      <xs:documentation>
                        <xs:Name>information</xs:Name>
                      </xs:documentation>
                    </xs:annotation>
                  </xs:enumeration>
                  <xs:enumeration value="3">
                    <xs:annotation>
                      <xs:documentation>
                        <xs:Name>offlineAccess</xs:Name>
                      </xs:documentation>
                    </xs:annotation>
                  </xs:enumeration>
                  <xs:enumeration value="4">
                    <xs:annotation>
                      <xs:documentation>
                        <xs:Name>offlineAccess</xs:Name>
                      </xs:documentation>
                    </xs:annotation>
                  </xs:enumeration>
                  <xs:enumeration value="5">
                    <xs:annotation>
                      <xs:documentation>
                        <xs:Name>order</xs:Name>
                      </xs:documentation>
                    </xs:annotation>
                  </xs:enumeration>
                  <xs:enumeration value="6">
                    <xs:annotation>
                      <xs:documentation>
                        <xs:Name>search</xs:Name>
                      </xs:documentation>
                    </xs:annotation>
                  </xs:enumeration>
                </xs:restriction>
              </xs:simpleType>
            </xs:element>
          </xs:sequence>
        </xs:complexType>
      </xs:element>
```

```
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

Element responsiblePartyType / sourceContact / contactPhoneNumber

Namespace	http://www.iho.int/S-121
Diagram	
Type	xs:string
Properties	content: simple minOccurs: 0 maxOccurs: 1

Source	`<xs:element name="contactPhoneNumber" minOccurs="0" maxOccurs="1">`
	`  <xs:simpleType>`
	`  <xs:restriction base="xs:string"/>`
	`  </xs:simpleType>`
	`</xs:element>`

Element responsiblePartyType / sourceContact / sourceAddress

Namespace	http://www.iho.int/S-121
Diagram	
Properties	content: complex minOccurs: 0 maxOccurs: 1
Model	addressDeliveryPoint{0,1} , addressCity{0,1} , addressAdministrativeArea{0,1} , addressPostcode{0,1} , addressCountry{0,1} , addressEmailAddress{0,1}
Children	addressAdministrativeArea, addressCity, addressCountry, addressDeliveryPoint, addressEmailAddress, addressPostcode

Instance	`<sourceAddress xmlns="http://www.iho.int/S-121">`
	`  <addressDeliveryPoint>{0,1}</addressDeliveryPoint>`
	`  <addressCity>{0,1}</addressCity>`
	`  <addressAdministrativeArea>{0,1}</addressAdministrativeArea>`
	`  <addressPostcode>{0,1}</addressPostcode>`
	`  <addressCountry>{0,1}</addressCountry>`
	`  <addressEmailAddress>{0,1}</addressEmailAddress>`
	`</sourceAddress>`

Source	`<xs:element name="sourceAddress" minOccurs="0" maxOccurs="1">`

```
  <xs:complexType>
    <xs:sequence>
      <xs:element name="addressDeliveryPoint" minOccurs="0" maxOccurs="1">
        <xs:simpleType>
          <xs:restriction base="xs:string"/>
        </xs:simpleType>
      </xs:element>
      <xs:element name="addressCity" minOccurs="0" maxOccurs="1">
        <xs:simpleType>
          <xs:restriction base="xs:string"/>
        </xs:simpleType>
      </xs:element>
      <xs:element name="addressAdministrativeArea" minOccurs="0" maxOccurs="1">
        <xs:simpleType>
          <xs:restriction base="xs:string"/>
        </xs:simpleType>
      </xs:element>
      <xs:element name="addressPostcode" minOccurs="0" maxOccurs="1">
        <xs:simpleType>
          <xs:restriction base="xs:string"/>
        </xs:simpleType>
      </xs:element>
      <xs:element name="addressCountry" minOccurs="0" maxOccurs="1">
        <xs:simpleType>
          <xs:restriction base="xs:string"/>
        </xs:simpleType>
      </xs:element>
      <xs:element name="addressEmailAddress" minOccurs="0" maxOccurs="1">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:enumeration value=""/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

Element responsiblePartyType / sourceContact / sourceAddress / addressDeliveryPoint

Namespace	http://www.iho.int/S-121
Diagram	
Type	xs:string
Properties	content: simple minOccurs: 0 maxOccurs: 1

Source	`<xs:element name="addressDeliveryPoint" minOccurs="0" maxOccurs="1">`
	`  <xs:simpleType>`
	`  <xs:restriction base="xs:string"/>`
	`  </xs:simpleType>`
	`</xs:element>`

Element responsiblePartyType / sourceContact / sourceAddress / addressCity

Namespace	http://www.iho.int/S-121
Diagram	
Type	xs:string
Properties	content: simple minOccurs: 0 maxOccurs: 1

Source	`<xs:element name="addressCity" minOccurs="0" maxOccurs="1">`
	`  <xs:simpleType>`
	`  <xs:restriction base="xs:string"/>`
	`  </xs:simpleType>`

```
</xs:element>
```

Element responsiblePartyType / sourceContact / sourceAddress / addressAdministrativeArea

Namespace	http://www.iho.int/S-121
Diagram	
Type	xs:string
Properties	content: simple minOccurs: 0 maxOccurs: 1

Source	`<xs:element name="addressAdministrativeArea" minOccurs="0" maxOccurs="1">`
	`  <xs:simpleType>`
	`  <xs:restriction base="xs:string"/>`
	`  </xs:simpleType>`
	`</xs:element>`

Element responsiblePartyType / sourceContact / sourceAddress / addressPostcode

Namespace	http://www.iho.int/S-121
Diagram	
Type	xs:string
Properties	content: simple minOccurs: 0 maxOccurs: 1

Source	`<xs:element name="addressPostcode" minOccurs="0" maxOccurs="1">`
	`  <xs:simpleType>`
	`  <xs:restriction base="xs:string"/>`
	`  </xs:simpleType>`
	`</xs:element>`

Element responsiblePartyType / sourceContact / sourceAddress / addressCountry

Namespace	http://www.iho.int/S-121
Diagram	
Type	xs:string
Properties	content: simple minOccurs: 0 maxOccurs: 1

Source	`<xs:element name="addressCountry" minOccurs="0" maxOccurs="1">`
	`  <xs:simpleType>`
	`  <xs:restriction base="xs:string"/>`
	`  </xs:simpleType>`
	`</xs:element>`

Element responsiblePartyType / sourceContact / sourceAddress / addressEmailAddress

Namespace	http://www.iho.int/S-121
Diagram	

Type	restriction of xs:string
Properties	content: simple minOccurs: 0 maxOccurs: 1
Facets	enumeration

Source	`<xs:element name="addressEmailAddress" minOccurs="0" maxOccurs="1">`
	`  <xs:simpleType>`
	`  <xs:restriction base="xs:string">`
	`  <xs:enumeration value=""/>`
	`  </xs:restriction>`
	`  </xs:simpleType>`
	`</xs:element>`

Element responsiblePartyType / sourceContact / onlineResource

Namespace	http://www.iho.int/S-121
Diagram	
Properties	content: complex minOccurs: 0 maxOccurs: 1
Model	onlineResourceLinkageURL{0,1} , onlineResourceProtocol{0,1} , onlineResourceApplicationProfile , onlineResourceName , onlineResourceDescription , onlineResourceFunction
Children	onlineResourceApplicationProfile, onlineResourceDescription, onlineResourceFunction, onlineResourceLinkageURL, onlineResourceName, onlineResourceProtocol

Instance	`<onlineResource xmlns="http://www.iho.int/S-121">`
	`  <onlineResourceLinkageURL>{0,1}</onlineResourceLinkageURL>`
	`  <onlineResourceProtocol>{0,1}</onlineResourceProtocol>`
	`  <onlineResourceApplicationProfile>{1,1}</onlineResourceApplicationProfile>`
	`  <onlineResourceName>{1,1}</onlineResourceName>`
	`  <onlineResourceDescription>{1,1}</onlineResourceDescription>`
	`  <onlineResourceFunction>{1,1}</onlineResourceFunction>`
	`</onlineResource>`

Source	`<xs:element name="onlineResource" minOccurs="0" maxOccurs="1">`
	`  <xs:complexType>`
	`  <xs:sequence>`
	`  <xs:element name="onlineResourceLinkageURL" minOccurs="0" maxOccurs="1">`
	`  <xs:simpleType>`
	`  <xs:restriction base="xs:string"/>`
	`  </xs:simpleType>`
	`  </xs:element>`
	`  <xs:element name="onlineResourceProtocol" minOccurs="0" maxOccurs="1">`

```
        <xs:simpleType>
          <xs:restriction base="xs:string"/>
        </xs:simpleType>
      </xs:element>
      <xs:element name="onlineResourceApplicationProfile" minOccurs="1" maxOccurs="1"
 nillable="true">
        <xs:simpleType>
          <xs:restriction base="xs:string"/>
        </xs:simpleType>
      </xs:element>
      <xs:element name="onlineResourceName" minOccurs="1" maxOccurs="1" nillable="true">
        <xs:simpleType>
          <xs:restriction base="xs:string"/>
        </xs:simpleType>
      </xs:element>
      <xs:element name="onlineResourceDescription" minOccurs="1" maxOccurs="1" nillable="true">
        <xs:simpleType>
          <xs:restriction base="xs:string"/>
        </xs:simpleType>
      </xs:element>
      <xs:element name="onlineResourceFunction" minOccurs="1" maxOccurs="1" nillable="true">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:enumeration value="1">
              <xs:annotation>
                <xs:documentation>
                  <xs:Name>download</xs:Name>
                </xs:documentation>
              </xs:annotation>
            </xs:enumeration>
            <xs:enumeration value="2">
              <xs:annotation>
                <xs:documentation>
                  <xs:Name>information</xs:Name>
                </xs:documentation>
              </xs:annotation>
            </xs:enumeration>
            <xs:enumeration value="3">
              <xs:annotation>
                <xs:documentation>
                  <xs:Name>offlineAccess</xs:Name>
                </xs:documentation>
              </xs:annotation>
            </xs:enumeration>
            <xs:enumeration value="4">
              <xs:annotation>
                <xs:documentation>
                  <xs:Name>offlineAccess</xs:Name>
                </xs:documentation>
              </xs:annotation>
            </xs:enumeration>
            <xs:enumeration value="5">
              <xs:annotation>
                <xs:documentation>
                  <xs:Name>order</xs:Name>
                </xs:documentation>
              </xs:annotation>
            </xs:enumeration>
            <xs:enumeration value="6">
              <xs:annotation>
                <xs:documentation>
                  <xs:Name>search</xs:Name>
                </xs:documentation>
              </xs:annotation>
            </xs:enumeration>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

Element responsiblePartyType / sourceContact / onlineResource / onlineResourceLinkageURL

Namespace	http://www.iho.int/S-121
Diagram	

Type	xs:string
Properties	content: simple minOccurs: 0 maxOccurs: 1

Source	`<xs:element name="onlineResourceLinkageURL" minOccurs="0" maxOccurs="1">`
	`  <xs:simpleType>`
	`  <xs:restriction base="xs:string"/>`
	`  </xs:simpleType>`
	`</xs:element>`

Element responsiblePartyType / sourceContact / onlineResource / onlineResource-Protocol

Namespace	http://www.iho.int/S-121
Diagram	
Type	xs:string
Properties	content: simple minOccurs: 0 maxOccurs: 1

Source	`<xs:element name="onlineResourceProtocol" minOccurs="0" maxOccurs="1">`
	`  <xs:simpleType>`
	`  <xs:restriction base="xs:string"/>`
	`  </xs:simpleType>`
	`</xs:element>`

Element responsiblePartyType / sourceContact / onlineResource / onlineRe-sourceApplicationProfile

Namespace	http://www.iho.int/S-121
Diagram	
Type	xs:string
Properties	content: simple minOccurs: 1 maxOccurs: 1 nillable: true

Source	`<xs:element name="onlineResourceApplicationProfile" minOccurs="1" maxOccurs="1" nillable="true">`
	`  <xs:simpleType>`
	`  <xs:restriction base="xs:string"/>`
	`  </xs:simpleType>`
	`</xs:element>`

Element responsiblePartyType / sourceContact / onlineResource / onlineResource-Name

Namespace	http://www.iho.int/S-121
Diagram	
Type	xs:string
Properties	content: simple minOccurs: 1 maxOccurs: 1 nillable: true

Source	`<xs:element name="onlineResourceName" minOccurs="1" maxOccurs="1" nillable="true">`
	`  <xs:simpleType>`
	`  <xs:restriction base="xs:string"/>`
	`  </xs:simpleType>`
	`</xs:element>`

Element responsiblePartyType / sourceContact / onlineResource / onlineResourceDescription

Namespace	http://www.iho.int/S-121
Diagram	
Type	xs:string
Properties	content: simple minOccurs: 1 maxOccurs: 1 nillable: true

Source	`<xs:element name="onlineResourceDescription" minOccurs="1" maxOccurs="1" nillable="true">`
	`  <xs:simpleType>`
	`  <xs:restriction base="xs:string"/>`
	`  </xs:simpleType>`
	`</xs:element>`

Element responsiblePartyType / sourceContact / onlineResource / onlineResourceFunction

Namespace	http://www.iho.int/S-121
Diagram	
Type	restriction of xs:string
Properties	content: simple minOccurs: 1 maxOccurs: 1 nillable: true
Facets	enumeration 1 `<xs:Name>download</xs:Name>` enumeration 2 `<xs:Name>information</xs:Name>` enumeration 3 `<xs:Name>offlineAccess</xs:Name>` enumeration 4 `<xs:Name>offlineAccess</xs:Name>` enumeration 5 `<xs:Name>order</xs:Name>` enumeration 6 `<xs:Name>search</xs:Name>`

Source	`<xs:element name="onlineResourceFunction" minOccurs="1" maxOccurs="1" nillable="true">`
	`  <xs:simpleType>`
	`  <xs:restriction base="xs:string">`
	`  <xs:enumeration value="1">`
	`  <xs:annotation>`
	`  <xs:documentation>`
	`  <xs:Name>download</xs:Name>`
	`  </xs:documentation>`
	`  </xs:annotation>`
	`  </xs:enumeration>`
	`  <xs:enumeration value="2">`
	`  <xs:annotation>`
	`  <xs:documentation>`
	`  <xs:Name>information</xs:Name>`
	`  </xs:documentation>`
	`  </xs:annotation>`
	`  </xs:enumeration>`
	`  <xs:enumeration value="3">`
	`  <xs:annotation>`
	`  <xs:documentation>`

```
            <xs:Name>offlineAccess</xs:Name>
          </xs:documentation>
        </xs:annotation>
      </xs:enumeration>
      <xs:enumeration value="4">
        <xs:annotation>
          <xs:documentation>
            <xs:Name>offlineAccess</xs:Name>
          </xs:documentation>
        </xs:annotation>
      </xs:enumeration>
      <xs:enumeration value="5">
        <xs:annotation>
          <xs:documentation>
            <xs:Name>order</xs:Name>
          </xs:documentation>
        </xs:annotation>
      </xs:enumeration>
      <xs:enumeration value="6">
        <xs:annotation>
          <xs:documentation>
            <xs:Name>search</xs:Name>
          </xs:documentation>
        </xs:annotation>
      </xs:enumeration>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
```

Element sourceType / sourceDocumentName

Namespace	http://www.iho.int/S-121
Diagram	
Type	xs:string
Properties	content: simple minOccurs: 0
Source	`<xs:element name="sourceDocumentName" type="xs:string" minOccurs="0"/>`

Element sourceType / sourceRegistryNumber

Namespace	http://www.iho.int/S-121
Diagram	
Type	xs:string
Properties	content: simple minOccurs: 0
Source	`<xs:element name="sourceRegistryNumber" type="xs:string" minOccurs="0"/>`

Element sourceType / sourceAvailabilityStatus

Namespace	http://www.iho.int/S-121
Diagram	
Type	restriction of xs:string
Properties	content: simple

	minOccurs:	0
Facets	enumeration	Archive Converted
	enumeration	Archive Destroyed
	enumeration	Archive Incomplete
	enumeration	Archive Unknown
	enumeration	Document Available

Source

```
<xs:element name="sourceAvailabilityStatus" minOccurs="0">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:enumeration value="Archive Converted"/>
      <xs:enumeration value="Archive Destroyed"/>
      <xs:enumeration value="Archive Incomplete"/>
      <xs:enumeration value="Archive Unknown"/>
      <xs:enumeration value="Document Available"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
```

Element sourceType / administrativeSourceType

Namespace	http://www.iho.int/S-121
Diagram	
Type	restriction of xs:string
Properties	content: simple
	minOccurs: 0
Facets	enumeration International Agreement
	enumeration Domestic Legislative Instrument
	enumeration Domestic Administrative

Source

```
<xs:element name="administrativeSourceType" minOccurs="0">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:enumeration value="International Agreement"/>
      <xs:enumeration value="Domestic Legislative Instrument"/>
      <xs:enumeration value="Domestic Administrative"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
```

Element sourceType / spatialSourceType

Namespace	http://www.iho.int/S-121
Diagram	
Type	restriction of xs:string
Properties	content: simple
	minOccurs: 0
Facets	enumeration Field Sketch
	enumeration GNSS Survey
	enumeration Relative Measurement
	enumeration Orthographic Photo
	enumeration Satellite Imagery
	enumeration Topographic Map
	enumeration Lidar Survey

	enumeration	Video
	enumeration	Hydrographic Chart

Source

```
<xs:element name="spatialSourceType" minOccurs="0">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:enumeration value="Field Sketch"/>
      <xs:enumeration value="GNSS Survey"/>
      <xs:enumeration value="Relative Measurement"/>
      <xs:enumeration value="Orthographic Photo"/>
      <xs:enumeration value="Satellite Imagery"/>
      <xs:enumeration value="Topographic Map"/>
      <xs:enumeration value="Lidar Survey"/>
      <xs:enumeration value="Video"/>
      <xs:enumeration value="Hydrographic Chart"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
```

Element sourceType / label

Namespace	http://www.iho.int/S-121
Diagram	
Type	xs:string
Properties	content: simple minOccurs: 0
Source	`<xs:element name="label" type="xs:string" minOccurs="0"/>`

Element sourceType / onlineResource

Namespace	http://www.iho.int/S-121
Diagram	
Properties	content: complex minOccurs: 0
Model	onlineResourceLinkageURL{0,1} , onlineResourceProtocol{0,1} , onlineResourceApplicationProfile , onlineResourceName , onlineResourceDescription , onlineResourceFunction

Children	onlineResourceApplicationProfile, onlineResourceDescription, onlineResourceFunction, onlineResourceLinkageURL, onlineResourceName, onlineResourceProtocol

Instance	`<onlineResource xmlns="http://www.iho.int/S-121">`
	`  <onlineResourceLinkageURL>{0,1}</onlineResourceLinkageURL>`
	`  <onlineResourceProtocol>{0,1}</onlineResourceProtocol>`
	`  <onlineResourceApplicationProfile>{1,1}</onlineResourceApplicationProfile>`
	`  <onlineResourceName>{1,1}</onlineResourceName>`
	`  <onlineResourceDescription>{1,1}</onlineResourceDescription>`
	`  <onlineResourceFunction>{1,1}</onlineResourceFunction>`
	`</onlineResource>`

Source	`<xs:element name="onlineResource" minOccurs="0">`
	`  <xs:complexType>`
	`  <xs:sequence>`
	`  <xs:element name="onlineResourceLinkageURL" minOccurs="0" maxOccurs="1">`
	`  <xs:simpleType>`
	`  <xs:restriction base="xs:string"/>`
	`  </xs:simpleType>`
	`  </xs:element>`
	`  <xs:element name="onlineResourceProtocol" minOccurs="0" maxOccurs="1">`
	`  <xs:simpleType>`
	`  <xs:restriction base="xs:string"/>`
	`  </xs:simpleType>`
	`  </xs:element>`
	`  <xs:element name="onlineResourceApplicationProfile" minOccurs="1" maxOccurs="1" nillable="true">`
	`  <xs:simpleType>`
	`  <xs:restriction base="xs:string"/>`
	`  </xs:simpleType>`
	`  </xs:element>`
	`  <xs:element name="onlineResourceName" minOccurs="1" maxOccurs="1" nillable="true">`
	`  <xs:simpleType>`
	`  <xs:restriction base="xs:string"/>`
	`  </xs:simpleType>`
	`  </xs:element>`
	`  <xs:element name="onlineResourceDescription" minOccurs="1" maxOccurs="1" nillable="true">`
	`  <xs:simpleType>`
	`  <xs:restriction base="xs:string"/>`
	`  </xs:simpleType>`
	`  </xs:element>`
	`  <xs:element name="onlineResourceFunction" minOccurs="1" maxOccurs="1" nillable="true">`
	`  <xs:simpleType>`
	`  <xs:restriction base="xs:string">`
	`  <xs:enumeration value="download">`
	`  <xs:annotation>`
	`  <xs:documentation>`
	`  <xs:Name>download</xs:Name>`
	`  </xs:documentation>`
	`  </xs:annotation>`
	`  </xs:enumeration>`
	`  <xs:enumeration value="information">`
	`  <xs:annotation>`
	`  <xs:documentation>`
	`  <xs:Name>information</xs:Name>`
	`  </xs:documentation>`
	`  </xs:annotation>`
	`  </xs:enumeration>`
	`  <xs:enumeration value="offlineAccess">`
	`  <xs:annotation>`
	`  <xs:documentation>`
	`  <xs:Name>offlineAccess</xs:Name>`
	`  </xs:documentation>`
	`  </xs:annotation>`
	`  </xs:enumeration>`
	`  <xs:enumeration value="order">`
	`  <xs:annotation>`
	`  <xs:documentation>`
	`  <xs:Name>offlineAccess</xs:Name>`
	`  </xs:documentation>`
	`  </xs:annotation>`
	`  </xs:enumeration>`
	`  <xs:enumeration value="search">`
	`  <xs:annotation>`
	`  <xs:documentation>`
	`  <xs:Name>order</xs:Name>`
	`  </xs:documentation>`
	`  </xs:annotation>`
	`  </xs:enumeration>`
	`  <xs:enumeration value="">`
	`  <xs:annotation>`
	`  <xs:documentation>`
	`  <xs:Name>search</xs:Name>`

```
                </xs:documentation>
              </xs:annotation>
            </xs:enumeration>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

Element sourceType / onlineResource / onlineResourceLinkageURL

Namespace	http://www.iho.int/S-121
Diagram	
Type	xs:string
Properties	content: simple minOccurs: 0 maxOccurs: 1

Source	`<xs:element name="onlineResourceLinkageURL" minOccurs="0" maxOccurs="1">`
	`  <xs:simpleType>`
	`  <xs:restriction base="xs:string"/>`
	`  </xs:simpleType>`
	`</xs:element>`

Element sourceType / onlineResource / onlineResourceProtocol

Namespace	http://www.iho.int/S-121
Diagram	
Type	xs:string
Properties	content: simple minOccurs: 0 maxOccurs: 1

Source	`<xs:element name="onlineResourceProtocol" minOccurs="0" maxOccurs="1">`
	`  <xs:simpleType>`
	`  <xs:restriction base="xs:string"/>`
	`  </xs:simpleType>`
	`</xs:element>`

Element sourceType / onlineResource / onlineResourceApplicationProfile

Namespace	http://www.iho.int/S-121
Diagram	
Type	xs:string
Properties	content: simple minOccurs: 1 maxOccurs: 1 nillable: true

Source	`<xs:element name="onlineResourceApplicationProfile" minOccurs="1" maxOccurs="1" nillable="true">`
	`  <xs:simpleType>`
	`  <xs:restriction base="xs:string"/>`
	`  </xs:simpleType>`
	`</xs:element>`

Element sourceType / onlineResource / onlineResourceName

Namespace	http://www.iho.int/S-121
Diagram	
Type	xs:string
Properties	content: simple minOccurs: 1 maxOccurs: 1 nillable: true

Source	`<xs:element name="onlineResourceName" minOccurs="1" maxOccurs="1" nillable="true">`
	`  <xs:simpleType>`
	`  <xs:restriction base="xs:string"/>`
	`  </xs:simpleType>`
	`</xs:element>`

Element sourceType / onlineResource / onlineResourceDescription

Namespace	http://www.iho.int/S-121
Diagram	
Type	xs:string
Properties	content: simple minOccurs: 1 maxOccurs: 1 nillable: true

Source	`<xs:element name="onlineResourceDescription" minOccurs="1" maxOccurs="1" nillable="true">`
	`  <xs:simpleType>`
	`  <xs:restriction base="xs:string"/>`
	`  </xs:simpleType>`
	`</xs:element>`

Element sourceType / onlineResource / onlineResourceFunction

Namespace	http://www.iho.int/S-121
Diagram	
Type	restriction of xs:string
Properties	content: simple minOccurs: 1 maxOccurs: 1 nillable: true
Facets	enumeration: download — `<xs:Name>download</xs:Name>` enumeration: information — `<xs:Name>information</xs:Name>` enumeration: offlineAccess — `<xs:Name>offlineAccess</xs:Name>` enumeration: order — `<xs:Name>offlineAccess</xs:Name>` enumeration: search — `<xs:Name>order</xs:Name>` enumeration — `<xs:Name>search</xs:Name>`

Source	`<xs:element name="onlineResourceFunction" minOccurs="1" maxOccurs="1" nillable="true">`
	`  <xs:simpleType>`
	`  <xs:restriction base="xs:string">`
	`  <xs:enumeration value="download">`

```
        <xs:annotation>
          <xs:documentation>
            <xs:Name>download</xs:Name>
          </xs:documentation>
        </xs:annotation>
      </xs:enumeration>
      <xs:enumeration value="information">
        <xs:annotation>
          <xs:documentation>
            <xs:Name>information</xs:Name>
          </xs:documentation>
        </xs:annotation>
      </xs:enumeration>
      <xs:enumeration value="offlineAccess">
        <xs:annotation>
          <xs:documentation>
            <xs:Name>offlineAccess</xs:Name>
          </xs:documentation>
        </xs:annotation>
      </xs:enumeration>
      <xs:enumeration value="order">
        <xs:annotation>
          <xs:documentation>
            <xs:Name>offlineAccess</xs:Name>
          </xs:documentation>
        </xs:annotation>
      </xs:enumeration>
      <xs:enumeration value="search">
        <xs:annotation>
          <xs:documentation>
            <xs:Name>order</xs:Name>
          </xs:documentation>
        </xs:annotation>
      </xs:enumeration>
      <xs:enumeration value="">
        <xs:annotation>
          <xs:documentation>
            <xs:Name>search</xs:Name>
          </xs:documentation>
        </xs:annotation>
      </xs:enumeration>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
```

Element sourceType / administrativeDateStamp

Namespace	http://www.iho.int/S-121
Diagram	
Type	xs:date
Properties	content: simple minOccurs: 0
Source	`<xs:element name="administrativeDateStamp" type="xs:date" minOccurs="0"/>`

Element sourceType / authoritativeDate

Namespace	http://www.iho.int/S-121
Diagram	
Type	xs:date
Properties	content: simple

	minOccurs: 0
Source	`<xs:element name="authoritativeDate" type="xs:date" minOccurs="0"/>`

Element sourceType / sourceDocumentType

Namespace	http://www.iho.int/S-121
Diagram	
Type	xs:string
Properties	content: simple minOccurs: 0
Source	`<xs:element name="sourceDocumentType" type="xs:string" minOccurs="0"/>`

Element sourceType / sourceType

Namespace	http://www.iho.int/S-121
Diagram	
Type	xs:string
Properties	content: simple minOccurs: 0
Source	`<xs:element name="sourceType" type="xs:string" minOccurs="0"/>`

Element sourceType / sourceSubmissionDate

Namespace	http://www.iho.int/S-121
Diagram	
Type	xs:date
Properties	content: simple minOccurs: 0
Source	`<xs:element name="sourceSubmissionDate" type="xs:date" minOccurs="0"/>`

Element sourceType / sourceRecordationDate

Namespace	http://www.iho.int/S-121
Diagram	
Type	xs:date
Properties	content: simple

	minOccurs: 0
Source	`<xs:element name="sourceRecordationDate" type="xs:date" minOccurs="0"/>`

Element sourceType / sourceOf

Namespace	http://www.iho.int/S-121
Annotations	binding between the source information type and its defining geographic feature(s)
Diagram	
Type	gml:ReferenceType
Properties	content: complex minOccurs: 0
Model	
Attributes	

QName	Type	Fixed	Default	Use
nilReason	gml:NilReasonType			optional
owns	boolean		false	optional
xlink:actuate	xlink:actuateType			optional
xlink:arcrole	xlink:arcroleType			optional
xlink:href	xlink:hrefType			optional
xlink:role	xlink:roleType			optional
xlink:show	xlink:showType			optional
xlink:title	xlink:titleAttrType			optional
xlink:type	xlink:typeType	simple		optional

Source

```
<xs:element minOccurs="0" name="sourceOf" type="gml:ReferenceType">
  <xs:annotation>
    <xs:documentation>binding between the source information type and its defining geographic
 feature(s)</xs:documentation>
  </xs:annotation>
</xs:element>
```

Element AdditionalSpatialInformation

Namespace	http://www.iho.int/S-121

Diagram	
Type	additionalSpatialInformationType
Type hierarchy	• gml:AbstractGMLType • AbstractInformationType • informationType • additionalSpatialInformationType
Properties	content: `complex`
Used by	Element Group Features
Model	informationAssociation* , invInformationAssociation* , source* , componentOf* , consistsOf* , startLifespan{0,1} , endLifespan{0,1} , locationReference+ , identifies*
Children	componentOf, consistsOf, endLifespan, identifies, informationAssociation, invInformationAssociation, locationReference, source, startLifespan

Instance	`<AdditionalSpatialInformation gml:id="" xmlns="http://www.iho.int/S-121" xmlns:s100="http://www.iho.int/s100gml/1.0">`
	`<s100:informationAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="" s100:informationAssociation>`
	`<s100:invInformationAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role s100:invInformationAssociation>`
	`<source xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" xl source>`
	`<componentOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show= componentOf>`
	`<consistsOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" consistsOf>`
	`<startLifespan>{0,1}</startLifespan>`
	`<endLifespan>{0,1}</endLifespan>`
	`<locationReference>{1,unbounded}</locationReference>`
	`<identifies xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" identifies>`
	`</AdditionalSpatialInformation>`

Attributes	**QName** / **Type** / **Use** **gml:id** / ID / required The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.
Source	`<xs:element name="AdditionalSpatialInformation" type="additionalSpatialInformationType"/>`

Element additionalSpatialInformationType / locationReference

Namespace	http://www.iho.int/S-121
Diagram	
Type	locationReferenceType
Properties	content: complex maxOccurs: unbounded
Model	categoryOfLocation{0,1} , locationByText{0,1} , textLat{0,1} , textLon{0,1} , referenceSystem{0,1}
Children	categoryOfLocation, locationByText, referenceSystem, textLat, textLon

Instance	`<locationReference xmlns="http://www.iho.int/S-121">`
	`<categoryOfLocation>{0,1}</categoryOfLocation>`
	`<locationByText>{0,1}</locationByText>`
	`<textLat>{0,1}</textLat>`
	`<textLon>{0,1}</textLon>`
	`<referenceSystem>{0,1}</referenceSystem>`
	`</locationReference>`

Source	`<xs:element maxOccurs="unbounded" name="locationReference" type="locationReferenceType"/>`

Element additionalSpatialInformationType / identifies

Namespace	http://www.iho.int/S-121
Annotations	inverse generic association between geographic features
Diagram	
Type	gml:ReferenceType
Properties	content: complex minOccurs: 0 maxOccurs: unbounded
Model	
Attributes	

QName	Type	Fixed	Default	Use	
nilReason	gml:NilReasonType			optional	
owns	boolean		false	optional	
xlink:actuate	xlink:actuateType			optional	
xlink:arcrole	xlink:arcroleType			optional	
xlink:href	xlink:hrefType			optional	
xlink:role	xlink:roleType			optional	
xlink:show	xlink:showType			optional	
xlink:title	xlink:titleAttrType			optional	
xlink:type	xlink:typeType	simple		optional	

Source

```
<xs:element maxOccurs="unbounded" minOccurs="0" name="identifies" type="gml:ReferenceType">
  <xs:annotation>
    <xs:documentation>inverse generic association between geographic features</xs:documentation>
  </xs:annotation>
</xs:element>
```

Element Party

Namespace	http://www.iho.int/S-121

Diagram

partyType
Base Type informationType
informationType (extension base)
Base Type s100:AbstractInformationType
s100:AbstractInformationType (extension base)
gml:AbstractGMLType (extension base)
Attributes
gml:id
The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory...
0..∞ informationAssociation
0..∞ invInformationAssociation
Abstract type for an S-100 information type. This is the base type from which domain application schemas derive...
0..∞ source
Type gml:ReferenceType
association to a SourceType information type which represents the source of the information type
0..∞ componentOf
Type gml:ReferenceType
Generic association between information types
0..∞ consistsOf
Type gml:ReferenceType
inverse generic association between information types
startLifespan
Type xs:date
endLifespan
Type xs:date
Party
Type partyType
partyName
Type xs:string
partyRole
Type xs:string
categoryOfParty
Type Restriction of 'xs:string'
partyGroupType
Type Restriction of 'xs:string'
partyGroup
Type xs:boolean
0..∞ rrr
Type gml:ReferenceType
0..∞ member
Type gml:ReferenceType

Type	partyType
Type hierarchy	• gml:AbstractGMLType • AbstractInformationType • informationType • partyType
Properties	content: complex
Used by	Element Group Features
Model	informationAssociation* , invInformationAssociation* , source* , componentOf* , consistsOf* , startLifespan{0,1} , endLifespan{0,1} , partyName , partyRole{0,1} , categoryOfParty{0,1} , partyGroupType{0,1} , partyGroup{0,1} , rrr* , member* , group*
Children	categoryOfParty, componentOf, consistsOf, endLifespan, group, informationAssociation, invInformationAssociation, member, partyGroup, partyGroupType, partyName, partyRole, rrr, source, startLifespan

Instance	`<Party gml:id="" xmlns="http://www.iho.int/S-121" xmlns:s100="http://www.iho.int/s100gml/1.0">`
	`<s100:informationAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="" s100:informationAssociation>`
	`<s100:invInformationAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role s100:invInformationAssociation>`
	`<source xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" xl source>`
	`<componentOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show= componentOf>`
	`<consistsOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" consistsOf>`
	`<startLifespan>{0,1}</startLifespan>`
	`<endLifespan>{0,1}</endLifespan>`
	`<partyName>{1,1}</partyName>`
	`<partyRole>{0,1}</partyRole>`
	`<categoryOfParty>{0,1}</categoryOfParty>`
	`<partyGroupType>{0,1}</partyGroupType>`
	`<partyGroup>{0,1}</partyGroup>`
	`<rrr xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" xlink rrr>`
	`<member xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" xl member>`
	`<group xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" xlin group>`
	`</Party>`

Attributes	**QName** / **Type** / **Use** **gml:id** / ID / required The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.
Source	`<xs:element name="Party" type="partyType"/>`

Element partyType / partyName

Namespace	http://www.iho.int/S-121
Diagram	
Type	xs:string
Properties	content: simple
Source	`<xs:element name="partyName" type="xs:string"/>`

Element partyType / partyRole

Namespace	http://www.iho.int/S-121

Diagram	
Type	xs:string
Properties	content: simple minOccurs: 0
Source	`<xs:element minOccurs="0" name="partyRole" type="xs:string"/>`

Element partyType / categoryOfParty

Namespace	http://www.iho.int/S-121
Diagram	
Type	restriction of xs:string
Properties	content: simple minOccurs: 0
Facets	enumeration: International Organisation enumeration: State Country enumeration: Province State enumeration: Non Natural Person enumeration: Natural Person

Source	`<xs:element minOccurs="0" name="categoryOfParty">`
	`  <xs:simpleType>`
	`  <xs:restriction base="xs:string">`
	`  <xs:enumeration value="International Organisation"/>`
	`  <xs:enumeration value="State Country"/>`
	`  <xs:enumeration value="Province State"/>`
	`  <xs:enumeration value="Non Natural Person"/>`
	`  <xs:enumeration value="Natural Person"/>`
	`  </xs:restriction>`
	`  </xs:simpleType>`
	`</xs:element>`

Element partyType / partyGroupType

Namespace	http://www.iho.int/S-121
Diagram	
Type	restriction of xs:string
Properties	content: simple minOccurs: 0
Facets	enumeration: Agreement enumeration: Association

Source	`<xs:element minOccurs="0" name="partyGroupType">`
	`  <xs:simpleType>`
	`  <xs:restriction base="xs:string">`
	`  <xs:enumeration value="Agreement"/>`
	`  <xs:enumeration value="Association"/>`
	`  </xs:restriction>`
	`  </xs:simpleType>`
	`</xs:element>`

Element partyType / partyGroup

Namespace	http://www.iho.int/S-121
Diagram	
Type	xs:boolean
Properties	content: `simple` minOccurs: `0`
Source	`<xs:element minOccurs="0" name="partyGroup" type="xs:boolean"/>`

Element partyType / rrr

Namespace	http://www.iho.int/S-121
Diagram	
Type	gml:ReferenceType
Properties	content: `complex` minOccurs: `0` maxOccurs: `unbounded`
Model	
Attributes	

QName	Type	Fixed	Default	Use	
nilReason	gml:NilReasonType			optional	
owns	boolean		false	optional	
xlink:actuate	xlink:actuateType			optional	
xlink:arcrole	xlink:arcroleType			optional	
xlink:href	xlink:hrefType			optional	
xlink:role	xlink:roleType			optional	

	QName	Type	Fixed	Default	Use	
	xlink:show	xlink:showType			optional	
	xlink:title	xlink:titleAttrType			optional	
	xlink:type	xlink:typeType	simple		optional	
Source	`<xs:element maxOccurs="unbounded" minOccurs="0" name="rrr" type="gml:ReferenceType"/>`					

Element `partyType / member`

Namespace	http://www.iho.int/S-121
Diagram	
Type	gml:ReferenceType
Properties	content: `complex` minOccurs: `0` maxOccurs: `unbounded`
Model	

Attributes	QName	Type	Fixed	Default	Use	
	nilReason	gml:NilReasonType			optional	
	owns	boolean		false	optional	
	xlink:actuate	xlink:actuateType			optional	
	xlink:arcrole	xlink:arcroleType			optional	
	xlink:href	xlink:hrefType			optional	
	xlink:role	xlink:roleType			optional	
	xlink:show	xlink:showType			optional	
	xlink:title	xlink:titleAttrType			optional	
	xlink:type	xlink:typeType	simple		optional	
Source	`<xs:element maxOccurs="unbounded" minOccurs="0" name="member" type="gml:ReferenceType"/>`					

Element `partyType / group`

Namespace	http://www.iho.int/S-121

Diagram	
Type	gml:ReferenceType
Properties	content: complex minOccurs: 0 maxOccurs: unbounded
Model	
Attributes	

QName	Type	Fixed	Default	Use	
nilReason	gml:NilReasonType			optional	
owns	boolean		false	optional	
xlink:actuate	xlink:actuateType			optional	
xlink:arcrole	xlink:arcroleType			optional	
xlink:href	xlink:hrefType			optional	
xlink:role	xlink:roleType			optional	
xlink:show	xlink:showType			optional	
xlink:title	xlink:titleAttrType			optional	
xlink:type	xlink:typeType	simple		optional	

Source

```
<xs:element minOccurs="0" name="group" type="gml:ReferenceType" maxOccurs="unbounded"/>
```

Element PartyMember

Namespace	http://www.iho.int/S-121
Annotations	This is the intermediate class between a party which is a group and a party whcih is a group member. It denotes a % membership in the group.

Diagram	
Type	partyMemberType

Type hierarchy	• gml:AbstractGMLType
	  • AbstractInformationType
	  • informationType
	  • partyMemberType

Properties	content: `complex`

Used by	Element Group Features
Model	informationAssociation* , invInformationAssociation* , source* , componentOf* , consistsOf* , startLifespan{0,1} , endLifespan{0,1} , partyMembership , member{0,1} , group{0,1}
Children	componentOf, consistsOf, endLifespan, group, informationAssociation, invInformationAssociation, member, partyMembership, source, startLifespan
Instance	<PartyMember gml:id="" xmlns="http://www.iho.int/S-121" xmlns:s100="http://www.iho.int/s100gml/1.0"> <s100:informationAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="" s100:informationAssociation> <s100:invInformationAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role s100:invInformationAssociation> <source xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" xl source> <componentOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show= componentOf> <consistsOf xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" consistsOf> <startLifespan>{0,1}</startLifespan> <endLifespan>{0,1}</endLifespan> <partyMembership>{1,1}</partyMembership> <member xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" xl member> <group xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="" xlin group> </PartyMember>
Attributes	**QName** / **Type**: ID / **Use**: required **gml:id** The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.
Source	<xs:element name="PartyMember" type="partyMemberType"> <xs:annotation> <xs:documentation>This is the intermediate class between a party which is a group and a party whcih is a group member. It denotes a % membership in the group.</xs:documentation> </xs:annotation> </xs:element>

Element partyMemberType / partyMembership

Namespace	http://www.iho.int/S-121
Diagram	
Type	xs:decimal
Properties	content: simple
Source	<xs:element name="partyMembership" type="xs:decimal"/>

Element partyMemberType / member

Namespace	http://www.iho.int/S-121

Diagram	
Type	gml:ReferenceType
Properties	content: complex minOccurs: 0
Model	

Attributes

QName	Type	Fixed	Default	Use	
nilReason	gml:NilReasonType			optional	
owns	boolean		false	optional	
xlink:actuate	xlink:actuateType			optional	
xlink:arcrole	xlink:arcroleType			optional	
xlink:href	xlink:hrefType			optional	
xlink:role	xlink:roleType			optional	
xlink:show	xlink:showType			optional	
xlink:title	xlink:titleAttrType			optional	
xlink:type	xlink:typeType	simple		optional	

Source

```
<xs:element minOccurs="0" name="member" type="gml:ReferenceType"/>
```

Element partyMemberType / group

Namespace	http://www.iho.int/S-121

Diagram	
Type	gml:ReferenceType
Properties	content: `complex` minOccurs: `0`
Model	
Attributes	

QName	Type	Fixed	Default	Use	
nilReason	gml:NilReasonType			optional	
owns	boolean		false	optional	
xlink:actuate	xlink:actuateType			optional	
xlink:arcrole	xlink:arcroleType			optional	
xlink:href	xlink:hrefType			optional	
xlink:role	xlink:roleType			optional	
xlink:show	xlink:showType			optional	
xlink:title	xlink:titleAttrType			optional	
xlink:type	xlink:typeType	simple		optional	

Source

```
<xs:element minOccurs="0" name="group" type="gml:ReferenceType"/>
```

Element `CollectionType / metadata`

Namespace	http://www.iho.int/S-121
Diagram	
Properties	content: `complex`
Model	DatasetIdentificationInformation , DatasetStructureInformation
Children	DatasetIdentificationInformation, DatasetStructureInformation

Instance	`<metadata xmlns="http://www.iho.int/S-121">`
	`  <DatasetIdentificationInformation>{1,1}</DatasetIdentificationInformation>`
	`  <DatasetStructureInformation>{1,1}</DatasetStructureInformation>`
	`</metadata>`

Source	`<xs:element name="metadata">`
	`  <xs:complexType>`
	`  <xs:sequence>`
	`  <xs:element name="DatasetIdentificationInformation" type="s100:DataSetIdentificationType"/>`
	`  <xs:element name="DatasetStructureInformation" type="s100:DataSetStructureInformationType"/>`
	`  </xs:sequence>`
	`  </xs:complexType>`
	`</xs:element>`

Element `CollectionType / metadata / DatasetIdentificationInformation`

Namespace	http://www.iho.int/S-121
Diagram	
Type	DataSetIdentificationType
Properties	content: `complex`
Model	encodingSpecification , encodingSpecificationEdition , productIdentifier , productEdition , applicationProfile , datasetFileIdentifier , datasetTitle , datasetReferenceDate , datasetLanguage , datasetAbstract{0,1} , datasetTopicCategory+
Children	applicationProfile, datasetAbstract, datasetFileIdentifier, datasetLanguage, datasetReferenceDate, datasetTitle, datasetTopicCategory, encodingSpecification, encodingSpecificationEdition, productEdition, productIdentifier

Instance	`<DatasetIdentificationInformation xmlns="http://www.iho.int/S-121" xmlns:s100="http://www.iho.int/s100gml/1.0">`
	`  <s100:encodingSpecification>{1,1}</s100:encodingSpecification>`
	`  <s100:encodingSpecificationEdition>{1,1}</s100:encodingSpecificationEdition>`
	`  <s100:productIdentifier>{1,1}</s100:productIdentifier>`
	`  <s100:productEdition>{1,1}</s100:productEdition>`
	`  <s100:applicationProfile>{1,1}</s100:applicationProfile>`
	`  <s100:datasetFileIdentifier>{1,1}</s100:datasetFileIdentifier>`
	`  <s100:datasetTitle>{1,1}</s100:datasetTitle>`
	`  <s100:datasetReferenceDate>{1,1}</s100:datasetReferenceDate>`
	`  <s100:datasetLanguage>{1,1}</s100:datasetLanguage>`
	`  <s100:datasetAbstract>{0,1}</s100:datasetAbstract>`
	`  <s100:datasetTopicCategory>{1,unbounded}</s100:datasetTopicCategory>`
	`</DatasetIdentificationInformation>`

Source	`<xs:element name="DatasetIdentificationInformation" type="s100:DataSetIdentificationType"/>`

Element `CollectionType / metadata / DatasetStructureInformation`

Namespace	http://www.iho.int/S-121

Diagram	
Type	DataSetStructureInformationType
Properties	content: complex
Model	datasetCoordOriginX{0,1} , datasetCoordOriginY{0,1} , datasetCoordOriginZ{0,1} , coordMultFactorX{0,1} , coordMultFactorY{0,1} , coordMultFactorZ{0,1} , nInfoRec{0,1} , nPointRec{0,1} , nMultiPointRec{0,1} , nCurveRec{0,1} , nCompositeCurveRec{0,1} , nSurfaceRec{0,1} , nFeatureRec{0,1}
Children	coordMultFactorX, coordMultFactorY, coordMultFactorZ, datasetCoordOriginX, datasetCoordOriginY, datasetCoordOriginZ, nCompositeCurveRec, nCurveRec, nFeatureRec, nInfoRec, nMultiPointRec, nPointRec, nSurfaceRec

Instance	`<DatasetStructureInformation xmlns="http://www.iho.int/S-121" xmlns:s100="http://www.iho.int/s100gml/1.0">`
	`<s100:datasetCoordOriginX>{0,1}</s100:datasetCoordOriginX>`
	`<s100:datasetCoordOriginY>{0,1}</s100:datasetCoordOriginY>`
	`<s100:datasetCoordOriginZ>{0,1}</s100:datasetCoordOriginZ>`
	`<s100:coordMultFactorX>{0,1}</s100:coordMultFactorX>`
	`<s100:coordMultFactorY>{0,1}</s100:coordMultFactorY>`
	`<s100:coordMultFactorZ>{0,1}</s100:coordMultFactorZ>`

```
  <s100:nInfoRec>{0,1}</s100:nInfoRec>
  <s100:nPointRec>{0,1}</s100:nPointRec>
  <s100:nMultiPointRec>{0,1}</s100:nMultiPointRec>
  <s100:nCurveRec>{0,1}</s100:nCurveRec>
  <s100:nCompositeCurveRec>{0,1}</s100:nCompositeCurveRec>
  <s100:nSurfaceRec>{0,1}</s100:nSurfaceRec>
  <s100:nFeatureRec>{0,1}</s100:nFeatureRec>
</DatasetStructureInformation>
```

Source

```
<xs:element name="DatasetStructureInformation" type="s100:DataSetStructureInformationType"/>
```

Element `CollectionType / members`

Namespace	http://www.iho.int/S-121
Diagram	members Type: Extension of 'gml:AbstractFeatureMemberType'
Type	extension of gml:AbstractFeatureMemberType
Type hierarchy	• gml:AbstractFeatureMemberType
Properties	content: complex
Model	(BaselinePoint | LimitPoint | BoundaryPoint | ContributingPoint | Location | Baseline | NormalBaseline | StraightBaseline | ArchipelagicBaseline | LowTideElevationBaseline | MouthOfRiversBaseline | BayBaseline | PortBaseline | ReefBaseline | Boundary | InternationalBoundary | Limit | OuterLimitOfTheTerritorialSea | OuterLimitOfTheContiguousZone | OuterLimitOfTheExclusiveEconomicZone | OuterLimitOfTheContinentalShelf | OuterLimitOfTheRoadstead | ConstructionLine | Zone | TerritorialSea | ContiguousZone | ExclusiveEconomicZone | ContinentalShelf | Roadstead | InternalWaters | TheArea | HighSeas | ArchipelagicWaters | Strait | BasicAdministrativeUnit | Right | Restriction | Responsibility | Governance | Source | AdditionalSpatialInformation | Party | PartyMember)
Children	AdditionalSpatialInformation, ArchipelagicBaseline, ArchipelagicWaters, Baseline, BaselinePoint, BasicAdministrativeUnit, BayBaseline, Boundary, BoundaryPoint, ConstructionLine, ContiguousZone, ContinentalShelf, ContributingPoint, ExclusiveEconomicZone, Governance, HighSeas, InternalWaters, InternationalBoundary, Limit, LimitPoint, Location, LowTideElevationBaseline, MouthOfRiversBaseline, NormalBaseline, OuterLimitOfTheContiguousZone, OuterLimitOfTheContinentalShelf, OuterLimitOfTheExclusiveEconomicZone, OuterLimitOfTheRoadstead, OuterLimitOfTheTerritorialSea, Party, PartyMember, PortBaseline, ReefBaseline, Responsibility, Restriction, Right, Roadstead, Source, StraightBaseline, Strait, TerritorialSea, TheArea, Zone

Instance

```
<members owns="false" xmlns="http://www.iho.int/S-121">
  <BaselinePoint gml:id="">{1,1}</BaselinePoint>
  <LimitPoint gml:id="">{1,1}</LimitPoint>
  <BoundaryPoint gml:id="">{1,1}</BoundaryPoint>
  <ContributingPoint gml:id="">{1,1}</ContributingPoint>
  <Location gml:id="">{1,1}</Location>
  <Baseline gml:id="">{1,1}</Baseline>
  <NormalBaseline gml:id="">{1,1}</NormalBaseline>
  <StraightBaseline gml:id="">{1,1}</StraightBaseline>
  <ArchipelagicBaseline gml:id="">{1,1}</ArchipelagicBaseline>
  <LowTideElevationBaseline gml:id="">{1,1}</LowTideElevationBaseline>
  <MouthOfRiversBaseline gml:id="">{1,1}</MouthOfRiversBaseline>
  <BayBaseline gml:id="">{1,1}</BayBaseline>
  <PortBaseline gml:id="">{1,1}</PortBaseline>
  <ReefBaseline gml:id="">{1,1}</ReefBaseline>
  <Boundary gml:id="">{1,1}</Boundary>
  <InternationalBoundary gml:id="">{1,1}</InternationalBoundary>
  <Limit gml:id="">{1,1}</Limit>
  <OuterLimitOfTheTerritorialSea gml:id="">{1,1}</OuterLimitOfTheTerritorialSea>
  <OuterLimitOfTheContiguousZone gml:id="">{1,1}</OuterLimitOfTheContiguousZone>
  <OuterLimitOfTheExclusiveEconomicZone gml:id="">{1,1}</OuterLimitOfTheExclusiveEconomicZone>
  <OuterLimitOfTheContinentalShelf gml:id="">{1,1}</OuterLimitOfTheContinentalShelf>
  <OuterLimitOfTheRoadstead gml:id="">{1,1}</OuterLimitOfTheRoadstead>
  <ConstructionLine gml:id="">{1,1}</ConstructionLine>
  <Zone gml:id="">{1,1}</Zone>
  <TerritorialSea gml:id="">{1,1}</TerritorialSea>
  <ContiguousZone gml:id="">{1,1}</ContiguousZone>
  <ExclusiveEconomicZone gml:id="">{1,1}</ExclusiveEconomicZone>
  <ContinentalShelf gml:id="">{1,1}</ContinentalShelf>
  <Roadstead gml:id="">{1,1}</Roadstead>
  <InternalWaters gml:id="">{1,1}</InternalWaters>
  <TheArea gml:id="">{1,1}</TheArea>
  <HighSeas gml:id="">{1,1}</HighSeas>
  <ArchipelagicWaters gml:id="">{1,1}</ArchipelagicWaters>
  <Strait gml:id="">{1,1}</Strait>
  <BasicAdministrativeUnit gml:id="">{1,1}</BasicAdministrativeUnit>
  <Right gml:id="">{1,1}</Right>
  <Restriction gml:id="">{1,1}</Restriction>
  <Responsibility gml:id="">{1,1}</Responsibility>
```

```
  <Governance gml:id="">{1,1}</Governance>
  <Source gml:id="">{1,1}</Source>
  <AdditionalSpatialInformation gml:id="">{1,1}</AdditionalSpatialInformation>
  <Party gml:id="">{1,1}</Party>
  <PartyMember gml:id="">{1,1}</PartyMember>
</members>
```

Attributes

QName	Type	Default	Use	
owns	boolean	false	optional	

Source

```
<xs:element name="members">
  <xs:complexType>
    <xs:complexContent>
      <xs:extension base="gml:AbstractFeatureMemberType">
        <xs:sequence>
          <xs:group maxOccurs="unbounded" minOccurs="0" ref="Features"/>
        </xs:sequence>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
</xs:element>
```

Element `Dataset`

Namespace	http://www.iho.int/S-121

Diagram	
Type	CollectionType

Type hierarchy	• gml:AbstractGMLType
	  • gml:AbstractFeatureType
	  • abstractFeature
	  • CollectionType

Properties	content: complex
Model	gml:boundedBy{0,1} , metadata , (Point | MultiPoint | Curve | CompositeCurve | OrientableCurve | Surface | Polygon) , members
Children	CompositeCurve, Curve, MultiPoint, OrientableCurve, Point, Polygon, Surface, gml:boundedBy, members, metadata
Instance	`<Dataset gml:id="" xmlns="http://www.iho.int/S-121" xmlns:gml="http://www.opengis.net/gml/3.2" xmlns:s100="http://www.iho.int/s100gml/1.0">` `  <gml:boundedBy nilReason="">{0,1}</gml:boundedBy>`

```
  <metadata>{1,1}</metadata>
  <s100:Point gml:id="" srsDimension="" srsName="">{1,1}</s100:Point>
  <s100:MultiPoint aggregationType="" gml:id="" srsDimension="" srsName="">{1,1}</s100:MultiPoint>
  <s100:Curve gml:id="" srsDimension="" srsName="">{1,1}</s100:Curve>
  <s100:CompositeCurve aggregationType="" gml:id="" srsDimension="" srsName="">{1,1}</
s100:CompositeCurve>
  <s100:OrientableCurve gml:id="" orientation="+" srsDimension="" srsName="">{1,1}</
s100:OrientableCurve>
  <s100:Surface gml:id="" srsDimension="" srsName="">{1,1}</s100:Surface>
  <s100:Polygon gml:id="" srsDimension="" srsName="">{1,1}</s100:Polygon>
  <members owns="false">{1,1}</members>
</Dataset>
```

Attributes

QName	Type	Use	
gml:id	ID	required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		

Source

```
<xs:element name="Dataset" type="CollectionType"/>
```

Complex Type(s)

Complex Type `geographicFeatureType`

Namespace	http://www.iho.int/S-121
Annotations	base type for all Geographic Features, i.e. points, limits and boundaries. Also contains reference elements for information types common across all geographic features = source and BAU.

Diagram

s100:AbstractFeatureType (extension base)
gml:AbstractFeatureType (extension base)
gml:AbstractGMLType (extension base)
Attributes
gml:id
The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory...
gml:boundedBy
This property describes the minimum bounding box or rectangle that encloses the entire feature.
The basic feature model is given by the gml:AbstractFeatureType. The content model for gml:AbstractFeatureType adds two...
featureObjectIdentifier
0..∞ informationAssociation
0..∞ featureAssociation
0..∞ invFeatureAssociation
Abstract type for an S-100 feature. This is the base type from which domain application schemas derive definitions for...
geographicFeatureType
Base Type s100:AbstractFeatureType
Abstract true
base type for all Geographic Features, i.e. points, limits and boundaries. Also contains reference elements for...
label Type xs:string
collectionName Type xs:string
0..∞ featureName Type featureNameType
context Type xs:string
startLifespan Type xs:date
endLifespan Type xs:date
releasabilityType Type releasabilityTypeType
0..∞ source Type gml:ReferenceType
association to a SourceType information type which represents the source of the feature
administration Type gml:ReferenceType
association with a BAU information type
0..∞ refersTo Type gml:ReferenceType
Association with additional spatial information information types. Used to associate a geogrpahic feature with an...
0..∞ locationReference Type locationReferenceType
0..∞ componentOf Type gml:ReferenceType
Generic association between geographic features
0..∞ consistsOf

Type	extension of AbstractFeatureType
Type hierarchy	• gml:AbstractGMLType • gml:AbstractFeatureType • AbstractFeatureType • geographicFeatureType
Properties	abstract: `true`
Used by	Complex Types limitType, locationType, zoneType
Model	gml:boundedBy{0,1} , featureObjectIdentifier{0,1} , informationAssociation* , featureAssociation* , invFeatureAssociation* , label{0,1} , collectionName{0,1} , featureName* , context{0,1} , startLifespan{0,1} , endLifespan{0,1} , releasabilityType{0,1} , source* , administration{0,1} , refersTo* , locationReference* , componentOf* , consistsOf*
Children	administration, collectionName, componentOf, consistsOf, context, endLifespan, featureAssociation, featureName, featureObjectIdentifier, gml:boundedBy, informationAssociation, invFeatureAssociation, label, locationReference, refersTo, releasabilityType, source, startLifespan

Attributes

QName	Type	Use	
gml:id	ID	required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		

Source

```
<xs:complexType name="geographicFeatureType" abstract="true">
  <xs:annotation>
    <xs:documentation>base type for all Geographic Features, i.e. points, limits and boundaries.
 Also contains reference elements for information types common across all geographic features =
 source and BAU.</xs:documentation>
  </xs:annotation>
  <xs:complexContent>
    <xs:extension base="s100:AbstractFeatureType">
      <xs:sequence>
        <xs:element name="label" type="xs:string" minOccurs="0"/>
        <xs:element minOccurs="0" name="collectionName" type="xs:string"/>
        <xs:element maxOccurs="unbounded" name="featureName" type="featureNameType" minOccurs="0"/>
        <xs:element minOccurs="0" name="context" type="xs:string"/>
        <xs:element minOccurs="0" name="startLifespan" type="xs:date"/>
        <xs:element minOccurs="0" name="endLifespan" type="xs:date"/>
        <xs:element minOccurs="0" name="releasabilityType" type="releasabilityTypeType"/>
        <xs:element minOccurs="0" name="source" type="gml:ReferenceType" maxOccurs="unbounded">
          <xs:annotation>
            <xs:documentation>association to a SourceType information type which represents the
 source of the feature</xs:documentation>
          </xs:annotation>
        </xs:element>
        <xs:element minOccurs="0" name="administration" type="gml:ReferenceType">
          <xs:annotation>
            <xs:documentation>association with a BAU information type</xs:documentation>
          </xs:annotation>
        </xs:element>
        <xs:element minOccurs="0" name="refersTo" type="gml:ReferenceType" maxOccurs="unbounded">
          <xs:annotation>
            <xs:documentation>Association with additional spatial information information types.
 Used to associate a geogrpahic feature with an alternative (textual) description of its location.</
xs:documentation>
          </xs:annotation>
        </xs:element>
        <xs:element minOccurs="0" name="locationReference" type="locationReferenceType"
 maxOccurs="unbounded"/>
        <xs:element maxOccurs="unbounded" minOccurs="0" name="componentOf" type="gml:ReferenceType">
          <xs:annotation>
            <xs:documentation>Generic association between geographic features</xs:documentation>
          </xs:annotation>
        </xs:element>
        <xs:element maxOccurs="unbounded" minOccurs="0" name="consistsOf" type="gml:ReferenceType">
          <xs:annotation>
            <xs:documentation>inverse generic association between geographic features</
xs:documentation>
          </xs:annotation>
        </xs:element>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
```

```
</xs:complexType>
```

Complex Type `featureNameType`

Namespace	http://www.iho.int/S-121
Diagram	
Used by	Elements bauType/featureName, geographicFeatureType/featureName
Model	displayName{0,1} , Language , Name
Children	Language, Name, displayName

Source	`<xs:complexType name="featureNameType">`
	`  <xs:sequence>`
	`  <xs:element minOccurs="0" name="displayName" type="xs:boolean"/>`
	`  <xs:element name="Language" type="xs:string"/>`
	`  <xs:element name="Name" type="xs:string"/>`
	`  </xs:sequence>`
	`</xs:complexType>`

Complex Type `locationReferenceType`

Namespace	http://www.iho.int/S-121
Diagram	
Used by	Elements additionalSpatialInformationType/locationReference, geographicFeatureType/locationReference
Model	categoryOfLocation{0,1} , locationByText{0,1} , textLat{0,1} , textLon{0,1} , referenceSystem{0,1}
Children	categoryOfLocation, locationByText, referenceSystem, textLat, textLon

Source	`<xs:complexType name="locationReferenceType">`
	`  <xs:sequence>`
	`  <xs:element minOccurs="0" name="categoryOfLocation">`
	`  <xs:simpleType>`
	`  <xs:restriction base="xs:string">`
	`  <xs:enumeration value="AdditionalSpatialInformation"/>`
	`  <xs:enumeration value="OriginalLocation"/>`
	`  <xs:enumeration value="OfficialLocation"/>`
	`  <xs:enumeration value="CommonLocation"/>`
	`  <xs:enumeration value="GlobalLocation"/>`

```
          <xs:enumeration value="WGS84Location"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element minOccurs="0" name="locationByText" type="xs:string"/>
    <xs:element name="textLat" type="xs:string" minOccurs="0"/>
    <xs:element minOccurs="0" name="textLon" type="xs:string"/>
    <xs:element name="referenceSystem" type="xs:string" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
```

Complex Type `locationType`

Namespace	http://www.iho.int/S-121
Annotations	`base type for all Point location features in S-121.`

Diagram

geographicFeatureType (extension base)
Base Type s100:AbstractFeatureType
Abstract true
s100:AbstractFeatureType (extension base)
gml:AbstractFeatureType (extension base)
gml:AbstractGMLType (extension base)
Attributes
gml:id
The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory...
gml:boundedBy
This property describes the minimum bounding box or rectangle that encloses the entire feature.
The basic feature model is given by the gml:AbstractFeatureType. The content model for gml:AbstractFeatureType adds two...
featureObjectIdentifier
0..∞ informationAssociation
0..∞ featureAssociation
0..∞ invFeatureAssociation
Abstract type for an S-100 feature. This is the base type from which domain application schemas derive definitions for...
locationType
Base Type geographicFeatureType
base type for all Point location features in S-121.
label Type xs:string
collectionName Type xs:string
0..∞ featureName Type featureNameType
context Type xs:string
startLifespan Type xs:date
endLifespan Type xs:date
releasabilityType Type releasabilityTypeType
0..∞ source Type gml:ReferenceType
association to a SourceType information type which represents the source of the feature
administration Type gml:ReferenceType
association with a BAU information type
0..∞ refersTo Type gml:ReferenceType
Association with additional spatial information information types. Used to associate a geogrpahic feature with an...
0..∞ locationReference Type locationReferenceType
0..∞ componentOf Type gml:ReferenceType

Type	extension of geographicFeatureType
Type hierarchy	• gml:AbstractGMLType • gml:AbstractFeatureType • AbstractFeatureType • geographicFeatureType • locationType
Used by	Elements BaselinePoint, BoundaryPoint, ContributingPoint, LimitPoint, Location
Model	gml:boundedBy{0,1} , featureObjectIdentifier{0,1} , informationAssociation* , featureAssociation* , invFeatureAssociation* , label{0,1} , collectionName{0,1} , featureName* , context{0,1} , startLifespan{0,1} , endLifespan{0,1} , releasabilityType{0,1} , source* , administration{0,1} , refersTo* , locationReference* , componentOf* , consistsOf* , interpolationType{0,1} , pointType{0,1} , geometry{0,1}
Children	administration, collectionName, componentOf, consistsOf, context, endLifespan, featureAssociation, featureName, featureObjectIdentifier, geometry, gml:boundedBy, informationAssociation, interpolationType, invFeatureAssociation, label, locationReference, pointType, refersTo, releasabilityType, source, startLifespan

Attributes

QName	Type	Use	
gml:id	ID	required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		

Source

```
<xs:complexType name="locationType">
  <xs:annotation>
    <xs:documentation>base type for all Point location features in S-121.</xs:documentation>
  </xs:annotation>
  <xs:complexContent>
    <xs:extension base="geographicFeatureType">
      <xs:sequence>
        <xs:element minOccurs="0" name="interpolationType">
          <xs:annotation>
            <xs:documentation>interpolation role (and pointType) are both from the S-121 model and
 only included in point features.</xs:documentation>
          </xs:annotation>
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:enumeration value="deflection"/>
              <xs:enumeration value="densification"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element name="pointType" minOccurs="0">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:enumeration value="defined"/>
              <xs:enumeration value="computed"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element minOccurs="0" name="geometry" type="gml:PointPropertyType">
          <xs:annotation>
            <xs:documentation>We're using the gml:PointPropertyType becasue the S-100 namespace
 isn't recognised as a geometry column by the GDAL GMLAS driver.</xs:documentation>
          </xs:annotation>
        </xs:element>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Complex Type `limitType`

Namespace	http://www.iho.int/S-121
Annotations	base type for all Baseline, Limit and Boundary geographic features

Diagram

geographicFeatureType (extension base)
Base Type s100:AbstractFeatureType
Abstract true
s100:AbstractFeatureType (extension base)
gml:AbstractFeatureType (extension base)
gml:AbstractGMLType (extension base)
Attributes
gml:id
The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory...
gml:boundedBy
This property describes the minimum bounding box or rectangle that encloses the entire feature.
The basic feature model is given by the gml:AbstractFeatureType. The content model for gml:AbstractFeatureType adds two...
featureObjectIdentifier
0..∞ informationAssociation
0..∞ featureAssociation
0..∞ invFeatureAssociation
Abstract type for an S-100 feature. This is the base type from which domain application schemas derive definitions for...
limitType
Base Type geographicFeatureType
base type for all Baseline, Limit and Boundary geographic features
label
Type xs:string
collectionName
Type xs:string
0..∞ featureName
Type featureNameType
context
Type xs:string
startLifespan
Type xs:date
endLifespan
Type xs:date
releasabilityType
Type releasabilityTypeType
0..∞ source
Type gml:ReferenceType
association to a SourceType information type which represents the source of the feature
administration
Type gml:ReferenceType
association with a BAU information type
0..∞ refersTo
Type gml:ReferenceType
Association with additional spatial information information types. Used to associate a geogrpahic feature with an...
0..∞ locationReference
Type locationReferenceType
0..∞ componentOf
Type gml:ReferenceType

Type	extension of geographicFeatureType
Type hierarchy	• gml:AbstractGMLType • gml:AbstractFeatureType • AbstractFeatureType • geographicFeatureType • limitType
Used by	Elements: ArchipelagicBaseline, Baseline, BayBaseline, Boundary, ConstructionLine, InternationalBoundary, Limit, LowTideElevationBaseline, MouthOfRiversBaseline, NormalBaseline, OuterLimitOfTheContiguousZone, OuterLimitOfTheContinentalShelf, OuterLimitOfTheExclusiveEconomicZone, OuterLimitOfTheRoadstead, OuterLimitOfTheTerritorialSea, PortBaseline, ReefBaseline, StraightBaseline
Model	gml:boundedBy{0,1} , featureObjectIdentifier{0,1} , informationAssociation* , featureAssociation* , invFeatureAssociation* , label{0,1} , collectionName{0,1} , featureName* , context{0,1} , startLifespan{0,1} , endLifespan{0,1} , releasabilityType{0,1} , source* , administration{0,1} , refersTo* , locationReference* , componentOf* , consistsOf* , arcGeometryType{0,1} , geometry{0,1}
Children	administration, arcGeometryType, collectionName, componentOf, consistsOf, context, endLifespan, featureAssociation, featureName, featureObjectIdentifier, geometry, gml:boundedBy, informationAssociation, invFeatureAssociation, label, locationReference, refersTo, releasabilityType, source, startLifespan

Attributes

QName	Type	Use	
gml:id	ID	required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		

Source

```
<xs:complexType name="limitType">
  <xs:annotation>
    <xs:documentation>base type for all Baseline, Limit and Boundary geographic features</
xs:documentation>
  </xs:annotation>
  <xs:complexContent>
    <xs:extension base="geographicFeatureType">
      <xs:sequence>
        <xs:element minOccurs="0" name="arcGeometryType" type="arcGeometryTypeType"/>
        <xs:element minOccurs="0" name="geometry" type="gml:CurvePropertyType">
          <xs:annotation>
            <xs:documentation>if you want inline geometry (which can be read by QGIS!)</
xs:documentation>
          </xs:annotation>
        </xs:element>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Complex Type zoneType

Namespace	http://www.iho.int/S-121
Annotations	base type for all zone features

Diagram

geographicFeatureType (extension base)
Base Type s100:AbstractFeatureType
Abstract true
s100:AbstractFeatureType (extension base)
gml:AbstractFeatureType (extension base)
gml:AbstractGMLType (extension base)
Attributes
gml:id
The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory...
gml:boundedBy
This property describes the minimum bounding box or rectangle that encloses the entire feature.
The basic feature model is given by the gml:AbstractFeatureType. The content model for gml:AbstractFeatureType adds two...
featureObjectIdentifier
0..∞ informationAssociation
0..∞ featureAssociation
0..∞ invFeatureAssociation
Abstract type for an S-100 feature. This is the base type from which domain application schemas derive definitions for...
zoneType
Base Type geographicFeatureType
base type for all zone features
label
Type xs:string
collectionName
Type xs:string
0..∞ featureName
Type featureNameType
context
Type xs:string
startLifespan
Type xs:date
endLifespan
Type xs:date
releasabilityType
Type releasabilityTypeType
0..∞ source
Type gml:ReferenceType
association to a SourceType information type which represents the source of the feature
administration
Type gml:ReferenceType
association with a BAU information type
0..∞ refersTo
Type gml:ReferenceType
Association with additional spatial information information types. Used to associate a geogrpahic feature with an...
0..∞ locationReference
Type locationReferenceType
0..∞ componentOf
Type gml:ReferenceType

Type	extension of geographicFeatureType
Type hierarchy	• gml:AbstractGMLType • gml:AbstractFeatureType • AbstractFeatureType • geographicFeatureType • zoneType
Used by	Elements: ArchipelagicWaters, ContiguousZone, ContinentalShelf, ExclusiveEconomicZone, HighSeas, InternalWaters, Roadstead, Strait, TerritorialSea, TheArea, Zone
Model	gml:boundedBy{0,1} , featureObjectIdentifier{0,1} , informationAssociation* , featureAssociation* , invFeatureAssociation* , label{0,1} , collectionName{0,1} , featureName* , context{0,1} , startLifespan{0,1} , endLifespan{0,1} , releasabilityType{0,1} , source* , administration{0,1} , refersTo* , locationReference* , componentOf* , consistsOf* , jurisdictionDomain{0,1} , geometry{0,1}
Children	administration, collectionName, componentOf, consistsOf, context, endLifespan, featureAssociation, featureName, featureObjectIdentifier, geometry, gml:boundedBy, informationAssociation, invFeatureAssociation, jurisdictionDomain, label, locationReference, refersTo, releasabilityType, source, startLifespan

Attributes

QName	Type	Use	
gml:id	ID	required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		

Source

```
<xs:complexType name="zoneType">
  <xs:annotation>
    <xs:documentation>base type for all zone features</xs:documentation>
  </xs:annotation>
  <xs:complexContent>
    <xs:extension base="geographicFeatureType">
      <xs:sequence>
        <xs:element name="jurisdictionDomain" minOccurs="0">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:enumeration value="airspace"/>
              <xs:enumeration value="landsurface"/>
              <xs:enumeration value="watersurface"/>
              <xs:enumeration value="watercolumn"/>
              <xs:enumeration value="seabedsurface"/>
              <xs:enumeration value="subsoil"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element minOccurs="0" name="geometry" type="gml:SurfacePropertyType">
          <xs:annotation>
            <xs:documentation>if you want inline geometry (which can be read by QGIS!)</
xs:documentation>
          </xs:annotation>
        </xs:element>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Complex Type bauType

Namespace	http://www.iho.int/S-121

Diagram

informationType (extension base)
Base Type s100:AbstractInformationType
s100:AbstractInformationType (extension base)
gml:AbstractGMLType (extension base)
Attributes
gml:id
The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory...
0..∞ informationAssociation
0..∞ invInformationAssociation
Abstract type for an S-100 information type. This is the base type from which domain application schemas derive...
0..∞ source
Type gml:ReferenceType
association to a SourceType information type which represents the source of the information type
0..∞ componentOf
Type gml:ReferenceType
Generic association between information types
0..∞ consistsOf
Type gml:ReferenceType
inverse generic association between information types
startLifespan
Type xs:date
endLifespan
Type xs:date
bauType
Base Type informationType
0..∞ featureName
Type featureNameType
basicAdministrativeUnitName
Type xs:string
basicAdministrativeUnitType
Type basicAdministrativeUnitTypeType
basicAdministrativeUnitContext
Type xs:string
0..∞ administrationOf
Type gml:ReferenceType
association between a BAU and its defining geographic feature(s)
0..∞ right
Type gml:ReferenceType
0..∞ responsibility
Type gml:ReferenceType
0..∞ restriction
Type gml:ReferenceType
0..∞ party
Type gml:ReferenceType

Type	extension of informationType
Type hierarchy	• gml:AbstractGMLType • AbstractInformationType • informationType • bauType
Used by	Element BasicAdministrativeUnit
Model	informationAssociation* , invInformationAssociation* , source* , componentOf* , consistsOf* , startLifespan{0,1} , endLifespan{0,1} , featureName* , basicAdministrativeUnitName{0,1} , basicAdministrativeUnitType{0,1} , basicAdministrativeUnitContext{0,1} , administrationOf* , right* , responsibility* , restriction* , party*
Children	administrationOf, basicAdministrativeUnitContext, basicAdministrativeUnitName, basicAdministrativeUnitType, componentOf, consistsOf, endLifespan, featureName, informationAssociation, invInformationAssociation, party, responsibility, restriction, right, source, startLifespan
Attributes	**QName** / **Type** / **Use** **gml:id** / ID / required The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.

Source

```
<xs:complexType name="bauType">
  <xs:complexContent>
    <xs:extension base="informationType">
      <xs:sequence>
        <xs:element maxOccurs="unbounded" minOccurs="0" name="featureName" type="featureNameType"/>
        <xs:element minOccurs="0" name="basicAdministrativeUnitName" type="xs:string"/>
        <xs:element minOccurs="0" name="basicAdministrativeUnitType"
 type="basicAdministrativeUnitTypeType"/>
        <xs:element minOccurs="0" name="basicAdministrativeUnitContext" type="xs:string"/>
        <xs:element minOccurs="0" name="administrationOf" type="gml:ReferenceType"
 maxOccurs="unbounded">
          <xs:annotation>
            <xs:documentation>association between a BAU and its defining geographic feature(s)</
xs:documentation>
          </xs:annotation>
        </xs:element>
        <xs:element minOccurs="0" name="right" type="gml:ReferenceType" maxOccurs="unbounded"/>
        <xs:element minOccurs="0" name="responsibility" type="gml:ReferenceType"
 maxOccurs="unbounded"/>
        <xs:element minOccurs="0" name="restriction" type="gml:ReferenceType" maxOccurs="unbounded"/
>
        <xs:element minOccurs="0" name="party" type="gml:ReferenceType" maxOccurs="unbounded"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Complex Type `informationType`

Namespace	http://www.iho.int/S-121

Diagram	
Type	extension of AbstractInformationType
Type hierarchy	• gml:AbstractGMLType • AbstractInformationType • informationType
Used by	Complex Types: additionalSpatialInformationType, bauType, governanceType, partyMemberType, partyType, responsibilityType, restrictionType, rightType, sourceType
Model	informationAssociation* , invInformationAssociation* , source* , componentOf* , consistsOf* , startLifespan{0,1} , endLifespan{0,1}
Children	componentOf, consistsOf, endLifespan, informationAssociation, invInformationAssociation, source, startLifespan

Attributes

QName	Type	Use	
gml:id	ID	required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		

Source

```
<xs:complexType name="informationType">
  <xs:complexContent>
    <xs:extension base="s100:AbstractInformationType">
      <xs:sequence>
        <xs:element minOccurs="0" name="source" type="gml:ReferenceType" maxOccurs="unbounded">
          <xs:annotation>
            <xs:documentation>association to a SourceType information type which represents the
 source of the information type</xs:documentation>
          </xs:annotation>
        </xs:element>
```

```
        <xs:element maxOccurs="unbounded" minOccurs="0" name="componentOf" type="gml:ReferenceType">
          <xs:annotation>
            <xs:documentation>Generic association between information types</xs:documentation>
          </xs:annotation>
        </xs:element>
        <xs:element maxOccurs="unbounded" minOccurs="0" name="consistsOf" type="gml:ReferenceType">
          <xs:annotation>
            <xs:documentation>inverse generic association between information types</
xs:documentation>
          </xs:annotation>
        </xs:element>
        <xs:element minOccurs="0" name="startLifespan" type="xs:date"/>
        <xs:element minOccurs="0" name="endLifespan" type="xs:date"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Complex Type `rightType`

Namespace	http://www.iho.int/S-121

Diagram	
Type	extension of informationType

Type hierarchy	• gml:AbstractGMLType • AbstractInformationType • informationType • rightType
Used by	Element Right
Model	informationAssociation* , invInformationAssociation* , source* , componentOf* , consistsOf* , startLifespan{0,1} , endLifespan{0,1} , categoryOfRight , rrrDescription{0,1} , rrrShare{0,1} , rrrTimespec{0,1} , rightFor*
Children	categoryOfRight, componentOf, consistsOf, endLifespan, informationAssociation, invInformationAssociation, rightFor, rrrDescription, rrrShare, rrrTimespec, source, startLifespan
Attributes	**QName** / **Type** / **Use** **gml:id** / ID / required The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.

Source

```
<xs:complexType name="rightType">
  <xs:complexContent>
    <xs:extension base="informationType">
      <xs:sequence>
        <xs:element name="categoryOfRight">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:enumeration value="sovereign"/>
              <xs:enumeration value="sovereignRight"/>
              <xs:enumeration value="accessRight"/>
              <xs:enumeration value="easementRight"/>
              <xs:enumeration value="harvestRight"/>
              <xs:enumeration value="contiguousRight"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element minOccurs="0" name="rrrDescription" type="xs:string"/>
        <xs:element minOccurs="0" name="rrrShare" type="xs:double"/>
        <xs:element minOccurs="0" name="rrrTimespec" type="xs:dateTime"/>
        <xs:element minOccurs="0" name="rightFor" type="gml:ReferenceType" maxOccurs="unbounded"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Complex Type `restrictionType`

Namespace	http://www.iho.int/S-121

Diagram	
Type	extension of informationType

Type hierarchy	• gml:AbstractGMLType • AbstractInformationType • informationType • restrictionType
Used by	Element Restriction
Model	informationAssociation* , invInformationAssociation* , source* , componentOf* , consistsOf* , startLifespan{0,1} , endLifespan{0,1} , categoryOfRestriction , rrrDescription{0,1} , rrrShare{0,1} , rrrTimespec{0,1} , restrictionFor*
Children	categoryOfRestriction, componentOf, consistsOf, endLifespan, informationAssociation, invInformationAssociation, restrictionFor, rrrDescription, rrrShare, rrrTimespec, source, startLifespan
Attributes	**QName** / **Type** / **Use** **gml:id** / ID / required The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.

Source

```
<xs:complexType name="restrictionType">
  <xs:complexContent>
    <xs:extension base="informationType">
      <xs:sequence>
        <xs:element name="categoryOfRestriction">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:enumeration value="accessRestriction"/>
              <xs:enumeration value="jurisdictionRestriction"/>
              <xs:enumeration value="passageRestriction"/>
              <xs:enumeration value="resourceRestriction"/>
              <xs:enumeration value="timeBasedRestriction"/>
              <xs:enumeration value="useRestriction"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element minOccurs="0" name="rrrDescription" type="xs:string"/>
        <xs:element minOccurs="0" name="rrrShare" type="xs:double"/>
        <xs:element minOccurs="0" name="rrrTimespec" type="xs:dateTime"/>
        <xs:element minOccurs="0" name="restrictionFor" type="gml:ReferenceType"
 maxOccurs="unbounded"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Complex Type `responsibilityType`

Namespace	http://www.iho.int/S-121

Diagram	
Type	extension of informationType

Type hierarchy	• gml:AbstractGMLType • AbstractInformationType • informationType • responsibilityType
Used by	Element Responsibility
Model	informationAssociation* , invInformationAssociation* , source* , componentOf* , consistsOf* , startLifespan{0,1} , endLifespan{0,1} , categoryOfResponsibility , rrrDescription{0,1} , rrrShare{0,1} , rrrTimespec{0,1} , responsibilityFor*
Children	categoryOfResponsibility, componentOf, consistsOf, endLifespan, informationAssociation, invInformationAssociation, responsibilityFor, rrrDescription, rrrShare, rrrTimespec, source, startLifespan
Attributes	**QName** / **Type** / **Use** **gml:id** / ID / required The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.

Source	`<xs:complexType name="responsibilityType">`
	`  <xs:complexContent>`
	`  <xs:extension base="informationType">`
	`  <xs:sequence>`
	`  <xs:element name="categoryOfResponsibility">`
	`  <xs:simpleType>`
	`  <xs:restriction base="xs:string">`
	`  <xs:enumeration value="maintenanceResponsibility"/>`
	`  </xs:restriction>`
	`  </xs:simpleType>`
	`  </xs:element>`
	`  <xs:element minOccurs="0" name="rrrDescription" type="xs:string"/>`
	`  <xs:element minOccurs="0" name="rrrShare" type="xs:double"/>`
	`  <xs:element minOccurs="0" name="rrrTimespec" type="xs:dateTime"/>`
	`  <xs:element minOccurs="0" name="responsibilityFor" type="gml:ReferenceType" maxOccurs="unbounded"/>`
	`  </xs:sequence>`
	`  </xs:extension>`
	`  </xs:complexContent>`
	`</xs:complexType>`

Complex Type governanceType

Namespace	http://www.iho.int/S-121

Diagram

informationType (extension base)
Base Type s100:AbstractInformationType
s100:AbstractInformationType (extension base)
gml:AbstractGMLType (extension base)
Attributes
gml:id
The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory...
0..∞ informationAssociation
0..∞ invInformationAssociation
Abstract type for an S-100 information type. This is the base type from which domain application schemas derive...
0..∞ source
Type gml:ReferenceType
association to a SourceType information type which represents the source of the information type
0..∞ componentOf
Type gml:ReferenceType
Generic association between information types
0..∞ consistsOf
Type gml:ReferenceType
inverse generic association between information types
startLifespan
Type xs:date
endLifespan
Type xs:date
governanceType
Base Type informationType
label
Type xs:string
referenceNumber
Type xs:string
featureName
Type InfofeatureNameType
governanceTitle
Type xs:string
governanceDescription
Type xs:string
releasabilityType
Type xs:string
dateApproved
Type xs:date
dateConsidered
Type xs:date
dateIntroduced
Type xs:date
0..∞ governanceOf
Type gml:ReferenceType

Type	extension of informationType
Type hierarchy	• gml:AbstractGMLType • AbstractInformationType • informationType • governanceType
Used by	Element Governance
Model	informationAssociation* , invInformationAssociation* , source* , componentOf* , consistsOf* , startLifespan{0,1} , endLifespan{0,1} , label{0,1} , referenceNumber{0,1} , featureName{0,1} , governanceTitle{0,1} , governanceDescription{0,1} , releasabilityType{0,1} , dateApproved{0,1} , dateConsidered{0,1} , dateIntroduced{0,1} , governanceOf* , governanceFor*
Children	componentOf, consistsOf, dateApproved, dateConsidered, dateIntroduced, endLifespan, featureName, governanceDescription, governanceFor, governanceOf, governanceTitle, informationAssociation, invInformationAssociation, label, referenceNumber, releasabilityType, source, startLifespan

Attributes

QName	Type	Use	
gml:id	ID	required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		

Source

```
<xs:complexType name="governanceType">
  <xs:complexContent>
    <xs:extension base="informationType">
      <xs:sequence>
        <xs:element name="label" type="xs:string" minOccurs="0" maxOccurs="1"/>
        <xs:element name="referenceNumber" type="xs:string" minOccurs="0" maxOccurs="1"/>
        <xs:element name="featureName" type="InfofeatureNameType" minOccurs="0" maxOccurs="1"/>
        <xs:element name="governanceTitle" type="xs:string" minOccurs="0" maxOccurs="1"/>
        <xs:element name="governanceDescription" type="xs:string" minOccurs="0" maxOccurs="1"/>
        <xs:element name="releasabilityType" type="xs:string" minOccurs="0" maxOccurs="1"/>
        <xs:element name="dateApproved" type="xs:date" minOccurs="0" maxOccurs="1"/>
        <xs:element name="dateConsidered" type="xs:date" minOccurs="0" maxOccurs="1"/>
        <xs:element name="dateIntroduced" type="xs:date" minOccurs="0" maxOccurs="1"/>
        <xs:element minOccurs="0" name="governanceOf" type="gml:ReferenceType"
 maxOccurs="unbounded">
          <xs:annotation>
            <xs:documentation>binding between a governance information type and a BAU information
 type</xs:documentation>
          </xs:annotation>
        </xs:element>
        <xs:element minOccurs="0" name="governanceFor" type="gml:ReferenceType"
 maxOccurs="unbounded">
          <xs:annotation>
            <xs:documentation>hierarchical binding between a governance information type and a BAU
 information type</xs:documentation>
          </xs:annotation>
        </xs:element>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Complex Type `InfofeatureNameType`

Namespace	http://www.iho.int/S-121
Diagram	

Used by	Element governanceType/featureName
Model	displayName{0,1} , language , Name
Children	Name, displayName, language

Source	`<xs:complexType name="InfofeatureNameType">`
	`  <xs:sequence>`
	`  <xs:element minOccurs="0" name="displayName" type="xs:boolean"/>`
	`  <xs:element name="language" type="xs:string"/>`
	`  <xs:element name="Name" type="xs:string"/>`
	`  </xs:sequence>`
	`</xs:complexType>`

Complex Type sourceType

Namespace	http://www.iho.int/S-121

Diagram

informationType (extension base)
Base Type s100:AbstractInformationType
s100:AbstractInformationType (extension base)
gml:AbstractGMLType (extension base)
Attributes
gml:id
The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory...
0..∞ informationAssociation
0..∞ invInformationAssociation
Abstract type for an S-100 information type. This is the base type from which domain application schemas derive...
0..∞ source
Type gml:ReferenceType
association to a SourceType information type which represents the source of the information type
0..∞ componentOf
Type gml:ReferenceType
Generic association between information types
0..∞ consistsOf
Type gml:ReferenceType
inverse generic association between information types
startLifespan
Type xs:date
endLifespan
Type xs:date
sourceType
Base Type informationType
responsibleParty
Type responsiblePartyType
sourceDocumentName
Type xs:string
sourceRegistryNumber
Type xs:string
sourceAvailabilityStatus
Type Restriction of 'xs:string'
administrativeSourceType
Type Restriction of 'xs:string'
spatialSourceType
Type Restriction of 'xs:string'
label
Type xs:string
onlineResource
administrativeDateStamp
Type xs:date
authoritativeDate
Type xs:date

Type	extension of informationType
Type hierarchy	• gml:AbstractGMLType • AbstractInformationType • informationType • sourceType
Used by	Element Source
Model	informationAssociation* , invInformationAssociation* , source* , componentOf* , consistsOf* , startLifespan{0,1} , endLifespan{0,1} , responsibleParty{0,1} , sourceDocumentName{0,1} , sourceRegistryNumber{0,1} , sourceAvailabilityStatus{0,1} , administrativeSourceType{0,1} , spatialSourceType{0,1} , label{0,1} , onlineResource{0,1} , administrativeDateStamp{0,1} , authoritativeDate{0,1} , sourceDocumentType{0,1} , sourceType{0,1} , sourceSubmissionDate{0,1} , sourceRecordationDate{0,1} , sourceOf{0,1}
Children	administrativeDateStamp, administrativeSourceType, authoritativeDate, componentOf, consistsOf, endLifespan, informationAssociation, invInformationAssociation, label, onlineResource, responsibleParty, source, sourceAvailabilityStatus, sourceDocumentName, sourceDocumentType, sourceOf, sourceRecordationDate, sourceRegistryNumber, sourceSubmissionDate, sourceType, spatialSourceType, startLifespan

Attributes

QName	Type	Use	
gml:id	ID	required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		

Source

```
<xs:complexType name="sourceType">
  <xs:complexContent>
    <xs:extension base="informationType">
      <xs:sequence>
        <xs:element name="responsibleParty" type="responsiblePartyType" minOccurs="0"/>
        <xs:element name="sourceDocumentName" type="xs:string" minOccurs="0"/>
        <xs:element name="sourceRegistryNumber" type="xs:string" minOccurs="0"/>
        <xs:element name="sourceAvailabilityStatus" minOccurs="0">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:enumeration value="Archive Converted"/>
              <xs:enumeration value="Archive Destroyed"/>
              <xs:enumeration value="Archive Incomplete"/>
              <xs:enumeration value="Archive Unknown"/>
              <xs:enumeration value="Document Available"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element name="administrativeSourceType" minOccurs="0">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:enumeration value="International Agreement"/>
              <xs:enumeration value="Domestic Legislative Instrument"/>
              <xs:enumeration value="Domestic Administrative"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element name="spatialSourceType" minOccurs="0">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:enumeration value="Field Sketch"/>
              <xs:enumeration value="GNSS Survey"/>
              <xs:enumeration value="Relative Measurement"/>
              <xs:enumeration value="Orthographic Photo"/>
              <xs:enumeration value="Satellite Imagery"/>
              <xs:enumeration value="Topographic Map"/>
              <xs:enumeration value="Lidar Survey"/>
              <xs:enumeration value="Video"/>
              <xs:enumeration value="Hydrographic Chart"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element name="label" type="xs:string" minOccurs="0"/>
        <xs:element name="onlineResource" minOccurs="0">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="onlineResourceLinkageURL" minOccurs="0" maxOccurs="1">
                <xs:simpleType>
                  <xs:restriction base="xs:string"/>
```

```
                </xs:simpleType>
              </xs:element>
              <xs:element name="onlineResourceProtocol" minOccurs="0" maxOccurs="1">
                <xs:simpleType>
                  <xs:restriction base="xs:string"/>
                </xs:simpleType>
              </xs:element>
              <xs:element name="onlineResourceApplicationProfile" minOccurs="1" maxOccurs="1"
nillable="true">
                <xs:simpleType>
                  <xs:restriction base="xs:string"/>
                </xs:simpleType>
              </xs:element>
              <xs:element name="onlineResourceName" minOccurs="1" maxOccurs="1" nillable="true">
                <xs:simpleType>
                  <xs:restriction base="xs:string"/>
                </xs:simpleType>
              </xs:element>
              <xs:element name="onlineResourceDescription" minOccurs="1" maxOccurs="1"
nillable="true">
                <xs:simpleType>
                  <xs:restriction base="xs:string"/>
                </xs:simpleType>
              </xs:element>
              <xs:element name="onlineResourceFunction" minOccurs="1" maxOccurs="1" nillable="true">
                <xs:simpleType>
                  <xs:restriction base="xs:string">
                    <xs:enumeration value="download">
                      <xs:annotation>
                        <xs:documentation>
                          <xs:Name>download</xs:Name>
                        </xs:documentation>
                      </xs:annotation>
                    </xs:enumeration>
                    <xs:enumeration value="information">
                      <xs:annotation>
                        <xs:documentation>
                          <xs:Name>information</xs:Name>
                        </xs:documentation>
                      </xs:annotation>
                    </xs:enumeration>
                    <xs:enumeration value="offlineAccess">
                      <xs:annotation>
                        <xs:documentation>
                          <xs:Name>offlineAccess</xs:Name>
                        </xs:documentation>
                      </xs:annotation>
                    </xs:enumeration>
                    <xs:enumeration value="order">
                      <xs:annotation>
                        <xs:documentation>
                          <xs:Name>offlineAccess</xs:Name>
                        </xs:documentation>
                      </xs:annotation>
                    </xs:enumeration>
                    <xs:enumeration value="search">
                      <xs:annotation>
                        <xs:documentation>
                          <xs:Name>order</xs:Name>
                        </xs:documentation>
                      </xs:annotation>
                    </xs:enumeration>
                    <xs:enumeration value="">
                      <xs:annotation>
                        <xs:documentation>
                          <xs:Name>search</xs:Name>
                        </xs:documentation>
                      </xs:annotation>
                    </xs:enumeration>
                  </xs:restriction>
                </xs:simpleType>
              </xs:element>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
        <xs:element name="administrativeDateStamp" type="xs:date" minOccurs="0"/>
        <xs:element name="authoritativeDate" type="xs:date" minOccurs="0"/>
        <xs:element name="sourceDocumentType" type="xs:string" minOccurs="0"/>
        <xs:element name="sourceType" type="xs:string" minOccurs="0"/>
        <xs:element name="sourceSubmissionDate" type="xs:date" minOccurs="0"/>
        <xs:element name="sourceRecordationDate" type="xs:date" minOccurs="0"/>
        <xs:element minOccurs="0" name="sourceOf" type="gml:ReferenceType">
          <xs:annotation>
```

```
            <xs:documentation>binding between the source information type and its defining
 geographic feature(s)</xs:documentation>
          </xs:annotation>
        </xs:element>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Complex Type `responsiblePartyType`

Namespace	http://www.iho.int/S-121
Diagram	
Used by	Element sourceType/responsibleParty
Model	responsiblePartyIndividualName{0,1} , responsiblePartyOrganisationName{0,1} , responsiblePartyPositionName{0,1} , organisationalRole{0,1} , sourceContact{0,1}
Children	organisationalRole, responsiblePartyIndividualName, responsiblePartyOrganisationName, responsiblePartyPositionName, sourceContact
Source	

```
<xs:complexType name="responsiblePartyType">
  <xs:sequence>
    <xs:element name="responsiblePartyIndividualName" minOccurs="0" maxOccurs="1">
      <xs:simpleType>
        <xs:restriction base="xs:string"/>
      </xs:simpleType>
    </xs:element>
    <xs:element name="responsiblePartyOrganisationName" minOccurs="0" maxOccurs="1">
      <xs:simpleType>
        <xs:restriction base="xs:string"/>
      </xs:simpleType>
    </xs:element>
    <xs:element name="responsiblePartyPositionName" minOccurs="0" maxOccurs="1">
      <xs:simpleType>
        <xs:restriction base="xs:string"/>
      </xs:simpleType>
    </xs:element>
    <xs:element name="organisationalRole" minOccurs="0" maxOccurs="1">
      <xs:simpleType>
        <xs:restriction base="xs:string">
          <xs:enumeration value=" Resource Provider">
            <xs:annotation>
              <xs:documentation>
                <xs:Name>Resource Provider</xs:Name>
              </xs:documentation>
            </xs:annotation>
          </xs:enumeration>
          <xs:enumeration value="Custodian"/>
          <xs:enumeration value="Owner"/>
          <xs:enumeration value="User"/>
          <xs:enumeration value="Distributor"/>
          <xs:enumeration value="Originator"/>
          <xs:enumeration value="Point Of Contact"/>
          <xs:enumeration value="Principal Investigator"/>
          <xs:enumeration value="Processor"/>
          <xs:enumeration value="Publisher"/>
          <xs:enumeration value="Author"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
```

```
    <xs:element name="sourceContact" minOccurs="0" maxOccurs="1">
      <xs:complexType>
        <xs:sequence>
          <xs:element name="contactPhoneNumber" minOccurs="0" maxOccurs="1">
            <xs:simpleType>
              <xs:restriction base="xs:string"/>
            </xs:simpleType>
          </xs:element>
          <xs:element name="sourceAddress" minOccurs="0" maxOccurs="1">
            <xs:complexType>
              <xs:sequence>
                <xs:element name="addressDeliveryPoint" minOccurs="0" maxOccurs="1">
                  <xs:simpleType>
                    <xs:restriction base="xs:string"/>
                  </xs:simpleType>
                </xs:element>
                <xs:element name="addressCity" minOccurs="0" maxOccurs="1">
                  <xs:simpleType>
                    <xs:restriction base="xs:string"/>
                  </xs:simpleType>
                </xs:element>
                <xs:element name="addressAdministrativeArea" minOccurs="0" maxOccurs="1">
                  <xs:simpleType>
                    <xs:restriction base="xs:string"/>
                  </xs:simpleType>
                </xs:element>
                <xs:element name="addressPostcode" minOccurs="0" maxOccurs="1">
                  <xs:simpleType>
                    <xs:restriction base="xs:string"/>
                  </xs:simpleType>
                </xs:element>
                <xs:element name="addressCountry" minOccurs="0" maxOccurs="1">
                  <xs:simpleType>
                    <xs:restriction base="xs:string"/>
                  </xs:simpleType>
                </xs:element>
                <xs:element name="addressEmailAddress" minOccurs="0" maxOccurs="1">
                  <xs:simpleType>
                    <xs:restriction base="xs:string">
                      <xs:enumeration value=""/>
                    </xs:restriction>
                  </xs:simpleType>
                </xs:element>
              </xs:sequence>
            </xs:complexType>
          </xs:element>
          <xs:element name="onlineResource" minOccurs="0" maxOccurs="1">
            <xs:complexType>
              <xs:sequence>
                <xs:element name="onlineResourceLinkageURL" minOccurs="0" maxOccurs="1">
                  <xs:simpleType>
                    <xs:restriction base="xs:string"/>
                  </xs:simpleType>
                </xs:element>
                <xs:element name="onlineResourceProtocol" minOccurs="0" maxOccurs="1">
                  <xs:simpleType>
                    <xs:restriction base="xs:string"/>
                  </xs:simpleType>
                </xs:element>
                <xs:element name="onlineResourceApplicationProfile" minOccurs="1" maxOccurs="1"
nillable="true">
                  <xs:simpleType>
                    <xs:restriction base="xs:string"/>
                  </xs:simpleType>
                </xs:element>
                <xs:element name="onlineResourceName" minOccurs="1" maxOccurs="1" nillable="true">
                  <xs:simpleType>
                    <xs:restriction base="xs:string"/>
                  </xs:simpleType>
                </xs:element>
                <xs:element name="onlineResourceDescription" minOccurs="1" maxOccurs="1"
nillable="true">
                  <xs:simpleType>
                    <xs:restriction base="xs:string"/>
                  </xs:simpleType>
                </xs:element>
                <xs:element name="onlineResourceFunction" minOccurs="1" maxOccurs="1"
nillable="true">
                  <xs:simpleType>
                    <xs:restriction base="xs:string">
                      <xs:enumeration value="1">
                        <xs:annotation>
                          <xs:documentation>
```

```
                                <xs:Name>download</xs:Name>
                              </xs:documentation>
                            </xs:annotation>
                          </xs:enumeration>
                          <xs:enumeration value="2">
                            <xs:annotation>
                              <xs:documentation>
                                <xs:Name>information</xs:Name>
                              </xs:documentation>
                            </xs:annotation>
                          </xs:enumeration>
                          <xs:enumeration value="3">
                            <xs:annotation>
                              <xs:documentation>
                                <xs:Name>offlineAccess</xs:Name>
                              </xs:documentation>
                            </xs:annotation>
                          </xs:enumeration>
                          <xs:enumeration value="4">
                            <xs:annotation>
                              <xs:documentation>
                                <xs:Name>offlineAccess</xs:Name>
                              </xs:documentation>
                            </xs:annotation>
                          </xs:enumeration>
                          <xs:enumeration value="5">
                            <xs:annotation>
                              <xs:documentation>
                                <xs:Name>order</xs:Name>
                              </xs:documentation>
                            </xs:annotation>
                          </xs:enumeration>
                          <xs:enumeration value="6">
                            <xs:annotation>
                              <xs:documentation>
                                <xs:Name>search</xs:Name>
                              </xs:documentation>
                            </xs:annotation>
                          </xs:enumeration>
                        </xs:restriction>
                      </xs:simpleType>
                    </xs:element>
                  </xs:sequence>
                </xs:complexType>
              </xs:element>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
```

Complex Type `additionalSpatialInformationType`

Namespace	http://www.iho.int/S-121

Diagram	
Type	extension of informationType
Type hierarchy	• gml:AbstractGMLType • AbstractInformationType • informationType • additionalSpatialInformationType
Used by	Element AdditionalSpatialInformation
Model	informationAssociation* , invInformationAssociation* , source* , componentOf* , consistsOf* , startLifespan{0,1} , endLifespan{0,1} , locationReference+ , identifies*
Children	componentOf, consistsOf, endLifespan, identifies, informationAssociation, invInformationAssociation, locationReference, source, startLifespan
Attributes	**QName** / **Type** / **Use** **gml:id** / ID / required `The attribute gml:id supports provision of a handle for the XML element`

	QName	Type	Use	
		representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		

Source

```
<xs:complexType name="additionalSpatialInformationType">
  <xs:complexContent>
    <xs:extension base="informationType">
      <xs:sequence>
        <xs:element maxOccurs="unbounded" name="locationReference" type="locationReferenceType"/>
        <xs:element maxOccurs="unbounded" minOccurs="0" name="identifies" type="gml:ReferenceType">
          <xs:annotation>
            <xs:documentation>inverse generic association between geographic features</
xs:documentation>
          </xs:annotation>
        </xs:element>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Complex Type partyType

Namespace	http://www.iho.int/S-121

Diagram

informationType (extension base)
Base Type s100:AbstractInformationType
s100:AbstractInformationType (extension base)
gml:AbstractGMLType (extension base)
Attributes
gml:id
The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory...
0..∞ informationAssociation
0..∞ invInformationAssociation
Abstract type for an S-100 information type. This is the base type from which domain application schemas derive...
0..∞ source
Type gml:ReferenceType
association to a SourceType information type which represents the source of the information type
0..∞ componentOf
Type gml:ReferenceType
Generic association between information types
0..∞ consistsOf
Type gml:ReferenceType
inverse generic association between information types
startLifespan
Type xs:date
endLifespan
Type xs:date
partyType
Base Type informationType
partyName
Type xs:string
partyRole
Type xs:string
categoryOfParty
Type Restriction of 'xs:string'
partyGroupType
Type Restriction of 'xs:string'
partyGroup
Type xs:boolean
0..∞ rrr
Type gml:ReferenceType
0..∞ member
Type gml:ReferenceType
0..∞ group
Type gml:ReferenceType

Type	extension of informationType
Type hierarchy	• gml:AbstractGMLType • AbstractInformationType • informationType • partyType
Used by	Element Party
Model	informationAssociation* , invInformationAssociation* , source* , componentOf* , consistsOf* , startLifespan{0,1} , endLifespan{0,1} , partyName , partyRole{0,1} , categoryOfParty{0,1} , partyGroupType{0,1} , partyGroup{0,1} , rrr* , member* , group*
Children	categoryOfParty, componentOf, consistsOf, endLifespan, group, informationAssociation, invInformationAssociation, member, partyGroup, partyGroupType, partyName, partyRole, rrr, source, startLifespan
Attributes	**QName** / **Type** / **Use** **gml:id** / ID / required The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.

Source

```
<xs:complexType name="partyType">
  <xs:complexContent>
    <xs:extension base="informationType">
      <xs:sequence>
        <xs:element name="partyName" type="xs:string"/>
        <xs:element minOccurs="0" name="partyRole" type="xs:string"/>
        <xs:element minOccurs="0" name="categoryOfParty">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:enumeration value="International Organisation"/>
              <xs:enumeration value="State Country"/>
              <xs:enumeration value="Province State"/>
              <xs:enumeration value="Non Natural Person"/>
              <xs:enumeration value="Natural Person"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element minOccurs="0" name="partyGroupType">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:enumeration value="Agreement"/>
              <xs:enumeration value="Association"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
        <xs:element minOccurs="0" name="partyGroup" type="xs:boolean"/>
        <xs:element maxOccurs="unbounded" minOccurs="0" name="rrr" type="gml:ReferenceType"/>
        <xs:element maxOccurs="unbounded" minOccurs="0" name="member" type="gml:ReferenceType"/>
        <xs:element minOccurs="0" name="group" type="gml:ReferenceType" maxOccurs="unbounded"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Complex Type partyMemberType

Namespace	http://www.iho.int/S-121

Diagram	
Type	extension of informationType
Type hierarchy	• gml:AbstractGMLType • AbstractInformationType • informationType • partyMemberType
Used by	Element PartyMember
Model	informationAssociation* , invInformationAssociation* , source* , componentOf* , consistsOf* , startLifespan{0,1} , endLifespan{0,1} , partyMembership , member{0,1} , group{0,1}

Children	componentOf, consistsOf, endLifespan, group, informationAssociation, invInformationAssociation, member, partyMembership, source, startLifespan
Attributes	**QName** / **Type** / **Use** **gml:id** / ID / required The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.

Source	`<xs:complexType name="partyMemberType">`
	`  <xs:complexContent>`
	`  <xs:extension base="informationType">`
	`  <xs:sequence>`
	`  <xs:element name="partyMembership" type="xs:decimal"/>`
	`  <xs:element minOccurs="0" name="member" type="gml:ReferenceType"/>`
	`  <xs:element minOccurs="0" name="group" type="gml:ReferenceType"/>`
	`  </xs:sequence>`
	`  </xs:extension>`
	`  </xs:complexContent>`
	`</xs:complexType>`

Complex Type `CollectionType`

Namespace	http://www.iho.int/S-121

Diagram	
Type	extension of abstractFeature
Type hierarchy	• gml:AbstractGMLType • gml:AbstractFeatureType • abstractFeature • CollectionType
Used by	Element Dataset
Model	gml:boundedBy{0,1} , metadata , (Point | MultiPoint | Curve | CompositeCurve | OrientableCurve | Surface | Polygon) , members
Children	CompositeCurve, Curve, MultiPoint, OrientableCurve, Point, Polygon, Surface, gml:boundedBy, members, metadata
Attributes	**QName** / **Type** / **Use** **gml:id** / ID / required `The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML`

	QName	Type	Use	
		type ID, so is constrained to be unique in the XML document within which it occurs.		

Source

```
<xs:complexType name="CollectionType">
  <xs:complexContent>
    <xs:extension base="abstractFeature">
      <xs:sequence>
        <xs:element name="metadata">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="DatasetIdentificationInformation"
 type="s100:DataSetIdentificationType"/>
              <xs:element name="DatasetStructureInformation"
 type="s100:DataSetStructureInformationType"/>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
        <xs:group ref="s100:Geometry" minOccurs="0" maxOccurs="unbounded">
          <xs:annotation>
            <xs:documentation>Allows spatial objects to be located outside feature objects (for
 references, and compatibility with ISO 8211 encoding)</xs:documentation>
          </xs:annotation>
        </xs:group>
        <xs:element name="members">
          <xs:complexType>
            <xs:complexContent>
              <xs:extension base="gml:AbstractFeatureMemberType">
                <xs:sequence>
                  <xs:group maxOccurs="unbounded" minOccurs="0" ref="Features"/>
                </xs:sequence>
              </xs:extension>
            </xs:complexContent>
          </xs:complexType>
        </xs:element>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Complex Type `abstractFeature`

Namespace	http://www.iho.int/S-121
Diagram	
Type	extension of gml:AbstractFeatureType

Type hierarchy	• gml:AbstractGMLType
	  • gml:AbstractFeatureType
	  • abstractFeature

Used by	Complex Type CollectionType

Model	gml:boundedBy{0,1}
Children	gml:boundedBy
Attributes	**QName** / **Type** / **Use** **gml:id** / ID / required The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.

Source	`<xs:complexType name="abstractFeature">`
	`  <xs:complexContent>`
	`  <xs:extension base="gml:AbstractFeatureType"/>`
	`  </xs:complexContent>`
	`</xs:complexType>`

Simple Type(s)

Simple Type `releasabilityTypeType`

Namespace	http://www.iho.int/S-121
Diagram	
Type	restriction of xs:string
Facets	enumeration `Internal` enumeration `Official` enumeration `Controlled`
Used by	Element geographicFeatureType/releasabilityType

Source	`<xs:simpleType name="releasabilityTypeType">`
	`  <xs:restriction base="xs:string">`
	`  <xs:enumeration value="Internal">`
	`  <xs:enumeration value="Official">`
	`  <xs:enumeration value="Controlled">`
	`  </xs:restriction>`
	`</xs:simpleType>`

Simple Type `arcGeometryTypeType`

Namespace	http://www.iho.int/S-121
Diagram	
Type	restriction of xs:string
Facets	enumeration `geodesic` enumeration `loxodrome`
Used by	Element limitType/arcGeometryType

Source	`<xs:simpleType name="arcGeometryTypeType">`
	`  <xs:restriction base="xs:string">`
	`  <xs:enumeration value="geodesic">`
	`  <xs:enumeration value="loxodrome">`
	`  </xs:restriction>`
	`</xs:simpleType>`

Simple Type `basicAdministrativeUnitTypeType`

Namespace	http://www.iho.int/S-121

Diagram	
Type	restriction of xs:string
Facets	enumeration `Maritime Limits and Boundaries`
Used by	Element bauType/basicAdministrativeUnitType

Source	`<xs:simpleType name="basicAdministrativeUnitTypeType">`
	`  <xs:restriction base="xs:string">`
	`  <xs:enumeration value="Maritime Limits and Boundaries"/>`
	`  </xs:restriction>`
	`</xs:simpleType>`

Element Group(s)

Element Group `Features`

Namespace	http://www.iho.int/S-121

Diagram

BaselinePoint
Type locationType
LimitPoint
Type locationType
BoundaryPoint
Type locationType
ContributingPoint
Type locationType
Location
Type locationType
Baseline
Type limitType
NormalBaseline
Type limitType
StraightBaseline
Type limitType
ArchipelagicBaseline
Type limitType
LowTideElevationBaseline
Type limitType
MouthOfRiversBaseline
Type limitType
BayBaseline
Type limitType
PortBaseline
Type limitType
ReefBaseline
Type limitType
Boundary
Type limitType
InternationalBoundary
Type limitType
Limit
Type limitType
OuterLimitOfTheTerritorialSea
Type limitType
OuterLimitOfTheContiguousZone
Type limitType

Used by	Element CollectionType/members
Model	BaselinePoint | LimitPoint | BoundaryPoint | ContributingPoint | Location | Baseline | NormalBaseline | StraightBaseline | ArchipelagicBaseline | LowTideElevationBaseline | MouthOfRiversBaseline | BayBaseline | PortBaseline | ReefBaseline | Boundary | InternationalBoundary | Limit | OuterLimitOfTheTerritorialSea | OuterLimitOfTheContiguousZone | OuterLimitOfTheExclusiveEconomicZone | OuterLimitOfTheContinentalShelf | OuterLimitOfTheRoadstead | ConstructionLine | Zone | TerritorialSea | ContiguousZone | ExclusiveEconomicZone | ContinentalShelf | Roadstead | InternalWaters | TheArea | HighSeas | ArchipelagicWaters | Strait | BasicAdministrativeUnit | Right | Restriction | Responsibility | Governance | Source | AdditionalSpatialInformation | Party | PartyMember
Children	AdditionalSpatialInformation, ArchipelagicBaseline, ArchipelagicWaters, Baseline, BaselinePoint, BasicAdministrativeUnit, BayBaseline, Boundary, BoundaryPoint, ConstructionLine, ContiguousZone, ContinentalShelf, ContributingPoint, ExclusiveEconomicZone, Governance, HighSeas, InternalWaters, InternationalBoundary, Limit, LimitPoint, Location, LowTideElevationBaseline, MouthOfRiversBaseline, NormalBaseline, OuterLimitOfTheContiguousZone, OuterLimitOfTheContinentalShelf, OuterLimitOfTheExclusiveEconomicZone, OuterLimitOfTheRoadstead, OuterLimitOfTheTerritorialSea, Party, PartyMember, PortBaseline, ReefBaseline, Responsibility, Restriction, Right, Roadstead, Source, StraightBaseline, Strait, TerritorialSea, TheArea, Zone
Source	

```
<xs:group name="Features">
  <xs:choice>
    <xs:element ref="BaselinePoint"/>
    <xs:element ref="LimitPoint"/>
    <xs:element ref="BoundaryPoint"/>
    <xs:element ref="ContributingPoint"/>
    <xs:element ref="Location"/>
    <xs:element ref="Baseline"/>
    <xs:element ref="NormalBaseline"/>
    <xs:element ref="StraightBaseline"/>
    <xs:element ref="ArchipelagicBaseline"/>
    <xs:element ref="LowTideElevationBaseline"/>
    <xs:element ref="MouthOfRiversBaseline"/>
    <xs:element ref="BayBaseline"/>
    <xs:element ref="PortBaseline"/>
    <xs:element ref="ReefBaseline"/>
    <xs:element ref="Boundary"/>
    <xs:element ref="InternationalBoundary"/>
    <xs:element ref="Limit"/>
    <xs:element ref="OuterLimitOfTheTerritorialSea"/>
    <xs:element ref="OuterLimitOfTheContiguousZone"/>
    <xs:element ref="OuterLimitOfTheExclusiveEconomicZone"/>
    <xs:element ref="OuterLimitOfTheContinentalShelf"/>
    <xs:element ref="OuterLimitOfTheRoadstead"/>
    <xs:element ref="ConstructionLine"/>
    <xs:element ref="Zone"/>
    <xs:element ref="TerritorialSea"/>
    <xs:element ref="ContiguousZone"/>
    <xs:element ref="ExclusiveEconomicZone"/>
    <xs:element ref="ContinentalShelf"/>
    <xs:element ref="Roadstead"/>
    <xs:element ref="InternalWaters"/>
    <xs:element ref="TheArea"/>
    <xs:element ref="HighSeas"/>
    <xs:element ref="ArchipelagicWaters"/>
    <xs:element ref="Strait"/>
    <xs:element ref="BasicAdministrativeUnit"/>
    <xs:element ref="Right"/>
    <xs:element ref="Restriction"/>
    <xs:element ref="Responsibility"/>
    <xs:element ref="Governance"/>
    <xs:element ref="Source"/>
    <xs:element ref="AdditionalSpatialInformation"/>
    <xs:element ref="Party"/>
    <xs:element ref="PartyMember"/>
  </xs:choice>
</xs:group>
```

Namespace: "http://www.opengis.net/gml/3.2"

Schema(s)

Imported schema `S100_gmlProfile.xsd`

Namespace	http://www.opengis.net/gml/3.2
Annotations	`S-100 GML 3.2.1 Profile Compliance Levels 1 and 2.`
Properties	attribute form default: `unqualified`
	element form default: `qualified`
	version: `4.0.0-20180502`

Element(s)

Element gml:boundedBy

Namespace	http://www.opengis.net/gml/3.2
Annotations	This property describes the minimum bounding box or rectangle that encloses the entire feature.
Diagram	
Type	gml:BoundingShapeType
Properties	content: complex nillable: true
Used by	Complex Types: AbstractFeatureType, CollectionType, abstractFeature, geographicFeatureType, gml:AbstractFeatureType, limitType, locationType, zoneType
Model	(gml:Envelope)
Children	gml:Envelope

Instance	`<gml:boundedBy nilReason="" xmlns:gml="http://www.opengis.net/gml/3.2">`
	`  <gml:Envelope srsDimension="" srsName="">{1,1}</gml:Envelope>`
	`</gml:boundedBy>`

Attributes	**QName** / **Type** / **Use** **nilReason** / gml:NilReasonType / optional

Source	`<element name="boundedBy" type="gml:BoundingShapeType" nillable="true">`
	`  <annotation>`
	`  <documentation>This property describes the minimum bounding box or rectangle that encloses the entire feature.</documentation>`
	`  </annotation>`
	`</element>`

Element gml:Envelope

Namespace	http://www.opengis.net/gml/3.2
Annotations	Envelope defines an extent using a pair of positions defining opposite corners in arbitrary dimensions. The first direct position is the "lower corner" (a coordinate position consisting of all the minimal ordinates for each dimension for all points within the envelope), the second one the "upper corner" (a coordinate position consisting of all the maximal ordinates for each dimension for all points within the envelope). The use of the properties "coordinates" and "pos" has been deprecated. The explicitly named properties "lowerCorner" and "upperCorner" shall be used instead.

Diagram	
Type	gml:EnvelopeType
Properties	content: complex
Substitution Group Affiliation	• gml:AbstractObject
Used by	Complex Type gml:BoundingShapeType
Model	gml:lowerCorner , gml:upperCorner
Children	gml:lowerCorner, gml:upperCorner

Instance	`<gml:Envelope srsDimension="" srsName="" xmlns:gml="http://www.opengis.net/gml/3.2">`
	`  <gml:lowerCorner srsDimension="" srsName="">{1,1}</gml:lowerCorner>`
	`  <gml:upperCorner srsDimension="" srsName="">{1,1}</gml:upperCorner>`
	`</gml:Envelope>`

Attributes	**QName** / **Type** / **Use** **srsDimension** / positiveInteger / optional **srsName** / anyURI / optional
Source	`<element name="Envelope" type="gml:EnvelopeType" substitutionGroup="gml:AbstractObject">` `  <annotation>` ` <documentation>Envelope defines an extent using a pair of positions defining opposite corners in arbitrary dimensions. The first direct position is the "lower corner" (a coordinate position consisting of all the minimal ordinates for each dimension for all points within the envelope), the second one the "upper corner" (a coordinate position consisting of all the maximal ordinates for each dimension for all points within the envelope). The use of the properties "coordinates" and "pos" has been deprecated. The explicitly named properties "lowerCorner" and "upperCorner" shall be used instead.</documentation>` ` </annotation>` `</element>`

Element gml:EnvelopeType / gml:lowerCorner

Namespace	http://www.opengis.net/gml/3.2

Diagram	
Type	gml:DirectPositionType
Type hierarchy	• anySimpleType • gml:doubleList • gml:DirectPositionType
Properties	content: `complex`
Attributes	**QName** / **Type** / **Use** **srsDimension** / positiveInteger / optional **srsName** / anyURI / optional
Source	`<element name="lowerCorner" type="gml:DirectPositionType"/>`

Element `gml:EnvelopeType / gml:upperCorner`

Namespace	http://www.opengis.net/gml/3.2

Diagram	
Type	gml:DirectPositionType
Type hierarchy	• anySimpleType • gml:doubleList • gml:DirectPositionType
Properties	content: `complex`
Attributes	**QName** / **Type** / **Use** **srsDimension** / positiveInteger / optional **srsName** / anyURI / optional
Source	`<element name="upperCorner" type="gml:DirectPositionType"/>`

Element `gml:Point`

Namespace	http://www.opengis.net/gml/3.2
Annotations	`A Point is defined by a single coordinate tuple. The direct position of a point is specified by the pos element which is of type DirectPositionType.`

Diagram	
Type	gml:PointType

Type hierarchy	• gml:AbstractGMLType
	  • gml:AbstractGeometryType
	  • gml:AbstractGeometricPrimitiveType
	  • gml:PointType

Properties	content: complex
Substitution Group Affiliation	• gml:AbstractGeometricPrimitive
Used by	Complex Type gml:PointPropertyType
Model	gml:pos
Children	gml:pos

Instance	`<gml:Point gml:id="" srsDimension="" srsName="" xmlns:gml="http://www.opengis.net/gml/3.2">`
	`  <gml:pos srsDimension="" srsName="">{1,1}</gml:pos>`
	`</gml:Point>`

Attributes	**QName** / **Type** / **Use** **gml:id** / ID / required The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs. **srsDimension** / positiveInteger / optional **srsName** / anyURI / optional

Source	`<element name="Point" type="gml:PointType" substitutionGroup="gml:AbstractGeometricPrimitive">`
	`  <annotation>`
	`  <documentation>A Point is defined by a single coordinate tuple. The direct position of a point is specified by the pos element which is of type DirectPositionType.</documentation>`
	`  </annotation>`
	`</element>`

Element gml:pos

Namespace	http://www.opengis.net/gml/3.2
Diagram	
Type	gml:DirectPositionType

Type hierarchy	• anySimpleType
	  • gml:doubleList
	  • gml:DirectPositionType

Properties	content:	complex
Used by	Complex Types	PointType, S100_ArcByCenterPointType, S100_CircleByCenterPointType, S100_GM_CurveType, S100_GM_PolynomialSplineType, S100_GM_SplineCurveType, gml:LineStringSegmentType, gml:LineStringType, gml:LinearRingType, gml:PointType
	Element Group	gml:geometricPositionGroup
	Element	VectorType/origin

Attributes	QName	Type	Use
	srsDimension	positiveInteger	optional
	srsName	anyURI	optional

Source
```
<element name="pos" type="gml:DirectPositionType"/>
```

Element gml:AbstractCurve

Namespace	http://www.opengis.net/gml/3.2
Annotations	The AbstractCurve element is the abstract head of the substitution group for all (continuous) curve elements.

Diagram

gml:AbstractCurveType
gml:AbstractGeometricPrimitiveType (extension base)
gml:AbstractGeometryType (extension base)
gml:AbstractGMLType (extension base)
Attributes
gml:id
The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory...
Attributes
gml:SRSReferenceGroup
The attribute group SRSReferenceGroup is an optional reference to the CRS used by this geometry, with optional...
All geometry elements are derived directly or indirectly from this abstract supertype. A geometry element may have an...
gml:AbstractGeometricPrimitiveType is the abstract root type of the geometric primitives. A geometric primitive is a...
gml:AbstractCurveType is an abstraction of a curve to support the different levels of complexity. The curve may always...
Substitutions
CompositeCurve
A gml:CompositeCurve is represented by a sequence of (orientable) curves such that each curve in the sequence...
AbstractCurve
The AbstractCurve element is the abstract head of the substitution group for all (continuous) curve elements.
Curve
A curve is a 1-dimensional primitive. Curves are continuous, connected, and have a measurable length in terms of the...
LineString
A LineString is a special curve that consists of a single segment with linear interpolation. It is defined by two or...
OrientableCurve
S-100 orientable curve is the same as GML orientable curve. Added for consistency.
OrientableCurve
OrientableCurve consists of a curve and an orientation. If the orientation is "+", then the OrientableCurve is...

Type	gml:AbstractCurveType

Type hierarchy	• gml:AbstractGMLType
	  • gml:AbstractGeometryType
	  • gml:AbstractGeometricPrimitiveType
	  • gml:AbstractCurveType

Properties	content: `complex` abstract: `true`
Substitution Group	• gml:LineString • gml:Curve • gml:OrientableCurve • gml:CompositeCurve • Curve • OrientableCurve
Substitution Group Affiliation	• gml:AbstractGeometricPrimitive
Used by	Complex Type gml:CurvePropertyType

Attributes

QName	Type	Use	
gml:id	ID	required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		
srsDimension	positiveInteger	optional	
srsName	anyURI	optional	

Source

```
<element name="AbstractCurve" type="gml:AbstractCurveType" abstract="true"
 substitutionGroup="gml:AbstractGeometricPrimitive">
  <annotation>
    <documentation>The AbstractCurve element is the abstract head of the substitution group for all
 (continuous) curve elements.</documentation>
  </annotation>
</element>
```

Element `gml:AbstractSurface`

Namespace	http://www.opengis.net/gml/3.2
Annotations	The AbstractSurface element is the abstract head of the substitution group for all (continuous) surface elements.

Diagram	
Type	gml:AbstractSurfaceType

Type hierarchy	• gml:AbstractGMLType
	  • gml:AbstractGeometryType
	  • gml:AbstractGeometricPrimitiveType
	  • gml:AbstractSurfaceType

Properties	content: complex abstract: true
Substitution Group	• gml:Polygon • gml:Surface • Surface • Polygon
Substitution Group Affiliation	• gml:AbstractGeometricPrimitive
Used by	Complex Types SurfacePropertyType, gml:SurfacePropertyType

Attributes

QName	Type	Use	
gml:id	ID	required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		
srsDimension	positiveInteger	optional	
srsName	anyURI	optional	

Source

```
<element name="AbstractSurface" type="gml:AbstractSurfaceType" abstract="true"
 substitutionGroup="gml:AbstractGeometricPrimitive">
  <annotation>
    <documentation>The AbstractSurface element is the abstract head of the substitution group for
 all (continuous) surface elements.</documentation>
  </annotation>
</element>
```

Element gml:pointMember

Namespace	http://www.opengis.net/gml/3.2
Annotations	This property element either references a Point via the XLink-attributes or contains the Point element.

Diagram

Type	gml:PointPropertyType
Properties	content: `complex`
Used by	Complex Types MultiPointType, gml:MultiPointType
Model	gml:Point
Children	gml:Point

Instance

```
<gml:pointMember xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show
www.opengis.net/gml/3.2">
  <gml:Point gml:id="" srsDimension="" srsName="">{1,1}</gml:Point>
</gml:pointMember>
```

Attributes

QName	Type	Fixed	Default	Use	
nilReason	gml:NilReasonType			optional	
owns	boolean		false	optional	
xlink:actuate	xlink:actuateType			optional	
xlink:arcrole	xlink:arcroleType			optional	
xlink:href	xlink:hrefType			optional	
xlink:role	xlink:roleType			optional	
xlink:show	xlink:showType			optional	
xlink:title	xlink:titleAttrType			optional	
xlink:type	xlink:typeType	simple		optional	

Source

```
<element name="pointMember" type="gml:PointPropertyType">
  <annotation>
    <documentation>This property element either references a Point via the XLink-attributes or
 contains the Point element.</documentation>
  </annotation>
</element>
```

Element gml:segments

Namespace	http://www.opengis.net/gml/3.2
Annotations	This property element contains a list of curve segments. The order of the elements is significant and shall be preserved when processing the array.
Diagram	
Type	gml:CurveSegmentArrayPropertyType
Properties	content: complex
Used by	Complex Types CurveType, gml:CurveType
Model	gml:AbstractCurveSegment
Children	gml:AbstractCurveSegment
Instance	<gml:segments xmlns:gml="http://www.opengis.net/gml/3.2"> <gml:AbstractCurveSegment numDerivativeInterior="0" numDerivativesAtEnd="0" numDerivativesAtStart="0">{1,1}</gml:AbstractCurveSegment> </gml:segments>
Source	<element name="segments" type="gml:CurveSegmentArrayPropertyType">...</element>

```
<element name="segments" type="gml:CurveSegmentArrayPropertyType">
  <annotation>
    <documentation>This property element contains a list of curve segments. The order of the
 elements is significant and shall be preserved when processing the array.</documentation>
  </annotation>
</element>
```

Element gml:AbstractCurveSegment

Namespace	http://www.opengis.net/gml/3.2
Annotations	A curve segment defines a homogeneous segment of a curve. The attributes numDerivativesAtStart, numDerivativesAtEnd and numDerivativesInterior specify the type of continuity as specified in ISO 19107:2003, 6.4.9.3. The AbstractCurveSegment element is the abstract head of the substituition group for all curve segment elements, i.e. continuous segments of the same interpolation mechanism. All curve segments shall have an attribute interpolation with type gml:CurveInterpolationType specifying the curve interpolation mechanism used for this segment. This mechanism uses the control points and control parameters to determine the position of this curve segment.

Diagram	
Type	gml:AbstractCurveSegmentType
Properties	content: `complex` abstract: `true`
Substitution Group	• gml:LineStringSegment • gml:GeodesicString • gml:Geodesic • S100_ArcByCenterPoint

	• S100_CircleByCenterPoint • S100_GM_SplineCurve • S100_GM_PolynomialSpline • S100_GM_Curve
Substitution Group Affiliation	• gml:AbstractObject
Used by	Complex Type gml:CurveSegmentArrayPropertyType

Attributes

QName	Type	Default	Use
numDerivativeInterior	integer	0	optional
numDerivativesAtEnd	integer	0	optional
numDerivativesAtStart	integer	0	optional

Source

```
<element name="AbstractCurveSegment" type="gml:AbstractCurveSegmentType" abstract="true"
 substitutionGroup="gml:AbstractObject">
  <annotation>
    <documentation>A curve segment defines a homogeneous segment of a curve. The attributes
 numDerivativesAtStart, numDerivativesAtEnd and numDerivativesInterior specify the type of
 continuity as specified in ISO 19107:2003, 6.4.9.3. The AbstractCurveSegment element is the
 abstract head of the substituition group for all curve segment elements, i.e. continuous segments
 of the same interpolation mechanism. All curve segments shall have an attribute interpolation with
 type gml:CurveInterpolationType specifying the curve interpolation mechanism used for this segment.
 This mechanism uses the control points and control parameters to determine the position of this
 curve segment.</documentation>
  </annotation>
</element>
```

Element gml:curveMember

Namespace	http://www.opengis.net/gml/3.2
Diagram	
Type	gml:CurvePropertyType
Properties	content: complex

Used by	Complex Types CompositeCurveType, gml:CompositeCurveType, gml:RingType
Model	gml:AbstractCurve
Children	gml:AbstractCurve

Instance	`<gml:curveMember xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show www.opengis.net/gml/3.2">`
	`  <gml:AbstractCurve gml:id="" srsDimension="" srsName="">{1,1}</gml:AbstractCurve>`
	`</gml:curveMember>`

Attributes

QName	Type	Fixed	Default	Use	
nilReason	gml:NilReasonType			optional	
owns	boolean		false	optional	
xlink:actuate	xlink:actuateType			optional	
xlink:arcrole	xlink:arcroleType			optional	
xlink:href	xlink:hrefType			optional	
xlink:role	xlink:roleType			optional	
xlink:show	xlink:showType			optional	
xlink:title	xlink:titleAttrType			optional	
xlink:type	xlink:typeType	simple		optional	

Source `<element name="curveMember" type="gml:CurvePropertyType"/>`

Element `gml:baseCurve`

Namespace	http://www.opengis.net/gml/3.2
Annotations	The property baseCurve references or contains the base curve, i.e. it either references the base curve via the XLink-attributes or contains the curve element. A curve element is any element which is substitutable for AbstractCurve. The base curve has positive orientation.
Diagram	

Type	gml:CurvePropertyType
Properties	content: complex

Used by	Complex Type gml:OrientableCurveType
Model	gml:AbstractCurve
Children	gml:AbstractCurve

Instance	`<gml:baseCurve xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show="`
	`www.opengis.net/gml/3.2">`
	`  <gml:AbstractCurve gml:id="" srsDimension="" srsName="">{1,1}</gml:AbstractCurve>`
	`</gml:baseCurve>`

Attributes	

QName	Type	Fixed	Default	Use	
nilReason	gml:NilReasonType			optional	
owns	boolean		false	optional	
xlink:actuate	xlink:actuateType			optional	
xlink:arcrole	xlink:arcroleType			optional	
xlink:href	xlink:hrefType			optional	
xlink:role	xlink:roleType			optional	
xlink:show	xlink:showType			optional	
xlink:title	xlink:titleAttrType			optional	
xlink:type	xlink:typeType	simple		optional	

Source

```
<element name="baseCurve" type="gml:CurvePropertyType">
  <annotation>
    <documentation>The property baseCurve references or contains the base curve, i.e. it either
 references the base curve via the XLink-attributes or contains the curve element. A curve element
 is any element which is substitutable for AbstractCurve. The base curve has positive orientation.</
documentation>
  </annotation>
</element>
```

Element `gml:patches`

Namespace	http://www.opengis.net/gml/3.2
Annotations	The patches property element contains the sequence of surface patches. The order of the elements is significant and shall be preserved when processing the array.
Diagram	
Type	gml:SurfacePatchArrayPropertyType
Properties	content: complex
Used by	Complex Types SurfaceType, gml:SurfaceType
Model	gml:AbstractSurfacePatch
Children	gml:AbstractSurfacePatch

Instance	`<gml:patches xmlns:gml="http://www.opengis.net/gml/3.2">`
	`  <gml:AbstractSurfacePatch>{1,1}</gml:AbstractSurfacePatch>`
	`</gml:patches>`

Source	


```
<element name="patches" type="gml:SurfacePatchArrayPropertyType">
  <annotation>
    <documentation>The patches property element contains the sequence of surface patches. The order
 of the elements is significant and shall be preserved when processing the array.</documentation>
  </annotation>
</element>
```

Element gml:AbstractSurfacePatch

Namespace	http://www.opengis.net/gml/3.2
Annotations	A surface patch defines a homogenuous portion of a surface. The AbstractSurfacePatch element is the abstract head of the substituition group for all surface patch elements describing a continuous portion of a surface. All surface patches shall have an attribute interpolation (declared in the types derived from gml:AbstractSurfacePatchType) specifying the interpolation mechanism used for the patch using gml:SurfaceInterpolationType.
Diagram	
Type	gml:AbstractSurfacePatchType
Properties	content: complex abstract: true
Substitution Group	• gml:PolygonPatch
Used by	Complex Type gml:SurfacePatchArrayPropertyType
Source	`<element name="AbstractSurfacePatch" type="gml:AbstractSurfacePatchType" abstract="true">` `  <annotation>` ` <documentation>A surface patch defines a homogenuous portion of a surface. The AbstractSurfacePatch element is the abstract head of the substituition group for all surface patch elements describing a continuous portion of a surface. All surface patches shall have an attribute interpolation (declared in the types derived from gml:AbstractSurfacePatchType) specifying the interpolation mechanism used for the patch using gml:SurfaceInterpolationType.</documentation>` ` </annotation>` `</element>`

Element gml:exterior

Namespace	http://www.opengis.net/gml/3.2
Annotations	A boundary of a surface consists of a number of rings. In the normal 2D case, one of these rings is distinguished as being the exterior boundary. In a general manifold this is not always possible, in which case all boundaries shall be listed as interior boundaries, and the exterior will be empty.
Diagram	
Type	gml:AbstractRingPropertyType
Properties	content: complex

Used by	Complex Types PolygonType, gml:PolygonPatchType, gml:PolygonType
Model	gml:AbstractRing
Children	gml:AbstractRing

Instance	`<gml:exterior xmlns:gml="http://www.opengis.net/gml/3.2">`
	`  <gml:AbstractRing>{1,1}</gml:AbstractRing>`
	`</gml:exterior>`

Source	`<element name="exterior" type="gml:AbstractRingPropertyType">` `  <annotation>` ` <documentation>A boundary of a surface consists of a number of rings. In the normal 2D case, one of these rings is distinguished as being the exterior boundary. In a general manifold this is not always possible, in which case all boundaries shall be listed as interior boundaries, and the exterior will be empty.</documentation>` ` </annotation>` `</element>`

Element `gml:AbstractRing`

Namespace	http://www.opengis.net/gml/3.2
Annotations	An abstraction of a ring to support surface boundaries of different complexity. The AbstractRing element is the abstract head of the substituition group for all closed boundaries of a surface patch.
Diagram	
Type	gml:AbstractRingType
Properties	content: `complex` abstract: `true`
Substitution Group	• gml:LinearRing • gml:Ring

Substitution Group Affiliation	• gml:AbstractObject
Used by	Complex Type gml:AbstractRingPropertyType
Model	

Source	`<element name="AbstractRing" type="gml:AbstractRingType" abstract="true" substitutionGroup="gml:AbstractObject">`
	`<annotation>`
	`<documentation>`An abstraction of a ring to support surface boundaries of different complexity. The AbstractRing element is the abstract head of the substituition group for all closed boundaries of a surface patch.`</documentation>`
	`</annotation>`
	`</element>`

Element `gml:interior`

Namespace	http://www.opengis.net/gml/3.2
Annotations	A boundary of a surface consists of a number of rings. The "interior" rings separate the surface / surface patch from the area enclosed by the rings.
Diagram	
Type	gml:AbstractRingPropertyType
Properties	content: complex
Used by	Complex Types PolygonType, gml:PolygonPatchType, gml:PolygonType
Model	gml:AbstractRing
Children	gml:AbstractRing

Instance	`<gml:interior xmlns:gml="http://www.opengis.net/gml/3.2">`
	`<gml:AbstractRing>`{1,1}`</gml:AbstractRing>`
	`</gml:interior>`

Source	`<element name="interior" type="gml:AbstractRingPropertyType">`
	`<annotation>`
	`<documentation>`A boundary of a surface consists of a number of rings. The "interior" rings separate the surface / surface patch from the area enclosed by the rings.`</documentation>`
	`</annotation>`
	`</element>`

Element `gml:AbstractObject`

Namespace	http://www.opengis.net/gml/3.2
Annotations	This element has no type defined, and is therefore implicitly (according to the rules of W3C XML Schema) an XML Schema anyType. It is used as the head of an XML Schema substitution group which unifies complex content and certain simple content elements used for datatypes in GML, including the gml:AbstractGML substitution group.

Diagram	
Properties	abstract: `true`
Substitution Group	• gml:AbstractGML • gml:AbstractFeature • gml:Envelope • gml:AbstractGeometry • gml:AbstractGeometricPrimitive • gml:Point • gml:AbstractCurve • gml:LineString • gml:AbstractSurface • gml:Polygon • gml:AbstractRing • gml:LinearRing • gml:Curve • gml:OrientableCurve • gml:AbstractCurveSegment • gml:LineStringSegment

	• gml:GeodesicString • gml:Geodesic • gml:Surface • gml:Ring • gml:CompositeCurve • gml:AbstractGeometricAggregate • gml:MultiPoint • gml:AbstractValue • gml:AbstractScalarValue • gml:Boolean • Point • MultiPoint • Curve • OrientableCurve • Surface • Polygon • S100_ArcByCenterPoint • S100_CircleByCenterPoint • S100_GM_SplineCurve • S100_GM_PolynomialSpline • S100_GM_Curve • Source
Source	`<element name="AbstractObject" abstract="true">` `  <annotation>` ` <documentation>This element has no type defined, and is therefore implicitly (according to the rules of W3C XML Schema) an XML Schema anyType. It is used as the head of an XML Schema substitution group which unifies complex content and certain simple content elements used for datatypes in GML, including the gml:AbstractGML substitution group.</documentation>` ` </annotation>` `</element>`

Element `gml:AbstractGML`

Namespace	http://www.opengis.net/gml/3.2
Annotations	The abstract element gml:AbstractGML is "any GML object having identity". It acts as the head of an XML Schema substitution group, which may include any element which is a GML feature, or other object, with identity. This is used as a variable in content models in GML core and application schemas. It is effectively an abstract superclass for all GML objects.

Diagram	
Type	gml:AbstractGMLType
Properties	content: `complex` abstract: `true`
Substitution Group	• gml:AbstractFeature • gml:AbstractGeometry • gml:AbstractGeometricPrimitive • gml:Point • gml:AbstractCurve • gml:LineString • gml:AbstractSurface • gml:Polygon

	• gml:Curve • gml:OrientableCurve • gml:Surface • gml:CompositeCurve • gml:AbstractGeometricAggregate • gml:MultiPoint • Point • MultiPoint • Curve • OrientableCurve • Surface • Polygon • Source
Substitution Group Affiliation	• gml:AbstractObject
Attributes	**QName** / **Type** / **Use** **gml:id** / ID / required The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.

Source	`<element name="AbstractGML" type="gml:AbstractGMLType" abstract="true" substitutionGroup="gml:AbstractObject">`
	`<annotation>`
	`<documentation>`The abstract element gml:AbstractGML is "any GML object having identity". It acts as the head of an XML Schema substitution group, which may include any element which is a GML feature, or other object, with identity. This is used as a variable in content models in GML core and application schemas. It is effectively an abstract superclass for all GML objects.`</documentation>`
	`</annotation>`
	`</element>`

Element gml:abstractAssociationRole

Namespace	http://www.opengis.net/gml/3.2
Annotations	Applying this pattern shall restrict the multiplicity of objects in a property element using this content model to exactly one. An instance of this type shall contain an element representing an object, or serve as a pointer to a remote object. Applying the pattern to define an application schema specific property type allows to restrict - the inline object to specified object types, - the encoding to "by-reference only" (see 7.2.3.7), - the encoding to "inline only" (see 7.2.3.8).

Diagram	
Type	gml:AssociationRoleType
Properties	content: `complex` abstract: `true`
Model	ANY element from ANY namespace

Attributes

QName	Type	Fixed	Default	Use	
nilReason	gml:NilReasonType			optional	
owns	boolean		false	optional	
xlink:actuate	xlink:actuateType			optional	
xlink:arcrole	xlink:arcroleType			optional	
xlink:href	xlink:hrefType			optional	
xlink:role	xlink:roleType			optional	
xlink:show	xlink:showType			optional	
xlink:title	xlink:titleAttrType			optional	
xlink:type	xlink:typeType	simple		optional	

Source

```
<element name="abstractAssociationRole" type="gml:AssociationRoleType" abstract="true">
  <annotation>
    <documentation>Applying this pattern shall restrict the multiplicity of objects in a property
 element using this content model to exactly one. An instance of this type shall contain an element
 representing an object, or serve as a pointer to a remote object. Applying the pattern to define
 an application schema specific property type allows to restrict - the inline object to specified
 object types, - the encoding to "by-reference only" (see 7.2.3.7), - the encoding to "inline
 only" (see 7.2.3.8).</documentation>
  </annotation>
</element>
```

Element `gml:abstractReference`

Namespace	http://www.opengis.net/gml/3.2
Annotations	`gml:abstractReference may be used as the head of a subtitution group of more specific elements providing a value by-reference.`

Diagram

Type	gml:ReferenceType
Properties	content: `complex` abstract: `true`
Model	

Attributes

QName	Type	Fixed	Default	Use	
nilReason	gml:NilReasonType			optional	
owns	boolean		false	optional	
xlink:actuate	xlink:actuateType			optional	
xlink:arcrole	xlink:arcroleType			optional	
xlink:href	xlink:hrefType			optional	
xlink:role	xlink:roleType			optional	
xlink:show	xlink:showType			optional	
xlink:title	xlink:titleAttrType			optional	
xlink:type	xlink:typeType	simple		optional	

Source

```
<element name="abstractReference" type="gml:ReferenceType" abstract="true">
  <annotation>
    <documentation>gml:abstractReference may be used as the head of a subtitution group of more
 specific elements providing a value by-reference.</documentation>
  </annotation>
</element>
```

Element `gml:abstractInlineProperty`

Namespace	http://www.opengis.net/gml/3.2
Annotations	`gml:abstractInlineProperty may be used as the head of a subtitution group of more specific elements providing a value inline.`

Diagram	
Type	gml:InlinePropertyType
Properties	content: complex abstract: true
Model	ANY element from ANY namespace
Attributes	**QName** / **Type** / **Default** / **Use** **owns** / boolean / false / optional

Source	`<element name="abstractInlineProperty" type="gml:InlinePropertyType" abstract="true">`
	`  <annotation>`
	`  <documentation>gml:abstractInlineProperty may be used as the head of a subtitution group of more specific elements providing a value inline.</documentation>`
	`  </annotation>`
	`</element>`

Element gml:reversePropertyName

Namespace	http://www.opengis.net/gml/3.2
Annotations	If the value of an object property is another object and that object contains also a property for the association between the two objects, then this name of the reverse property may be encoded in a gml:reversePropertyName element in an appinfo annotation of the property element to document the constraint between the two properties. The value of the element shall contain the qualified name of the property element.
Diagram	
Type	string
Properties	content: simple
Source	`<element name="reversePropertyName" type="string">` `  <annotation>` ` <documentation>If the value of an object property is another object and that object contains also a property for the association between the two objects, then this name of the reverse property may be encoded in a gml:reversePropertyName element in an appinfo annotation of the property element to document the constraint between the two properties. The value of the element shall contain the qualified name of the property element.</documentation>` ` </annotation>` `</element>`

Element gml:targetElement

Namespace	http://www.opengis.net/gml/3.2

Diagram	
Type	string
Properties	content: simple
Source	`<element name="targetElement" type="string"/>`

Element gml:associationName

Namespace	http://www.opengis.net/gml/3.2
Diagram	
Type	string
Properties	content: simple
Source	`<element name="associationName" type="string"/>`

Element gml:defaultCodeSpace

Namespace	http://www.opengis.net/gml/3.2
Diagram	
Type	anyURI
Properties	content: simple
Source	`<element name="defaultCodeSpace" type="anyURI"/>`

Element gml:gmlProfileSchema

Namespace	http://www.opengis.net/gml/3.2
Diagram	
Type	anyURI
Properties	content: simple
Source	`<element name="gmlProfileSchema" type="anyURI"/>`

Element gml:AbstractFeature

Namespace	http://www.opengis.net/gml/3.2
Annotations	This abstract element serves as the head of a substitution group which may contain any elements whose content model is derived from gml:AbstractFeatureType. This may be used as a variable in the construction of content models. gml:AbstractFeature may be thought of as "anything that is a GML feature" and may be used to define variables or templates in which the value of a GML property is "any feature". This occurs in particular in a GML feature collection where the feature member properties contain one or multiple copies of gml:AbstractFeature respectively.

Diagram	
Type	gml:AbstractFeatureType
Type hierarchy	• gml:AbstractGMLType • gml:AbstractFeatureType
Properties	content: `complex` abstract: `true`
Substitution Group Affiliation	• gml:AbstractGML
Used by	Complex Type gml:FeaturePropertyType
Model	gml:boundedBy{0,1}
Children	gml:boundedBy

Instance	`<gml:AbstractFeature gml:id="" xmlns:gml="http://www.opengis.net/gml/3.2">`
	`  <gml:boundedBy nilReason="">{0,1}</gml:boundedBy>`
	`</gml:AbstractFeature>`

Attributes	**QName** / **Type** / **Use** **gml:id** / ID / required The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.

Source	`<element name="AbstractFeature" type="gml:AbstractFeatureType" abstract="true" substitutionGroup="gml:AbstractGML">`
	`  <annotation>`
	`  <documentation>This abstract element serves as the head of a substitution group which may contain any elements whose content model is derived from gml:AbstractFeatureType. This may be`

```
 used as a variable in the construction of content models. gml:AbstractFeature may be thought of
 as "anything that is a GML feature" and may be used to define variables or templates in which the
 value of a GML property is "any feature". This occurs in particular in a GML feature collection
 where the feature member properties contain one or multiple copies of gml:AbstractFeature
 respectively.</documentation>
  </annotation>
</element>
```

Element `gml:AbstractGeometry`

Namespace	http://www.opengis.net/gml/3.2
Annotations	The AbstractGeometry element is the abstract head of the substitution group for all geometry elements of GML. This includes pre-defined and user-defined geometry elements. Any geometry element shall be a direct or indirect extension/restriction of AbstractGeometryType and shall be directly or indirectly in the substitution group of AbstractGeometry.

Diagram	
Type	gml:AbstractGeometryType
Type hierarchy	• gml:AbstractGMLType • gml:AbstractGeometryType
Properties	content: `complex` abstract: `true`
Substitution Group	• gml:AbstractGeometricPrimitive • gml:Point • gml:AbstractCurve

	• gml:LineString • gml:AbstractSurface • gml:Polygon • gml:Curve • gml:OrientableCurve • gml:Surface • gml:CompositeCurve • gml:AbstractGeometricAggregate • gml:MultiPoint • Point • MultiPoint • Curve • OrientableCurve • Surface • Polygon
Substitution Group Affiliation	• gml:AbstractGML
Attributes	

QName	Type	Use	
gml:id	ID	required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		
srsDimension	positiveInteger	optional	
srsName	anyURI	optional	

Source

```
<element name="AbstractGeometry" type="gml:AbstractGeometryType" abstract="true"
 substitutionGroup="gml:AbstractGML">
  <annotation>
    <documentation>The AbstractGeometry element is the abstract head of the substitution group for
 all geometry elements of GML. This includes pre-defined and user-defined geometry elements. Any
 geometry element shall be a direct or indirect extension/restriction of AbstractGeometryType and
 shall be directly or indirectly in the substitution group of AbstractGeometry.</documentation>
  </annotation>
</element>
```

Element gml:posList

Namespace	http://www.opengis.net/gml/3.2

Diagram	
Type	gml:DirectPositionListType
Type hierarchy	• anySimpleType • gml:doubleList • gml:DirectPositionListType
Properties	content: `complex`
Used by	Complex Types: S100_GM_CurveType, S100_GM_PolynomialSplineType, S100_GM_SplineCurveType, gml:GeodesicStringType, gml:GeodesicType, gml:LineStringSegmentType, gml:LineStringType, gml:LinearRingType
Attributes	

QName	Type	Use	
count	positiveInteger	optional	
srsDimension	positiveInteger	optional	
srsName	anyURI	optional	

Source	`<element name="posList" type="gml:DirectPositionListType"/>`

Element `gml:AbstractGeometricPrimitive`

Namespace	http://www.opengis.net/gml/3.2
Annotations	`The AbstractGeometricPrimitive element is the abstract head of the substitution group for all (pre- and user-defined) geometric primitives.`

Diagram

gml:AbstractGeometricPrimitiveType
gml:AbstractGeometryType (extension base)
gml:AbstractGMLType (extension base)
Attributes
gml:id
The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory...
Attributes
gml:SRSReferenceGroup
The attribute group SRSReferenceGroup is an optional reference to the CRS used by this geometry, with optional...
All geometry elements are derived directly or indirectly from this abstract supertype. A geometry element may have an...
gml:AbstractGeometricPrimitiveType is the abstract root type of the geometric primitives. A geometric primitive is a...
Substitutions
AbstractCurve
The AbstractCurve element is the abstract head of the substitution group for all (continuous) curve elements.
AbstractSurface
The AbstractSurface element is the abstract head of the substitution group for all (continuous) surface elements.
Point
Point
A Point is defined by a single coordinate tuple. The direct position of a point is specified by the pos element which...
AbstractGeometricPrimitive
The AbstractGeometricPrimitive element is the abstract head of the substitution group for all (pre- and user-defined)...
Substitution Group
AbstractGeometry
The AbstractGeometry element is the abstract head of the substitution group for all geometry elements of GML. This...

Type	gml:AbstractGeometricPrimitiveType

Type hierarchy	• gml:AbstractGMLType
	  • gml:AbstractGeometryType
	  • gml:AbstractGeometricPrimitiveType

Properties	content: `complex` abstract: `true`
Substitution Group	• gml:Point • gml:AbstractCurve • gml:LineString • gml:AbstractSurface • gml:Polygon • gml:Curve • gml:OrientableCurve • gml:Surface • gml:CompositeCurve • Point • Curve • OrientableCurve • Surface • Polygon
Substitution Group Affiliation	• gml:AbstractGeometry
Used by	Complex Type gml:GeometricPrimitivePropertyType

Attributes

QName	Type	Use	
gml:id	ID	required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		
srsDimension	positiveInteger	optional	
srsName	anyURI	optional	

Source

```
<element name="AbstractGeometricPrimitive" type="gml:AbstractGeometricPrimitiveType" abstract="true"
 substitutionGroup="gml:AbstractGeometry">
  <annotation>
    <documentation>The AbstractGeometricPrimitive element is the abstract head of the substitution
 group for all (pre- and user-defined) geometric primitives.</documentation>
  </annotation>
</element>
```

Element `gml:pointProperty`

Namespace	http://www.opengis.net/gml/3.2
Annotations	This property element either references a point via the XLink-attributes or contains the point element. pointProperty is the predefined property which may be used by GML Application Schemas whenever a GML feature has a property with a value that is substitutable for Point.

Diagram

Type: gml:PointPropertyType

Properties

content:	`complex`

Used by

Element Group	gml:geometricPositionGroup
Complex Types	S100_ArcByCenterPointType, S100_CircleByCenterPointType, S100_GM_CurveType, S100_GM_PolynomialSplineType, S100_GM_SplineCurveType, gml:LineStringSegmentType, gml:LineStringType, gml:LinearRingType
Element	VectorType/origin

Model: gml:Point

Children: gml:Point

Instance

```
<gml:pointProperty xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:sh
www.opengis.net/gml/3.2">
  <gml:Point gml:id="" srsDimension="" srsName="">{1,1}</gml:Point>
</gml:pointProperty>
```

Attributes

QName	Type	Fixed	Default	Use	
nilReason	gml:NilReasonType			optional	
owns	boolean		false	optional	
xlink:actuate	xlink:actuateType			optional	
xlink:arcrole	xlink:arcroleType			optional	
xlink:href	xlink:hrefType			optional	
xlink:role	xlink:roleType			optional	
xlink:show	xlink:showType			optional	
xlink:title	xlink:titleAttrType			optional	
xlink:type	xlink:typeType	simple		optional	

Source

```
<element name="pointProperty" type="gml:PointPropertyType">
  <annotation>
```

```
    <documentation>This property element either references a point via the XLink-attributes or
 contains the point element. pointProperty is the predefined property which may be used by GML
 Application Schemas whenever a GML feature has a property with a value that is substitutable for
 Point.</documentation>
  </annotation>
</element>
```

Element `gml:LineString`

Namespace	http://www.opengis.net/gml/3.2
Annotations	A LineString is a special curve that consists of a single segment with linear interpolation. It is defined by two or more coordinate tuples, with linear interpolation between them. The number of direct positions in the list shall be at least two.
Diagram	
Type	gml:LineStringType

Type hierarchy	• gml:AbstractGMLType • gml:AbstractGeometryType • gml:AbstractGeometricPrimitiveType • gml:AbstractCurveType • gml:LineStringType
Properties	content: complex
Substitution Group Affiliation	• gml:AbstractCurve
Model	(gml:pos | gml:pointProperty | gml:posList)
Children	gml:pointProperty, gml:pos, gml:posList

Instance	`<gml:LineString gml:id="" srsDimension="" srsName="" xmlns:gml="http://www.opengis.net/gml/3.2">`
	`  <gml:pos srsDimension="" srsName="">{1,1}</gml:pos>`
	`  <gml:pointProperty xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink`
	`gml:pointProperty>`
	`  <gml:posList count="" srsDimension="" srsName="">{1,1}</gml:posList>`
	`</gml:LineString>`

Attributes

QName	Type	Use	
gml:id	ID	required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		
srsDimension	positiveInteger	optional	
srsName	anyURI	optional	

Source

```
<element name="LineString" type="gml:LineStringType" substitutionGroup="gml:AbstractCurve">
  <annotation>
    <documentation>A LineString is a special curve that consists of a single segment with linear
 interpolation. It is defined by two or more coordinate tuples, with linear interpolation between
 them. The number of direct positions in the list shall be at least two.</documentation>
  </annotation>
</element>
```

Element `gml:Polygon`

Namespace	http://www.opengis.net/gml/3.2
Annotations	A Polygon is a special surface that is defined by a single surface patch (see D.3.6). The boundary of this patch is coplanar and the polygon uses planar interpolation in its interior. The elements exterior and interior describe the surface boundary of the polygon.

Diagram

gml:PolygonType
gml:AbstractSurfaceType (extension base)
gml:AbstractGeometricPrimitiveType (extension base)
gml:AbstractGeometryType (extension base)
gml:AbstractGMLType (extension base)
Attributes
gml:id
The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory...
Attributes
gml:SRSReferenceGroup
The attribute group SRSReferenceGroup is an optional reference to the CRS used by this geometry, with optional...
All geometry elements are derived directly or indirectly from this abstract supertype. A geometry element may have an...
gml:AbstractGeometricPrimitiveType is the abstract root type of the geometric primitives. A geometric primitive is a...
gml:AbstractSurfaceType is an abstraction of a surface to support the different levels of complexity. A surface is...
Polygon
A Polygon is a special surface that is defined by a single surface patch (see D.3.6). The boundary of this patch is...
gml:exterior
A boundary of a surface consists of a number of rings. In the normal 2D case, one of these rings is distinguished as...
0..∞
gml:interior
A boundary of a surface consists of a number of rings. The "interior" rings separate the surface / surface patch from...
Substitutions
Polygon
S100 version of polygon type
Substitution Group
AbstractSurface
The AbstractSurface element is the abstract head of the substitution group for all (continuous) surface elements.

Type	gml:PolygonType
Type hierarchy	• gml:AbstractGMLType • gml:AbstractGeometryType • gml:AbstractGeometricPrimitiveType • gml:AbstractSurfaceType • gml:PolygonType
Properties	content: complex
Substitution Group	• Polygon
Substitution Group Affiliation	• gml:AbstractSurface
Model	gml:exterior{0,1} , gml:interior*
Children	gml:exterior, gml:interior

Instance	`<gml:Polygon gml:id="" srsDimension="" srsName="" xmlns:gml="http://www.opengis.net/gml/3.2">`
	`  <gml:exterior>{0,1}</gml:exterior>`
	`  <gml:interior>{0,unbounded}</gml:interior>`
	`</gml:Polygon>`

Attributes	**QName** / **Type** / **Use** **gml:id** / ID / required The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs. **srsDimension** / positiveInteger / optional **srsName** / anyURI / optional

Source	`<element name="Polygon" type="gml:PolygonType" substitutionGroup="gml:AbstractSurface">`
	`  <annotation>`
	`  <documentation>A Polygon is a special surface that is defined by a single surface patch (see D.3.6). The boundary of this patch is coplanar and the polygon uses planar interpolation in its interior. The elements exterior and interior describe the surface boundary of the polygon.</documentation>`
	`  </annotation>`
	`</element>`

Element gml:LinearRing

Namespace	http://www.opengis.net/gml/3.2
Annotations	A LinearRing is defined by four or more coordinate tuples, with linear interpolation between them; the first and last coordinates shall be coincident. The number of direct positions in the list shall be at least four.

Diagram	
Type	gml:LinearRingType
Type hierarchy	• gml:AbstractRingType • gml:LinearRingType
Properties	content: complex
Substitution Group Affiliation	• gml:AbstractRing
Used by	Complex Type gml:LinearRingPropertyType
Model	(gml:pos | gml:pointProperty | gml:posList)
Children	gml:pointProperty, gml:pos, gml:posList

Instance	`<gml:LinearRing xmlns:gml="http://www.opengis.net/gml/3.2">`
	`  <gml:pos srsDimension="" srsName="">{1,1}</gml:pos>`
	`  <gml:pointProperty xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink`
	`gml:pointProperty>`
	`  <gml:posList count="" srsDimension="" srsName="">{1,1}</gml:posList>`
	`</gml:LinearRing>`

Source	`<element name="LinearRing" type="gml:LinearRingType" substitutionGroup="gml:AbstractRing">`
	`  <annotation>`
	`  <documentation>A LinearRing is defined by four or more coordinate tuples, with linear`
	` interpolation between them; the first and last coordinates shall be coincident. The number of`
	` direct positions in the list shall be at least four.</documentation>`
	`  </annotation>`
	`</element>`

Element `gml:Curve`

Namespace	http://www.opengis.net/gml/3.2
Annotations	A curve is a 1-dimensional primitive. Curves are continuous, connected, and have a measurable length in terms of the coordinate system. A curve is composed of one or more curve segments. Each curve segment within a curve may be defined using a different interpolation method. The curve segments are connected to one another, with the end point of each segment except the last being the start point of the next segment in the segment list. The orientation of the curve is positive. The element segments encapsulates the segments of the curve.

Diagram

gml:CurveType
gml:AbstractCurveType (extension base)
gml:AbstractGeometricPrimitiveType (extension base)
gml:AbstractGeometryType (extension base)
gml:AbstractGMLType (extension base)
Attributes
gml:id
The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory...
Attributes
gml:SRSReferenceGroup
The attribute group SRSReferenceGroup is an optional reference to the CRS used by this geometry, with optional...
All geometry elements are derived directly or indirectly from this abstract supertype. A geometry element may have an...
gml:AbstractGeometricPrimitiveType is the abstract root type of the geometric primitives. A geometric primitive is a...
gml:AbstractCurveType is an abstraction of a curve to support the different levels of complexity. The curve may always...
Curve
A curve is a 1-dimensional primitive. Curves are continuous, connected, and have a measurable length in terms of the...
gml:segments
This property element contains a list of curve segments. The order of the elements is significant and shall be...
Substitutions
Curve
Substitution Group
AbstractCurve
The AbstractCurve element is the abstract head of the substitution group for all (continuous) curve elements.

Type	gml:CurveType
Type hierarchy	• gml:AbstractGMLType • gml:AbstractGeometryType • gml:AbstractGeometricPrimitiveType • gml:AbstractCurveType • gml:CurveType
Properties	content: complex
Substitution Group	• Curve
Substitution Group Affiliation	• gml:AbstractCurve
Model	gml:segments
Children	gml:segments

Instance	`<gml:Curve gml:id="" srsDimension="" srsName="" xmlns:gml="http://www.opengis.net/gml/3.2">`
	`  <gml:segments>{1,1}</gml:segments>`
	`</gml:Curve>`

Attributes	**QName** / **Type** / **Use** **gml:id** / ID / required The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs. **srsDimension** / positiveInteger / optional **srsName** / anyURI / optional
Source	`<element name="Curve" type="gml:CurveType" substitutionGroup="gml:AbstractCurve">` `  <annotation>` ` <documentation>A curve is a 1-dimensional primitive. Curves are continuous, connected, and have a measurable length in terms of the coordinate system. A curve is composed of one or more curve segments. Each curve segment within a curve may be defined using a different interpolation method. The curve segments are connected to one another, with the end point of each segment except the last being the start point of the next segment in the segment list. The orientation of the curve is positive. The element segments encapsulates the segments of the curve.</documentation>` ` </annotation>` `</element>`

Element gml:OrientableCurve

Namespace	http://www.opengis.net/gml/3.2
Annotations	OrientableCurve consists of a curve and an orientation. If the orientation is "+", then the OrientableCurve is identical to the baseCurve. If the orientation is "-", then the OrientableCurve is related to another AbstractCurve with a parameterization that reverses the sense of the curve traversal.

Diagram	
Type	gml:OrientableCurveType

Type hierarchy	• gml:AbstractGMLType • gml:AbstractGeometryType • gml:AbstractGeometricPrimitiveType • gml:AbstractCurveType • gml:OrientableCurveType
Properties	content: complex
Substitution Group Affiliation	• gml:AbstractCurve
Model	gml:baseCurve
Children	gml:baseCurve

Instance	`<gml:OrientableCurve gml:id="" orientation="+" srsDimension="" srsName="" xmlns:gml="http://www.opengis.net/gml/3.2">`
	`  <gml:baseCurve xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show`
	`gml:baseCurve>`
	`</gml:OrientableCurve>`

Attributes	

QName	Type	Default	Use	
gml:id	ID		required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.			
orientation	gml:SignType	+	optional	
srsDimension	positiveInteger		optional	
srsName	anyURI		optional	

Source

```
<element name="OrientableCurve" type="gml:OrientableCurveType"
 substitutionGroup="gml:AbstractCurve">
  <annotation>
    <documentation>OrientableCurve consists of a curve and an orientation. If the orientation is
 "+", then the OrientableCurve is identical to the baseCurve. If the orientation is "-", then the
 OrientableCurve is related to another AbstractCurve with a parameterization that reverses the sense
 of the curve traversal.</documentation>
  </annotation>
</element>
```

Element gml:LineStringSegment

Namespace	http://www.opengis.net/gml/3.2
Annotations	A LineStringSegment is a curve segment that is defined by two or more control points including the start and end point, with linear interpolation between them. The content model follows the general pattern for the encoding of curve segments.

Diagram

Type: gml:LineStringSegmentType

Type hierarchy

- gml:AbstractCurveSegmentType
  - gml:LineStringSegmentType

Properties

content: `complex`

Substitution Group Affiliation

- gml:AbstractCurveSegment

Model: (gml:pos | gml:pointProperty | gml:posList)

Children: gml:pointProperty, gml:pos, gml:posList

Instance

```
<gml:LineStringSegment interpolation="linear" numDerivativeInterior="0" numDerivativesAtEnd="0" numDerivativesAtSta
www.opengis.net/gml/3.2">
  <gml:pos srsDimension="" srsName="">{1,1}</gml:pos>
  <gml:pointProperty xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink
gml:pointProperty>
  <gml:posList count="" srsDimension="" srsName="">{1,1}</gml:posList>
</gml:LineStringSegment>
```

Attributes

QName	Type	Fixed	Default	Use	
interpolation	gml:CurveInterpolationType	linear		optional	
numDerivativeInterior	integer		0	optional	
numDerivativesAtEnd	integer		0	optional	
numDerivativesAtStart	integer		0	optional	

Source

```
<element name="LineStringSegment" type="gml:LineStringSegmentType"
 substitutionGroup="gml:AbstractCurveSegment">
  <annotation>
    <documentation>A LineStringSegment is a curve segment that is defined by two or more control
 points including the start and end point, with linear interpolation between them. The content model
 follows the general pattern for the encoding of curve segments.</documentation>
  </annotation>
</element>
```

Element `gml:GeodesicString`

Namespace	http://www.opengis.net/gml/3.2
Annotations	`A sequence of geodesic segments. The number of control points shall be at least two. interpolation is fixed as "geodesic". The content model follows the general pattern for the encoding of curve segments.`
Diagram	
Type	gml:GeodesicStringType
Type hierarchy	• gml:AbstractCurveSegmentType • gml:GeodesicStringType
Properties	content: `complex`
Substitution Group	• gml:Geodesic
Substitution Group Affiliation	• gml:AbstractCurveSegment
Model	gml:posList | gml:pos | gml:pointProperty
Children	gml:pointProperty, gml:pos, gml:posList

Instance

```
<gml:GeodesicString interpolation="geodesic" numDerivativeInterior="0" numDerivativesAtEnd="0" numDerivativesAtStar
www.opengis.net/gml/3.2">
  <gml:posList count="" srsDimension="" srsName="">{1,1}</gml:posList>
  <gml:pos srsDimension="" srsName="">{1,1}</gml:pos>
  <gml:pointProperty xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink
gml:pointProperty>
</gml:GeodesicString>
```

Attributes

QName	Type	Fixed	Default	Use	
interpolation	gml:CurveInterpolationType	geodesic		optional	
numDerivativeInterior	integer		0	optional	
numDerivativesAtEnd	integer		0	optional	
numDerivativesAtStart	integer		0	optional	

Source

```
<element name="GeodesicString" type="gml:GeodesicStringType"
 substitutionGroup="gml:AbstractCurveSegment">
  <annotation>
    <documentation>A sequence of geodesic segments. The number of control points shall be at least
 two. interpolation is fixed as "geodesic". The content model follows the general pattern for the
 encoding of curve segments.</documentation>
  </annotation>
</element>
```

Element gml:Geodesic

Namespace	http://www.opengis.net/gml/3.2

Diagram	
Type	gml:GeodesicType

Type hierarchy	• gml:AbstractCurveSegmentType
	  • gml:GeodesicStringType
	  • gml:GeodesicType

Properties	content: complex
Substitution Group Affiliation	• gml:GeodesicString
Model	gml:posList | gml:pos | gml:pointProperty
Children	gml:pointProperty, gml:pos, gml:posList
Instance	<gml:Geodesic interpolation="geodesic" numDerivativeInterior="0" numDerivativesAtEnd="0" numDerivativesAtStart="0" www.opengis.net/gml/3.2"> <gml:posList count="" srsDimension="" srsName="">{1,1}</gml:posList> <gml:pos srsDimension="" srsName="">{1,1}</gml:pos> <gml:pointProperty xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink gml:pointProperty> </gml:Geodesic>

Attributes	**QName**	**Type**	**Fixed**	**Default**	**Use**	
	interpolation	gml:CurveInterpolationType	geodesic		optional	
	numDerivativeInterior	integer		0	optional	
	numDerivativesAtEnd	integer		0	optional	
	numDerivativesAtStart	integer		0	optional	
Source	`<element name="Geodesic" type="gml:GeodesicType" substitutionGroup="gml:GeodesicString"/>`					

Element `gml:Surface`

Namespace	http://www.opengis.net/gml/3.2
Annotations	`A Surface is a 2-dimensional primitive and is composed of one or more surface patches as specified in ISO 19107:2003, 6.3.17.1. The surface patches are connected to one another. patches encapsulates the patches of the surface.`

Diagram

gml:SurfaceType
gml:AbstractSurfaceType (extension base)
gml:AbstractGeometricPrimitiveType (extension base)
gml:AbstractGeometryType (extension base)
gml:AbstractGMLType (extension base)
Attributes
gml:id
The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory...
Attributes
gml:SRSReferenceGroup
The attribute group SRSReferenceGroup is an optional reference to the CRS used by this geometry, with optional...
All geometry elements are derived directly or indirectly from this abstract supertype. A geometry element may have an...
gml:AbstractGeometricPrimitiveType is the abstract root type of the geometric primitives. A geometric primitive is a...
Surface
A Surface is a 2-dimensional primitive and is composed of one or more surface patches as specified in ISO 19107:2003,...
gml:AbstractSurfaceType is an abstraction of a surface to support the different levels of complexity. A surface is...
gml:patches
The patches property element contains the sequence of surface patches. The order of the elements is significant and...
Substitutions
Surface
Substitution Group
AbstractSurface
The AbstractSurface element is the abstract head of the substitution group for all (continuous) surface elements.

Type	gml:SurfaceType
Type hierarchy	• gml:AbstractGMLType • gml:AbstractGeometryType • gml:AbstractGeometricPrimitiveType • gml:AbstractSurfaceType • gml:SurfaceType
Properties	content: complex
Substitution Group	• Surface
Substitution Group Affiliation	• gml:AbstractSurface
Model	gml:patches
Children	gml:patches

Instance	`<gml:Surface gml:id="" srsDimension="" srsName="" xmlns:gml="http://www.opengis.net/gml/3.2">`
	`  <gml:patches>{1,1}</gml:patches>`
	`</gml:Surface>`

Attributes	**QName** / **Type** / **Use** **gml:id** / ID / required The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs. **srsDimension** / positiveInteger / optional **srsName** / anyURI / optional

Source	`<element name="Surface" type="gml:SurfaceType" substitutionGroup="gml:AbstractSurface">`
	`  <annotation>`
	`  <documentation>A Surface is a 2-dimensional primitive and is composed of one or more surface patches as specified in ISO 19107:2003, 6.3.17.1. The surface patches are connected to one another. patches encapsulates the patches of the surface.</documentation>`
	`  </annotation>`
	`</element>`

Element gml:PolygonPatch

Namespace	http://www.opengis.net/gml/3.2
Annotations	A gml:PolygonPatch is a surface patch that is defined by a set of boundary curves and an underlying surface to which these curves adhere. The curves shall be coplanar and the polygon uses planar interpolation in its interior. interpolation is fixed to "planar", i.e. an interpolation shall return points on a single plane. The boundary of the patch shall be contained within that plane.

Diagram	
Type	gml:PolygonPatchType
Type hierarchy	• gml:AbstractSurfacePatchType • gml:PolygonPatchType
Properties	content: `complex`
Substitution Group Affiliation	• gml:AbstractSurfacePatch
Model	gml:exterior{0,1} , gml:interior*
Children	gml:exterior, gml:interior

Instance	`<gml:PolygonPatch interpolation="planar" xmlns:gml="http://www.opengis.net/gml/3.2">`
	`  <gml:exterior>{0,1}</gml:exterior>`
	`  <gml:interior>{0,unbounded}</gml:interior>`
	`</gml:PolygonPatch>`

Attributes	**QName** / **Type** / **Fixed** / **Use** **interpolation** / gml:SurfaceInterpolationType / planar / optional
Source	`<element name="PolygonPatch" type="gml:PolygonPatchType" substitutionGroup="gml:AbstractSurfacePatch">` `  <annotation>` ` <documentation>A gml:PolygonPatch is a surface patch that is defined by a set of boundary curves and an underlying surface to which these curves adhere. The curves shall be coplanar and the polygon uses planar interpolation in its interior. interpolation is fixed to "planar", i.e. an interpolation shall return points on a single plane. The boundary of the patch shall be contained within that plane.</documentation>` ` </annotation>` `</element>`

Element gml:Ring

Namespace	http://www.opengis.net/gml/3.2
Annotations	A ring is used to represent a single connected component of a surface boundary as specified in ISO 19107:2003, 6.3.6. Every gml:curveMember references or contains one curve, i.e. any element which is substitutable for gml:AbstractCurve. In the context of a ring, the curves describe the boundary of the surface. The sequence of curves shall be contiguous and connected in a cycle. If provided, the aggregationType attribute shall have the value "sequence".
Diagram	
Type	gml:RingType
Type hierarchy	• gml:AbstractRingType • gml:RingType
Properties	content: complex
Substitution Group Affiliation	• gml:AbstractRing
Model	gml:curveMember+
Children	gml:curveMember
Instance	<gml:Ring aggregationType="" xmlns:gml="http://www.opengis.net/gml/3.2"> <gml:curveMember xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:sh gml:curveMember> </gml:Ring>
Attributes	**QName** / **Type** / **Use** **aggregationType** / gml:AggregationType / optional
Source	<element name="Ring" type="gml:RingType" substitutionGroup="gml:AbstractRing"> <annotation>

```
    <documentation>A ring is used to represent a single connected component of a surface boundary
 as specified in ISO 19107:2003, 6.3.6. Every gml:curveMember references or contains one curve,
 i.e. any element which is substitutable for gml:AbstractCurve. In the context of a ring, the curves
 describe the boundary of the surface. The sequence of curves shall be contiguous and connected in a
 cycle. If provided, the aggregationType attribute shall have the value "sequence".</documentation>
  </annotation>
</element>
```

Element `gml:CompositeCurve`

Namespace	http://www.opengis.net/gml/3.2
Annotations	`A gml:CompositeCurve is represented by a sequence of (orientable) curves such that each curve in the sequence terminates at the start point of the subsequent curve in the list. curveMember references or contains inline one curve in the composite curve. The curves are contiguous, the collection of curves is ordered. Therefore, if provided, the aggregationType attribute shall have the value "sequence".`

Diagram	
Type	gml:CompositeCurveType

Type hierarchy	• gml:AbstractGMLType • gml:AbstractGeometryType • gml:AbstractGeometricPrimitiveType • gml:AbstractCurveType • gml:CompositeCurveType
Properties	content: complex
Substitution Group Affiliation	• gml:AbstractCurve
Model	gml:curveMember+
Children	gml:curveMember

Instance	`<gml:CompositeCurve aggregationType="" gml:id="" srsDimension="" srsName="" xmlns:gml="http://www.opengis.net/gml/3.2">`
	`  <gml:curveMember xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:sh`
	`gml:curveMember>`
	`</gml:CompositeCurve>`

Attributes

QName	Type	Use	
aggregationType	gml:AggregationType	optional	
gml:id	ID	required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		
srsDimension	positiveInteger	optional	
srsName	anyURI	optional	

Source

```
<element name="CompositeCurve" type="gml:CompositeCurveType" substitutionGroup="gml:AbstractCurve">
  <annotation>
    <documentation>A gml:CompositeCurve is represented by a sequence of (orientable) curves such
 that each curve in the sequence terminates at the start point of the subsequent curve in the
 list. curveMember references or contains inline one curve in the composite curve. The curves
 are contiguous, the collection of curves is ordered. Therefore, if provided, the aggregationType
 attribute shall have the value "sequence".</documentation>
  </annotation>
</element>
```

Element gml:AbstractGeometricAggregate

Namespace	http://www.opengis.net/gml/3.2
Annotations	gml:AbstractGeometricAggregate is the abstract head of the substitution group for all geometric aggregates.

Diagram	
Type	gml:AbstractGeometricAggregateType

Type hierarchy	• gml:AbstractGMLType
	  • gml:AbstractGeometryType
	  • gml:AbstractGeometricAggregateType

Properties	content:	complex		
	abstract:	true		
Substitution Group	• gml:MultiPoint • MultiPoint			
Substitution Group Affiliation	• gml:AbstractGeometry			
Attributes	**QName**	**Type**	**Use**	
	aggregationType	gml:AggregationType	optional	
	gml:id	ID	required	
		The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		
	srsDimension	positiveInteger	optional	
	srsName	anyURI	optional	
Source	<element name="AbstractGeometricAggregate" type="gml:AbstractGeometricAggregateType" abstract="true" substitutionGroup="gml:AbstractGeometry"> <annotation> <documentation>gml:AbstractGeometricAggregate is the abstract head of the substitution group for all geometric aggregates.</documentation> </annotation> </element>			

Element gml:MultiPoint

Namespace	http://www.opengis.net/gml/3.2
Annotations	A gml:MultiPoint consists of one or more gml:Points. The members of the geometric aggregate may be specified either using the "standard" property (gml:pointMember) or the array property (gml:pointMembers). It is also valid to use both the "standard" and the array properties in the same collection.

Diagram	
Type	gml:MultiPointType

Type hierarchy	• gml:AbstractGMLType • gml:AbstractGeometryType • gml:AbstractGeometricAggregateType • gml:MultiPointType
Properties	content: complex
Substitution Group Affiliation	• gml:AbstractGeometricAggregate
Model	gml:pointMember*
Children	gml:pointMember

Instance	`<gml:MultiPoint aggregationType="" gml:id="" srsDimension="" srsName="" xmlns:gml="http://www.opengis.net/gml/3.2">`
	`  <gml:pointMember xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:sh`
	`gml:pointMember>`
	`</gml:MultiPoint>`

Attributes

QName	Type	Use	
aggregationType	gml:AggregationType	optional	
gml:id	ID	required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		
srsDimension	positiveInteger	optional	
srsName	anyURI	optional	

Source

```
<element name="MultiPoint" type="gml:MultiPointType"
 substitutionGroup="gml:AbstractGeometricAggregate">
  <annotation>
    <documentation>A gml:MultiPoint consists of one or more gml:Points. The members of the geometric
 aggregate may be specified either using the "standard" property (gml:pointMember) or the array
 property (gml:pointMembers). It is also valid to use both the "standard" and the array properties
 in the same collection.</documentation>
  </annotation>
</element>
```

Element gml:AbstractValue

Namespace	http://www.opengis.net/gml/3.2
Annotations	gml:AbstractValue is an abstract element which acts as the head of a substitution group which contains gml:AbstractScalarValue, gml:AbstractScalarValueList, gml:CompositeValue and gml:ValueExtent, and (transitively) the elements in their substitution groups. These elements may be used in an application schema as variables, so that in an XML instance document any member of its substitution group may occur.

Diagram	
Properties	abstract: `true`
Substitution Group	• gml:AbstractScalarValue • gml:Boolean
Substitution Group Affiliation	• gml:AbstractObject
Source	`<element name="AbstractValue" type="anyType" abstract="true" substitutionGroup="gml:AbstractObject">` `  <annotation>` ` <documentation>gml:AbstractValue is an abstract element which acts as the head of a substitution group which contains gml:AbstractScalarValue, gml:AbstractScalarValueList, gml:CompositeValue and gml:ValueExtent, and (transitively) the elements in their substitution groups. These elements may be used in an application schema as variables, so that in an XML instance document any member of its substitution group may occur.</documentation>` ` </annotation>` `</element>`

Element `gml:AbstractScalarValue`

Namespace	http://www.opengis.net/gml/3.2
Annotations	`gml:AbstractScalarValue is an abstract element which acts as the head of a substitution group which contains gml:Boolean, gml:Category, gml:Count and gml:Quantity, and (transitively) the elements in their substitution groups.`

Diagram	
Properties	abstract: `true`
Substitution Group	• gml:Boolean
Substitution Group Affiliation	• gml:AbstractValue

Source	`<element name="AbstractScalarValue" type="anyType" abstract="true" substitutionGroup="gml:AbstractValue">`
	`<annotation>`
	`<documentation>gml:AbstractScalarValue is an abstract element which acts as the head of a substitution group which contains gml:Boolean, gml:Category, gml:Count and gml:Quantity, and (transitively) the elements in their substitution groups.</documentation>`
	`</annotation>`
	`</element>`

Element `gml:Boolean`

Namespace	http://www.opengis.net/gml/3.2

Diagram	
Type	extension of boolean
Properties	content: `complex` nillable: `true`
Substitution Group Affiliation	• gml:AbstractScalarValue
Attributes	**QName** / **Type** / **Use** **nilReason** / gml:NilReasonType / optional

Source	`<element name="Boolean" substitutionGroup="gml:AbstractScalarValue" nillable="true">`
	`  <complexType>`
	`  <simpleContent>`
	`  <extension base="boolean">`
	`  <attribute name="nilReason" type="gml:NilReasonType"/>`
	`  </extension>`
	`  </simpleContent>`
	`  </complexType>`
	`</element>`

Element `gml:measure`

Namespace	http://www.opengis.net/gml/3.2
Annotations	`The value of a physical quantity, together with its unit.`

Diagram	
Type	gml:MeasureType
Properties	content: complex
Attributes	**QName** / **Type** / **Use** **uom** / gml:UomIdentifier / required

Source	`<element name="measure" type="gml:MeasureType">`
	`  <annotation>`
	`  <documentation>The value of a physical quantity, together with its unit.</documentation>`
	`  </annotation>`
	`</element>`

Element `gml:angle`

Namespace	http://www.opengis.net/gml/3.2
Annotations	The gml:angle property element is used to record the value of an angle quantity as a single number, with its units.
Diagram	
Type	gml:AngleType

Type hierarchy	• double • gml:MeasureType • gml:AngleType
Properties	content: `complex`
Attributes	**QName** / **Type** / **Use** **uom** / gml:UomIdentifier / required

Source	`<element name="angle" type="gml:AngleType">`
	`  <annotation>`
	`  <documentation>The gml:angle property element is used to record the value of an angle quantity as a single number, with its units.</documentation>`
	`  </annotation>`
	`</element>`

Complex Type(s)

Complex Type `gml:AbstractFeatureType`

Namespace	http://www.opengis.net/gml/3.2
Annotations	The basic feature model is given by the gml:AbstractFeatureType. The content model for gml:AbstractFeatureType adds two specific properties suitable for geographic features to the content model defined in gml:AbstractGMLType. The value of the gml:boundedBy property describes an envelope that encloses the entire feature instance, and is primarily useful for supporting rapid searching for features that occur in a particular location. The value of the gml:location property describes the extent, position or relative location of the feature.
Diagram	
Type	extension of gml:AbstractGMLType
Type hierarchy	• gml:AbstractGMLType • gml:AbstractFeatureType
Properties	abstract: `true`
Used by	Complex Types: AbstractFeatureType, abstractFeature Element: gml:AbstractFeature
Model	gml:boundedBy{0,1}
Children	gml:boundedBy
Attributes	**QName** / **Type** / **Use** **gml:id** / ID / required The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.

Source

```
<complexType name="AbstractFeatureType" abstract="true">
  <annotation>
    <documentation>The basic feature model is given by the gml:AbstractFeatureType. The content
 model for gml:AbstractFeatureType adds two specific properties suitable for geographic features to
 the content model defined in gml:AbstractGMLType. The value of the gml:boundedBy property describes
 an envelope that encloses the entire feature instance, and is primarily useful for supporting rapid
 searching for features that occur in a particular location. The value of the gml:location property
 describes the extent, position or relative location of the feature.</documentation>
  </annotation>
  <complexContent>
    <extension base="gml:AbstractGMLType">
      <sequence>
        <element ref="gml:boundedBy" minOccurs="0"/>
      </sequence>
    </extension>
  </complexContent>
</complexType>
```

Complex Type `gml:AbstractGMLType`

Namespace	http://www.opengis.net/gml/3.2
Diagram	
Properties	abstract: `true`
Used by	Complex Types: AbstractAttributeType, AbstractInformationType, gml:AbstractFeatureType, gml:AbstractGeometryType Element: gml:AbstractGML
Attributes	**QName**: **gml:id**; **Type**: ID; **Use**: required The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.

Source	`<complexType name="AbstractGMLType" abstract="true">`
	`  <attribute ref="gml:id" use="required"/>`
	`</complexType>`

Complex Type `gml:BoundingShapeType`

Namespace	http://www.opengis.net/gml/3.2
Diagram	
Used by	Element: gml:boundedBy
Model	(gml:Envelope)
Children	gml:Envelope

Attributes	**QName**	**Type**	**Use**	
	nilReason	gml:NilReasonType	optional	

Source

```
<complexType name="BoundingShapeType">
  <sequence>
    <choice>
      <element ref="gml:Envelope"/>
    </choice>
  </sequence>
  <attribute name="nilReason" type="gml:NilReasonType"/>
</complexType>
```

Complex Type `gml:EnvelopeType`

Namespace	http://www.opengis.net/gml/3.2
Diagram	
Used by	Element gml:Envelope
Model	gml:lowerCorner , gml:upperCorner
Children	gml:lowerCorner, gml:upperCorner

Attributes	**QName**	**Type**	**Use**	
	srsDimension	positiveInteger	optional	
	srsName	anyURI	optional	

Source

```
<complexType name="EnvelopeType">
  <sequence>
    <element name="lowerCorner" type="gml:DirectPositionType"/>
    <element name="upperCorner" type="gml:DirectPositionType"/>
  </sequence>
  <attributeGroup ref="gml:SRSReferenceGroup"/>
  <!-- EnvelopeType has been limited to allow the encoding of the bounding coordinates using lower
 and upper corner coordinates only -->
</complexType>
```

Complex Type `gml:DirectPositionType`

Namespace	http://www.opengis.net/gml/3.2
Annotations	Direct position instances hold the coordinates for a position within some coordinate reference system (CRS). Since direct positions, as data types, will often be included in larger objects (such as geometry elements) that have references to CRS, the srsName attribute will in general be missing, if this particular direct position is included in a larger element with such a reference to a CRS. In this case, the CRS is implicitly assumed to take on the value of the containing object's CRS. if no srsName attribute is given, the CRS shall be specified as part of the larger context this geometry element is part of, typically a geometric object like a point, curve, etc.

Diagram	
Type	extension of gml:doubleList
Type hierarchy	• anySimpleType • gml:doubleList • gml:DirectPositionType
Used by	Elements gml:EnvelopeType/gml:lowerCorner, gml:EnvelopeType/gml:upperCorner, gml:pos

Attributes	QName	Type	Use
	srsDimension	positiveInteger	optional
	srsName	anyURI	optional

Source

```
<complexType name="DirectPositionType">
  <annotation>
    <documentation>Direct position instances hold the coordinates for a position within some
 coordinate reference system (CRS). Since direct positions, as data types, will often be included
 in larger objects (such as geometry elements) that have references to CRS, the srsName attribute
 will in general be missing, if this particular direct position is included in a larger element with
 such a reference to a CRS. In this case, the CRS is implicitly assumed to take on the value of the
 containing object's CRS. if no srsName attribute is given, the CRS shall be specified as part of
 the larger context this geometry element is part of, typically a geometric object like a point,
 curve, etc.</documentation>
  </annotation>
  <simpleContent>
    <extension base="gml:doubleList">
      <attributeGroup ref="gml:SRSReferenceGroup"/>
    </extension>
  </simpleContent>
</complexType>
```

Complex Type `gml:ReferenceType`

Namespace	http://www.opengis.net/gml/3.2
Annotations	`gml:ReferenceType is intended to be used in application schemas directly, if a property element shall use a "by-reference only" encoding.`

Diagram

Used by

Elements: additionalSpatialInformationType/identifies, bauType/administrationOf, bauType/party, bauType/responsibility, bauType/restriction, bauType/right, geographicFeatureType/administration, geographicFeatureType/componentOf, geographicFeatureType/consistsOf, geographicFeatureType/referSTo, geographicFeatureType/source, gml:abstractReference, governanceType/governanceFor, governanceType/governanceOf, informationType/componentOf, informationType/consistsOf, informationType/source, partyMemberType/group, partyMemberType/member, partyType/group, partyType/member, partyType/rrr, responsibilityType/responsibilityFor, restrictionType/restrictionFor, rightType/rightFor, sourceType/sourceOf

Model

Attributes

QName	Type	Fixed	Default	Use	
nilReason	gml:NilReasonType			optional	
owns	boolean		false	optional	
xlink:actuate	xlink:actuateType			optional	
xlink:arcrole	xlink:arcroleType			optional	
xlink:href	xlink:hrefType			optional	
xlink:role	xlink:roleType			optional	
xlink:show	xlink:showType			optional	
xlink:title	xlink:titleAttrType			optional	
xlink:type	xlink:typeType	simple		optional	

Source

```
<complexType name="ReferenceType">
  <annotation>
    <documentation>gml:ReferenceType is intended to be used in application schemas directly, if a
 property element shall use a "by-reference only" encoding.</documentation>
  </annotation>
  <sequence/>
  <attributeGroup ref="gml:OwnershipAttributeGroup"/>
  <attributeGroup ref="gml:AssociationAttributeGroup"/>
</complexType>
```

Complex Type `gml:PointPropertyType`

Namespace: http://www.opengis.net/gml/3.2

Annotations

```
A property that has a point as its value domain may either be an
appropriate geometry element encapsulated in an element of this type or an XLink
reference to a remote geometry element (where remote includes geometry elements
located elsewhere in the same document). Either the reference or the contained
element shall be given, but neither both nor none.
```

Diagram

Used by	Elements gml:pointMember, gml:pointProperty, locationType/geometry
Model	gml:Point
Children	gml:Point

Attributes

QName	Type	Fixed	Default	Use	
nilReason	gml:NilReasonType			optional	
owns	boolean		false	optional	
xlink:actuate	xlink:actuateType			optional	
xlink:arcrole	xlink:arcroleType			optional	
xlink:href	xlink:hrefType			optional	
xlink:role	xlink:roleType			optional	
xlink:show	xlink:showType			optional	
xlink:title	xlink:titleAttrType			optional	
xlink:type	xlink:typeType	simple		optional	

Source

```
<complexType name="PointPropertyType">
  <annotation>
    <documentation>A property that has a point as its value domain may either be an appropriate
 geometry element encapsulated in an element of this type or an XLink reference to a remote geometry
 element (where remote includes geometry elements located elsewhere in the same document). Either
 the reference or the contained element shall be given, but neither both nor none.</documentation>
  </annotation>
  <sequence minOccurs="0">
    <element ref="gml:Point"/>
  </sequence>
  <attributeGroup ref="gml:AssociationAttributeGroup"/>
  <attributeGroup ref="gml:OwnershipAttributeGroup"/>
</complexType>
```

Complex Type `gml:PointType`

Namespace	http://www.opengis.net/gml/3.2
Annotations	S-100 XML supports two different ways to specify the direct positon of a point. 1. The "pos" element is of type DirectPositionType.

Diagram

Type	extension of gml:AbstractGeometricPrimitiveType

Type hierarchy	• gml:AbstractGMLType
	  • gml:AbstractGeometryType
	  • gml:AbstractGeometricPrimitiveType
	  • gml:PointType

Used by	Element: gml:Point Complex Type: PointType
Model	gml:pos
Children	gml:pos

Attributes

QName	Type	Use	
gml:id	ID	required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		
srsDimension	positiveInteger	optional	
srsName	anyURI	optional	

Source

```
<complexType name="PointType">
  <annotation>
```

```
    <documentation>S-100 XML supports two different ways to specify the direct positon of a point.
 1. The "pos" element is of type DirectPositionType.</documentation>
  </annotation>
  <complexContent>
    <extension base="gml:AbstractGeometricPrimitiveType">
      <sequence>
        <element ref="gml:pos"/>
      </sequence>
    </extension>
  </complexContent>
  <!-- The PointType has been limited to gml:pos. gml:coordinates has been removed as it is
 deprecated -->
</complexType>
```

Complex Type `gml:AbstractGeometricPrimitiveType`

Namespace	http://www.opengis.net/gml/3.2
Annotations	`gml:AbstractGeometricPrimitiveType is the abstract root type of the geometric primitives. A geometric primitive is a geometric object that is not decomposed further into other primitives in the system. All primitives are oriented in the direction implied by the sequence of their coordinate tuples.`
Diagram	
Type	extension of gml:AbstractGeometryType

Type hierarchy	• gml:AbstractGMLType
	  • gml:AbstractGeometryType
	  • gml:AbstractGeometricPrimitiveType

Properties	abstract: `true`
Used by	Complex Types: gml:AbstractCurveType, gml:AbstractSurfaceType, gml:PointType Element: gml:AbstractGeometricPrimitive

Attributes

QName	Type	Use	
gml:id	ID	required	
	`The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.`		
srsDimension	positiveInteger	optional	

	QName	Type	Use	
	srsName	anyURI	optional	

Source

```
<complexType name="AbstractGeometricPrimitiveType" abstract="true">
  <annotation>
    <documentation>gml:AbstractGeometricPrimitiveType is the abstract root type of the geometric
 primitives. A geometric primitive is a geometric object that is not decomposed further into other
 primitives in the system. All primitives are oriented in the direction implied by the sequence of
 their coordinate tuples.</documentation>
  </annotation>
  <complexContent>
    <extension base="gml:AbstractGeometryType"/>
  </complexContent>
</complexType>
```

Complex Type `gml:AbstractGeometryType`

Namespace	http://www.opengis.net/gml/3.2
Annotations	`All geometry elements are derived directly or indirectly from this abstract supertype. A geometry element may have an identifying attribute (gml:id), one or more names (elements identifier and name) and a description (elements description and descriptionReference) . It may be associated with a spatial reference system (attribute group gml:SRSReferenceGroup). The following rules shall be adhered to: - Every geometry type shall derive from this abstract type. - Every geometry element (i.e. an element of a geometry type) shall be directly or indirectly in the substitution group of AbstractGeometry.`
Diagram	
Type	extension of gml:AbstractGMLType
Type hierarchy	• gml:AbstractGMLType • gml:AbstractGeometryType
Properties	abstract: `true`
Used by	Complex Types: gml:AbstractGeometricAggregateType, gml:AbstractGeometricPrimitiveType Element: gml:AbstractGeometry

Attributes

QName	Type	Use	
gml:id	ID	required	
	`The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.`		
srsDimension	positiveInteger	optional	

	QName	Type	Use	
	srsName	anyURI	optional	

Source

```
<complexType name="AbstractGeometryType" abstract="true">
  <annotation>
    <documentation>All geometry elements are derived directly or indirectly from this abstract
 supertype. A geometry element may have an identifying attribute (gml:id), one or more names
 (elements identifier and name) and a description (elements description and descriptionReference) .
 It may be associated with a spatial reference system (attribute group gml:SRSReferenceGroup). The
 following rules shall be adhered to: - Every geometry type shall derive from this abstract type. -
 Every geometry element (i.e. an element of a geometry type) shall be directly or indirectly in the
 substitution group of AbstractGeometry.</documentation>
  </annotation>
  <complexContent>
    <extension base="gml:AbstractGMLType">
      <attributeGroup ref="gml:SRSReferenceGroup"/>
    </extension>
  </complexContent>
</complexType>
```

Complex Type `gml:CurvePropertyType`

Namespace	http://www.opengis.net/gml/3.2
Annotations	A property that has a curve as its value domain may either be an appropriate geometry element encapsulated in an element of this type or an XLink reference to a remote geometry element (where remote includes geometry elements located elsewhere in the same document). Either the reference or the contained element shall be given, but neither both nor none.

Diagram

Used by	Elements gml:baseCurve, gml:curveMember, limitType/geometry
Model	gml:AbstractCurve
Children	gml:AbstractCurve

Attributes

QName	Type	Fixed	Default	Use	
nilReason	gml:NilReasonType			optional	
owns	boolean		false	optional	
xlink:actuate	xlink:actuateType			optional	
xlink:arcrole	xlink:arcroleType			optional	
xlink:href	xlink:hrefType			optional	
xlink:role	xlink:roleType			optional	
xlink:show	xlink:showType			optional	
xlink:title	xlink:titleAttrType			optional	
xlink:type	xlink:typeType	simple		optional	

Source

```
<complexType name="CurvePropertyType">
  <annotation>
    <documentation>A property that has a curve as its value domain may either be an appropriate
 geometry element encapsulated in an element of this type or an XLink reference to a remote geometry
 element (where remote includes geometry elements located elsewhere in the same document). Either
 the reference or the contained element shall be given, but neither both nor none.</documentation>
  </annotation>
  <sequence minOccurs="0">
    <element ref="gml:AbstractCurve"/>
  </sequence>
  <attributeGroup ref="gml:AssociationAttributeGroup"/>
  <attributeGroup ref="gml:OwnershipAttributeGroup"/>
</complexType>
```

Complex Type `gml:AbstractCurveType`

Namespace: http://www.opengis.net/gml/3.2

Annotations:

```
gml:AbstractCurveType is an abstraction of a curve to support the
different levels of complexity. The curve may always be viewed as a geometric
primitive, i.e. is continuous.
```

Diagram

Type: extension of gml:AbstractGeometricPrimitiveType

Type hierarchy:

- gml:AbstractGMLType
  - gml:AbstractGeometryType
    - gml:AbstractGeometricPrimitiveType
      - gml:AbstractCurveType

Properties: abstract: `true`

Used by

Element	gml:AbstractCurve
Complex Types	gml:CompositeCurveType, gml:CurveType, gml:LineStringType, gml:OrientableCurveType

Attributes

QName	Type	Use	
gml:id	ID	required	

	QName	Type	Use	
		The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		
	srsDimension	positiveInteger	optional	
	srsName	anyURI	optional	

Source

```
<complexType name="AbstractCurveType" abstract="true">
  <annotation>
    <documentation>gml:AbstractCurveType is an abstraction of a curve to support the different
 levels of complexity. The curve may always be viewed as a geometric primitive, i.e. is
 continuous.</documentation>
  </annotation>
  <complexContent>
    <extension base="gml:AbstractGeometricPrimitiveType"/>
  </complexContent>
</complexType>
```

Complex Type `gml:SurfacePropertyType`

Namespace	http://www.opengis.net/gml/3.2
Annotations	A property that has a surface as its value domain may either be an appropriate geometry element encapsulated in an element of this type or an XLink reference to a remote geometry element (where remote includes geometry elements located elsewhere in the same document). Either the reference or the contained element shall be given, but neither both nor none.

Diagram

Used by	Element zoneType/geometry
Model	gml:AbstractSurface
Children	gml:AbstractSurface

Attributes

QName	Type	Fixed	Default	Use	
nilReason	gml:NilReasonType			optional	
owns	boolean		false	optional	
xlink:actuate	xlink:actuateType			optional	
xlink:arcrole	xlink:arcroleType			optional	
xlink:href	xlink:hrefType			optional	
xlink:role	xlink:roleType			optional	
xlink:show	xlink:showType			optional	
xlink:title	xlink:titleAttrType			optional	

	QName	Type	Fixed	Default	Use	
	xlink:type	xlink:typeType	simple		optional	

Source

```
<complexType name="SurfacePropertyType">
  <annotation>
    <documentation>A property that has a surface as its value domain may either be an appropriate
 geometry element encapsulated in an element of this type or an XLink reference to a remote geometry
 element (where remote includes geometry elements located elsewhere in the same document). Either
 the reference or the contained element shall be given, but neither both nor none.</documentation>
  </annotation>
  <sequence minOccurs="0">
    <element ref="gml:AbstractSurface"/>
  </sequence>
  <attributeGroup ref="gml:AssociationAttributeGroup"/>
  <attributeGroup ref="gml:OwnershipAttributeGroup"/>
</complexType>
```

Complex Type `gml:AbstractSurfaceType`

Namespace	http://www.opengis.net/gml/3.2
Annotations	`gml:AbstractSurfaceType is an abstraction of a surface to support the different levels of complexity. A surface is always a continuous region of a plane.`
Diagram	
Type	extension of gml:AbstractGeometricPrimitiveType

Type hierarchy	• gml:AbstractGMLType
	  • gml:AbstractGeometryType
	  • gml:AbstractGeometricPrimitiveType
	  • gml:AbstractSurfaceType

Properties	abstract: `true`
Used by	Element: gml:AbstractSurface Complex Types: gml:PolygonType, gml:SurfaceType

Attributes	**QName**	**Type**	**Use**	
	gml:id	ID	required	
		The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		
	srsDimension	positiveInteger	optional	
	srsName	anyURI	optional	

Source

```
<complexType name="AbstractSurfaceType" abstract="true">
  <annotation>
    <documentation>gml:AbstractSurfaceType is an abstraction of a surface to support the different
 levels of complexity. A surface is always a continuous region of a plane.</documentation>
  </annotation>
  <complexContent>
    <extension base="gml:AbstractGeometricPrimitiveType"/>
  </complexContent>
</complexType>
```

Complex Type `gml:MultiPointType`

Namespace	http://www.opengis.net/gml/3.2

Diagram	
Type	extension of gml:AbstractGeometricAggregateType
Type hierarchy	• gml:AbstractGMLType • gml:AbstractGeometryType • gml:AbstractGeometricAggregateType • gml:MultiPointType
Used by	Complex Type: MultiPointType Element: gml:MultiPoint
Model	gml:pointMember*
Children	gml:pointMember

Attributes

QName	Type	Use	
aggregationType	gml:AggregationType	optional	
gml:id	ID	required	

	QName	Type	Use	
		The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		
	srsDimension	positiveInteger	optional	
	srsName	anyURI	optional	

Source

```
<complexType name="MultiPointType">
  <complexContent>
    <extension base="gml:AbstractGeometricAggregateType">
      <sequence>
        <element ref="gml:pointMember" minOccurs="0" maxOccurs="unbounded"/>
      </sequence>
    </extension>
  </complexContent>
</complexType>
```

Complex Type `gml:AbstractGeometricAggregateType`

Namespace: http://www.opengis.net/gml/3.2

Diagram

Type: extension of gml:AbstractGeometryType

Type hierarchy:
- gml:AbstractGMLType
  - gml:AbstractGeometryType
    - gml:AbstractGeometricAggregateType

Properties: abstract: `true`

Used by: Complex Type gml:MultiPointType

	Element	gml:AbstractGeometricAggregate		
Attributes	**QName**	**Type**	**Use**	
	aggregationType	gml:AggregationType	optional	
	gml:id	ID	required	
		The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		
	srsDimension	positiveInteger	optional	
	srsName	anyURI	optional	

Source	`<complexType name="AbstractGeometricAggregateType" abstract="true">`
	`  <complexContent>`
	`  <extension base="gml:AbstractGeometryType">`
	`  <attributeGroup ref="gml:AggregationAttributeGroup"/>`
	`  </extension>`
	`  </complexContent>`
	`</complexType>`			

Complex Type `gml:CurveType`

Namespace	http://www.opengis.net/gml/3.2

Diagram	
Type	extension of gml:AbstractCurveType
Type hierarchy	• gml:AbstractGMLType • gml:AbstractGeometryType • gml:AbstractGeometricPrimitiveType • gml:AbstractCurveType • gml:CurveType
Used by	Complex Type: CurveType Element: gml:Curve
Model	gml:segments
Children	gml:segments
Attributes	**QName**: **gml:id**; **Type**: ID; **Use**: required

	QName	Type	Use	
		The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		
	srsDimension	positiveInteger	optional	
	srsName	anyURI	optional	

Source

```
<complexType name="CurveType">
  <complexContent>
    <extension base="gml:AbstractCurveType">
      <sequence>
        <element ref="gml:segments"/>
      </sequence>
    </extension>
  </complexContent>
</complexType>
```

Complex Type `gml:CurveSegmentArrayPropertyType`

Namespace	http://www.opengis.net/gml/3.2
Annotations	gml:CurveSegmentArrayPropertyType is a container for an array of curve segments.
Diagram	
Used by	Element gml:segments
Model	gml:AbstractCurveSegment
Children	gml:AbstractCurveSegment

Source

```
<complexType name="CurveSegmentArrayPropertyType">
  <annotation>
    <documentation>gml:CurveSegmentArrayPropertyType is a container for an array of curve
 segments.</documentation>
  </annotation>
  <sequence minOccurs="0" maxOccurs="unbounded">
    <element ref="gml:AbstractCurveSegment"/>
  </sequence>
</complexType>
```

Complex Type `gml:AbstractCurveSegmentType`

Namespace	http://www.opengis.net/gml/3.2
Diagram	
Properties	abstract: `true`
Used by	Element gml:AbstractCurveSegment Complex Types S100_ArcByCenterPointType, S100_GM_CurveType, S100_GM_SplineCurveType, gml:GeodesicStringType, gml:LineStringSegmentType

Attributes

QName	Type	Default	Use	
numDerivativeInterior	integer	0	optional	
numDerivativesAtEnd	integer	0	optional	

	QName	Type	Default	Use
	numDerivativesAtStart	integer	0	optional

Source

```
<complexType name="AbstractCurveSegmentType" abstract="true">
  <attribute name="numDerivativesAtStart" type="integer" default="0"/>
  <attribute name="numDerivativesAtEnd" type="integer" default="0"/>
  <attribute name="numDerivativeInterior" type="integer" default="0"/>
</complexType>
```

Complex Type `gml:CompositeCurveType`

Namespace: http://www.opengis.net/gml/3.2

Diagram

Type: extension of gml:AbstractCurveType

Type hierarchy:

- gml:AbstractGMLType
  - gml:AbstractGeometryType
    - gml:AbstractGeometricPrimitiveType

	• gml:AbstractCurveType • gml:CompositeCurveType
Used by	Complex Type: CompositeCurveType Element: gml:CompositeCurve
Model	gml:curveMember+
Children	gml:curveMember
Attributes	

QName	Type	Use	
aggregationType	gml:AggregationType	optional	
gml:id	ID	required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		
srsDimension	positiveInteger	optional	
srsName	anyURI	optional	

Source

```
<complexType name="CompositeCurveType">
  <complexContent>
    <extension base="gml:AbstractCurveType">
      <sequence>
        <element ref="gml:curveMember" maxOccurs="unbounded"/>
      </sequence>
      <attributeGroup ref="gml:AggregationAttributeGroup"/>
    </extension>
  </complexContent>
</complexType>
```

Complex Type `gml:OrientableCurveType`

Namespace	http://www.opengis.net/gml/3.2

Diagram	
Type	extension of gml:AbstractCurveType
Type hierarchy	• gml:AbstractGMLType • gml:AbstractGeometryType • gml:AbstractGeometricPrimitiveType • gml:AbstractCurveType • gml:OrientableCurveType
Used by	Elements OrientableCurve, gml:OrientableCurve
Model	gml:baseCurve
Children	gml:baseCurve
Attributes	**QName** / **Type** / **Default** / **Use** **gml:id** / ID / / required `The attribute gml:id supports provision of a handle for the XML element`

	QName	Type	Default	Use	
		representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.			
	orientation	gml:SignType	+	optional	
	srsDimension	positiveInteger		optional	
	srsName	anyURI		optional	

Source

```
<complexType name="OrientableCurveType">
  <complexContent>
    <extension base="gml:AbstractCurveType">
      <sequence>
        <element ref="gml:baseCurve"/>
      </sequence>
      <attribute name="orientation" type="gml:SignType" default="+"/>
    </extension>
  </complexContent>
</complexType>
```

Complex Type `gml:SurfaceType`

Namespace	http://www.opengis.net/gml/3.2

Diagram	
Type	extension of gml:AbstractSurfaceType
Type hierarchy	• gml:AbstractGMLType • gml:AbstractGeometryType • gml:AbstractGeometricPrimitiveType • gml:AbstractSurfaceType • gml:SurfaceType
Used by	Complex Type: SurfaceType Element: gml:Surface
Model	gml:patches
Children	gml:patches
Attributes	**QName**: **gml:id**; **Type**: ID; **Use**: required `The attribute gml:id supports provision of a handle for the XML element`

	QName	Type	Use	
		representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		
	srsDimension	positiveInteger	optional	
	srsName	anyURI	optional	

Source

```
<complexType name="SurfaceType">
  <complexContent>
    <extension base="gml:AbstractSurfaceType">
      <sequence>
        <element ref="gml:patches"/>
      </sequence>
    </extension>
  </complexContent>
</complexType>
```

Complex Type `gml:SurfacePatchArrayPropertyType`

Namespace	http://www.opengis.net/gml/3.2
Annotations	gml:SurfacePatchArrayPropertyType is a container for a sequence of surface patches.
Diagram	
Used by	Element gml:patches
Model	gml:AbstractSurfacePatch
Children	gml:AbstractSurfacePatch

Source

```
<complexType name="SurfacePatchArrayPropertyType">
  <annotation>
    <documentation>gml:SurfacePatchArrayPropertyType is a container for a sequence of surface
 patches.</documentation>
  </annotation>
  <sequence minOccurs="0" maxOccurs="unbounded">
    <element ref="gml:AbstractSurfacePatch"/>
  </sequence>
</complexType>
```

Complex Type `gml:AbstractSurfacePatchType`

Namespace	http://www.opengis.net/gml/3.2
Diagram	
Properties	abstract: `true`
Used by	Element gml:AbstractSurfacePatch Complex Type gml:PolygonPatchType

Source

```
<complexType name="AbstractSurfacePatchType" abstract="true"/>
```

Complex Type `gml:PolygonType`

Namespace	http://www.opengis.net/gml/3.2

Diagram	
Type	extension of gml:AbstractSurfaceType

Type hierarchy	• gml:AbstractGMLType
	  • gml:AbstractGeometryType
	  • gml:AbstractGeometricPrimitiveType
	  • gml:AbstractSurfaceType
	  • gml:PolygonType

Used by	Complex Type: PolygonType Element: gml:Polygon

Model	gml:exterior{0,1} , gml:interior*
Children	gml:exterior, gml:interior
Attributes	

QName	Type	Use	
gml:id	ID	required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		
srsDimension	positiveInteger	optional	
srsName	anyURI	optional	

Source

```
<complexType name="PolygonType">
  <complexContent>
    <extension base="gml:AbstractSurfaceType">
      <sequence>
        <element ref="gml:exterior" minOccurs="0"/>
        <element ref="gml:interior" minOccurs="0" maxOccurs="unbounded"/>
      </sequence>
    </extension>
  </complexContent>
</complexType>
```

Complex Type gml:AbstractRingPropertyType

Namespace	http://www.opengis.net/gml/3.2
Annotations	A property with the content model of gml:AbstractRingPropertyType encapsulates a ring to represent the surface boundary property of a surface.
Diagram	
Used by	Elements gml:exterior, gml:interior
Model	gml:AbstractRing
Children	gml:AbstractRing

Source

```
<complexType name="AbstractRingPropertyType">
  <annotation>
    <documentation>A property with the content model of gml:AbstractRingPropertyType encapsulates a
 ring to represent the surface boundary property of a surface.</documentation>
  </annotation>
  <sequence>
    <element ref="gml:AbstractRing"/>
  </sequence>
</complexType>
```

Complex Type gml:AbstractRingType

Namespace	http://www.opengis.net/gml/3.2
Diagram	
Properties	abstract: true
Used by	Element gml:AbstractRing Complex Types gml:LinearRingType, gml:RingType
Model	

Source

```
<complexType name="AbstractRingType" abstract="true">
  <sequence/>
</complexType>
```

Complex Type gml:AbstractFeatureMemberType

Namespace	http://www.opengis.net/gml/3.2

Annotations	To create a collection of GML features, a property type shall be derived by extension from gml:AbstractFeatureMemberType. By default, this abstract property type does not imply any ownership of the features in the collection. The owns attribute of gml:OwnershipAttributeGroup may be used on a property element instance to assert ownership of a feature in the collection. A collection shall not own a feature already owned by another object.
Diagram	
Properties	abstract: `true`
Used by	Element CollectionType/members
Model	
Attributes	

QName	Type	Default	Use
owns	boolean	false	optional

Source

```
<complexType name="AbstractFeatureMemberType" abstract="true">
  <annotation>
    <documentation>To create a collection of GML features, a property type shall be derived
 by extension from gml:AbstractFeatureMemberType. By default, this abstract property type
 does not imply any ownership of the features in the collection. The owns attribute of
 gml:OwnershipAttributeGroup may be used on a property element instance to assert ownership of a
 feature in the collection. A collection shall not own a feature already owned by another object.</
documentation>
  </annotation>
  <sequence/>
  <attributeGroup ref="gml:OwnershipAttributeGroup"/>
</complexType>
```

Complex Type `gml:AssociationRoleType`

Namespace	http://www.opengis.net/gml/3.2
Diagram	
Used by	Element gml:abstractAssociationRole

Model	ANY element from ANY namespace
Attributes	

QName	Type	Fixed	Default	Use	
nilReason	gml:NilReasonType			optional	
owns	boolean		false	optional	
xlink:actuate	xlink:actuateType			optional	
xlink:arcrole	xlink:arcroleType			optional	
xlink:href	xlink:hrefType			optional	
xlink:role	xlink:roleType			optional	
xlink:show	xlink:showType			optional	
xlink:title	xlink:titleAttrType			optional	
xlink:type	xlink:typeType	simple		optional	

Source

```
<complexType name="AssociationRoleType">
  <sequence minOccurs="0">
    <any namespace="##any"/>
  </sequence>
  <attributeGroup ref="gml:OwnershipAttributeGroup"/>
  <attributeGroup ref="gml:AssociationAttributeGroup"/>
</complexType>
```

Complex Type `gml:InlinePropertyType`

Namespace	http://www.opengis.net/gml/3.2
Diagram	

Used by	Element gml:abstractInlineProperty
Model	ANY element from ANY namespace
Attributes	

QName	Type	Default	Use	
owns	boolean	false	optional	

Source

```
<complexType name="InlinePropertyType">
  <sequence>
    <any namespace="##any"/>
  </sequence>
  <attributeGroup ref="gml:OwnershipAttributeGroup"/>
</complexType>
```

Complex Type `gml:AbstractMemberType`

Namespace	http://www.opengis.net/gml/3.2
Annotations	To create a collection of GML Objects that are not all features, a property type shall be derived by extension from gml:AbstractMemberType. This abstract property type is intended to be used only in object types where software shall be able to identify that an instance of such an object type is to be interpreted as a collection of objects. By default, this abstract property type does not imply any ownership of the objects in the collection. The owns attribute of gml:OwnershipAttributeGroup may be used on a property element instance to assert ownership of an object in the collection. A collection shall not own an object already owned by another object.

Diagram	
Properties	abstract: `true`
Model	
Attributes	**QName** / **Type** / **Default** / **Use** **owns** / boolean / false / optional
Source	`<complexType name="AbstractMemberType" abstract="true">` `  <annotation>` ` <documentation>To create a collection of GML Objects that are not all features, a property type shall be derived by extension from gml:AbstractMemberType. This abstract property type is intended to be used only in object types where software shall be able to identify that an instance of such an object type is to be interpreted as a collection of objects. By default, this abstract property type does not imply any ownership of the objects in the collection. The owns attribute of gml:OwnershipAttributeGroup may be used on a property element instance to assert ownership of an object in the collection. A collection shall not own an object already owned by another object.</documentation>` ` </annotation>` ` <sequence/>` ` <attributeGroup ref="gml:OwnershipAttributeGroup"/>` `</complexType>`

Complex Type `gml:AbstractMetadataPropertyType`

Namespace	http://www.opengis.net/gml/3.2
Annotations	`To associate metadata described by any XML Schema with a GML object, a property element shall be defined whose content model is derived by extension from gml:AbstractMetadataPropertyType. The value of such a property shall be metadata. The content model of such a property type, i.e. the metadata application schema shall be specified by the GML Application Schema. By default, this abstract property type does not imply any ownership of the metadata. The owns attribute of gml:OwnershipAttributeGroup may be used on a metadata property element instance to assert ownership of the metadata. If metadata following the conceptual model of ISO 19115 is to be encoded in a GML document, the corresponding Implementation Specification specified in ISO/TS 19139 shall be used to encode the metadata information.`
Diagram	
Properties	abstract: `true`
Model	
Attributes	**QName** / **Type** / **Default** / **Use** **owns** / boolean / false / optional

Source

```
<complexType name="AbstractMetadataPropertyType" abstract="true">
  <annotation>
    <documentation>To associate metadata described by any XML Schema with a GML object,
 a property element shall be defined whose content model is derived by extension from
 gml:AbstractMetadataPropertyType. The value of such a property shall be metadata. The content
 model of such a property type, i.e. the metadata application schema shall be specified by the GML
 Application Schema. By default, this abstract property type does not imply any ownership of the
 metadata. The owns attribute of gml:OwnershipAttributeGroup may be used on a metadata property
 element instance to assert ownership of the metadata. If metadata following the conceptual model
 of ISO 19115 is to be encoded in a GML document, the corresponding Implementation Specification
 specified in ISO/TS 19139 shall be used to encode the metadata information.</documentation>
  </annotation>
  <sequence/>
  <attributeGroup ref="gml:OwnershipAttributeGroup"/>
</complexType>
```

Complex Type `gml:FeaturePropertyType`

Namespace: http://www.opengis.net/gml/3.2

Diagram

Model: gml:AbstractFeature

Children: gml:AbstractFeature

Attributes

QName	Type	Fixed	Default	Use	
nilReason	gml:NilReasonType			optional	
owns	boolean		false	optional	
xlink:actuate	xlink:actuateType			optional	
xlink:arcrole	xlink:arcroleType			optional	
xlink:href	xlink:hrefType			optional	
xlink:role	xlink:roleType			optional	
xlink:show	xlink:showType			optional	
xlink:title	xlink:titleAttrType			optional	
xlink:type	xlink:typeType	simple		optional	

Source

```
<complexType name="FeaturePropertyType">
  <sequence minOccurs="0">
    <element ref="gml:AbstractFeature"/>
  </sequence>
  <attributeGroup ref="gml:OwnershipAttributeGroup"/>
  <attributeGroup ref="gml:AssociationAttributeGroup"/>
</complexType>
```

Complex Type `gml:DirectPositionListType`

Namespace: http://www.opengis.net/gml/3.2

Annotations	posList instances (and other instances with the content model specified by DirectPositionListType) hold the coordinates for a sequence of direct positions within the same coordinate reference system (CRS). if no srsName attribute is given, the CRS shall be specified as part of the larger context this geometry element is part of, typically a geometric object like a point, curve, etc. The optional attribute count specifies the number of direct positions in the list. If the attribute count is present then the attribute srsDimension shall be present, too. The number of entries in the list is equal to the product of the dimensionality of the coordinate reference system (i.e. it is a derived value of the coordinate reference system definition) and the number of direct positions.
Diagram	
Type	extension of gml:doubleList
Type hierarchy	• anySimpleType • gml:doubleList • gml:DirectPositionListType
Used by	Element gml:posList

Attributes

QName	Type	Use	
count	positiveInteger	optional	
srsDimension	positiveInteger	optional	
srsName	anyURI	optional	

Source

```
<complexType name="DirectPositionListType">
  <annotation>
    <documentation>posList instances (and other instances with the content model specified by
 DirectPositionListType) hold the coordinates for a sequence of direct positions within the same
 coordinate reference system (CRS). if no srsName attribute is given, the CRS shall be specified
 as part of the larger context this geometry element is part of, typically a geometric object like
 a point, curve, etc. The optional attribute count specifies the number of direct positions in the
 list. If the attribute count is present then the attribute srsDimension shall be present, too.
 The number of entries in the list is equal to the product of the dimensionality of the coordinate
 reference system (i.e. it is a derived value of the coordinate reference system definition) and the
 number of direct positions.</documentation>
  </annotation>
  <simpleContent>
    <extension base="gml:doubleList">
      <attributeGroup ref="gml:SRSReferenceGroup"/>
      <attribute name="count" type="positiveInteger"/>
    </extension>
  </simpleContent>
</complexType>
```

Complex Type gml:GeometricPrimitivePropertyType

Namespace	http://www.opengis.net/gml/3.2
Annotations	A property that has a geometric primitive as its value domain may either be an appropriate geometry element encapsulated in an element of this type or an XLink reference to a remote geometry element (where remote includes geometry elements located elsewhere in the same document). Either the reference or the contained element shall be given, but neither both nor none.

Diagram

Model: gml:AbstractGeometricPrimitive

Children: gml:AbstractGeometricPrimitive

Attributes

QName	Type	Fixed	Default	Use	
nilReason	gml:NilReasonType			optional	
owns	boolean		false	optional	
xlink:actuate	xlink:actuateType			optional	
xlink:arcrole	xlink:arcroleType			optional	
xlink:href	xlink:hrefType			optional	
xlink:role	xlink:roleType			optional	
xlink:show	xlink:showType			optional	
xlink:title	xlink:titleAttrType			optional	
xlink:type	xlink:typeType	simple		optional	

Source

```
<complexType name="GeometricPrimitivePropertyType">
  <annotation>
    <documentation>A property that has a geometric primitive as its value domain may either be an
 appropriate geometry element encapsulated in an element of this type or an XLink reference to a
 remote geometry element (where remote includes geometry elements located elsewhere in the same
 document). Either the reference or the contained element shall be given, but neither both nor
 none.</documentation>
  </annotation>
  <sequence minOccurs="0">
    <element ref="gml:AbstractGeometricPrimitive"/>
  </sequence>
  <attributeGroup ref="gml:OwnershipAttributeGroup"/>
  <attributeGroup ref="gml:AssociationAttributeGroup"/>
</complexType>
```

Complex Type `gml:LineStringType`

Namespace	http://www.opengis.net/gml/3.2

Diagram	
Type	extension of gml:AbstractCurveType
Type hierarchy	• gml:AbstractGMLType • gml:AbstractGeometryType • gml:AbstractGeometricPrimitiveType • gml:AbstractCurveType • gml:LineStringType
Used by	Element gml:LineString
Model	(gml:pos | gml:pointProperty | gml:posList)
Children	gml:pointProperty, gml:pos, gml:posList

Attributes

QName	Type	Use	
gml:id	ID	required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		
srsDimension	positiveInteger	optional	
srsName	anyURI	optional	

Source	`<complexType name="LineStringType">`
	`  <complexContent>`
	`  <extension base="gml:AbstractCurveType">`
	`  <sequence>`
	`  <choice>`
	`  <choice minOccurs="2" maxOccurs="unbounded">`
	`  <element ref="gml:pos"/>`
	`  <element ref="gml:pointProperty"/>`
	`  </choice>`
	`  <element ref="gml:posList"/>`
	`  </choice>`
	`  </sequence>`
	`  </extension>`
	`  </complexContent>`
	`  <!-- The LineStringType has been limited to gml:posList only this results in a more compact encoding of the geometry compared to a list of gml:pos elements for each individual coordinate -->`
	`  <!-- list of gml:pos elements restored - March 2014 -->`
	`</complexType>`

Complex Type `gml:LinearRingType`

Namespace	http://www.opengis.net/gml/3.2
Annotations	S-100 XML supports two different ways to specify the control points of a linear ring. 1. A sequence of "pos" (DirectPositionType) or "pointProperty" (PointPropertyType) elements. "pos" elements are control points that are only part of this ring, "pointProperty" elements contain a point that may be referenced from other geometry elements or reference another point defined outside of this ring (reuse of existing points). 2. The "posList" element allows for a compact way to specifiy the coordinates of the control points, if all control points are in the same coordinate reference systems and belong to this ring only. The number of direct positions in the list must be at least four.
Diagram	
Type	extension of gml:AbstractRingType
Type hierarchy	• gml:AbstractRingType • gml:LinearRingType
Used by	Element gml:LinearRing
Model	(gml:pos | gml:pointProperty | gml:posList)
Children	gml:pointProperty, gml:pos, gml:posList
Source	`<complexType name="LinearRingType">` `  <annotation>` ` <documentation>S-100 XML supports two different ways to specify the control points of a linear ring. 1. A sequence of "pos" (DirectPositionType) or "pointProperty" (PointPropertyType) elements. "pos" elements are control points that are only part of this ring, "pointProperty" elements contain a point that may be referenced from other geometry elements or reference another point defined outside of this ring (reuse of existing points). 2. The "posList" element allows for a compact way to specifiy the coordinates of the control points, if all control points are in the same coordinate reference systems and belong to this ring only. The number of direct positions in the list must be at least four.</documentation>` ` </annotation>` ` <complexContent>` ` <extension base="gml:AbstractRingType">` ` <sequence>` ` <choice>` ` <choice minOccurs="4" maxOccurs="unbounded">` ` <element ref="gml:pos"/>` ` <element ref="gml:pointProperty"/>` ` </choice>` ` <element ref="gml:posList"/>` ` </choice>` ` </sequence>`

```
    </extension>
  </complexContent>
</complexType>
```

Complex Type `gml:LinearRingPropertyType`

Namespace	http://www.opengis.net/gml/3.2
Annotations	`A property with the content model of gml:LinearRingPropertyType encapsulates a linear ring to represent a component of a surface boundary.`
Diagram	
Model	gml:LinearRing
Children	gml:LinearRing

Source	`<complexType name="LinearRingPropertyType">`
	`  <annotation>`
	`  <documentation>A property with the content model of gml:LinearRingPropertyType encapsulates a linear ring to represent a component of a surface boundary.</documentation>`
	`  </annotation>`
	`  <sequence>`
	`  <element ref="gml:LinearRing"/>`
	`  </sequence>`
	`</complexType>`

Complex Type `gml:LineStringSegmentType`

Namespace	http://www.opengis.net/gml/3.2
Annotations	`GML supports two different ways to specify the control points of a line string. 1. A sequence of "pos" (DirectPositionType) or "pointProperty" (PointPropertyType) elements. "pos" elements are control points that are only part of this curve, "pointProperty" elements contain a point that may be referenced from other geometry elements or reference another point defined outside of this curve (reuse of existing points). 2. The "posList" element allows for a compact way to specifiy the coordinates of the control points, if all control points are in the same coordinate reference systems and belong to this curve only. The number of direct positions in the list must be at least two.`
Diagram	
Type	extension of gml:AbstractCurveSegmentType
Type hierarchy	• gml:AbstractCurveSegmentType • gml:LineStringSegmentType
Used by	Element gml:LineStringSegment

Model	(gml:pos | gml:pointProperty | gml:posList)
Children	gml:pointProperty, gml:pos, gml:posList

Attributes

QName	Type	Fixed	Default	Use	
interpolation	gml:CurveInterpolationType	linear		optional	
numDerivativeInterior	integer		0	optional	
numDerivativesAtEnd	integer		0	optional	
numDerivativesAtStart	integer		0	optional	

Source

```
<complexType name="LineStringSegmentType">
  <annotation>
    <documentation>GML supports two different ways to specify the control points of a line string.
 1. A sequence of "pos" (DirectPositionType) or "pointProperty" (PointPropertyType) elements. "pos"
 elements are control points that are only part of this curve, "pointProperty" elements contain
 a point that may be referenced from other geometry elements or reference another point defined
 outside of this curve (reuse of existing points). 2. The "posList" element allows for a compact way
 to specifiy the coordinates of the control points, if all control points are in the same coordinate
 reference systems and belong to this curve only. The number of direct positions in the list must be
 at least two.</documentation>
  </annotation>
  <complexContent>
    <extension base="gml:AbstractCurveSegmentType">
      <sequence>
        <choice>
          <choice minOccurs="2" maxOccurs="unbounded">
            <element ref="gml:pos"/>
            <element ref="gml:pointProperty"/>
          </choice>
          <element ref="gml:posList"/>
        </choice>
      </sequence>
      <!--<sequence>
     <element ref="gml:posList"/>
    </sequence>-->
      <attribute name="interpolation" type="gml:CurveInterpolationType" fixed="linear"/>
    </extension>
  </complexContent>
</complexType>
```

Complex Type `gml:GeodesicStringType`

Namespace	http://www.opengis.net/gml/3.2

Diagram

Type	extension of gml:AbstractCurveSegmentType
Type hierarchy	• gml:AbstractCurveSegmentType • gml:GeodesicStringType
Used by	Element gml:GeodesicString Complex Type gml:GeodesicType
Model	gml:posList | gml:pos | gml:pointProperty
Children	gml:pointProperty, gml:pos, gml:posList

Attributes

QName	Type	Fixed	Default	Use
interpolation	gml:CurveInterpolationType	geodesic		optional
numDerivativeInterior	integer		0	optional
numDerivativesAtEnd	integer		0	optional
numDerivativesAtStart	integer		0	optional

Source

```
<complexType name="GeodesicStringType">
  <complexContent>
    <extension base="gml:AbstractCurveSegmentType">
      <choice>
        <element ref="gml:posList"/>
        <group ref="gml:geometricPositionGroup" minOccurs="2" maxOccurs="unbounded"/>
      </choice>
      <attribute name="interpolation" type="gml:CurveInterpolationType" fixed="geodesic"/>
    </extension>
  </complexContent>
</complexType>
```

Complex Type `gml:GeodesicType`

Namespace	http://www.opengis.net/gml/3.2

Diagram

Type	extension of gml:GeodesicStringType
Type hierarchy	• gml:AbstractCurveSegmentType • gml:GeodesicStringType

	• gml:GeodesicType
Used by	Element gml:Geodesic
Model	gml:posList | gml:pos | gml:pointProperty
Children	gml:pointProperty, gml:pos, gml:posList

Attributes

QName	Type	Fixed	Default	Use
interpolation	gml:CurveInterpolationType	geodesic		optional
numDerivativeInterior	integer		0	optional
numDerivativesAtEnd	integer		0	optional
numDerivativesAtStart	integer		0	optional

Source

```
<complexType name="GeodesicType">
  <complexContent>
    <extension base="gml:GeodesicStringType"/>
  </complexContent>
</complexType>
```

Complex Type `gml:PolygonPatchType`

Namespace	http://www.opengis.net/gml/3.2
Diagram	
Type	extension of gml:AbstractSurfacePatchType
Type hierarchy	• gml:AbstractSurfacePatchType • gml:PolygonPatchType
Used by	Element gml:PolygonPatch
Model	gml:exterior{0,1} , gml:interior*
Children	gml:exterior, gml:interior

Attributes

QName	Type	Fixed	Use
interpolation	gml:SurfaceInterpolationType	planar	optional

Source

```
<complexType name="PolygonPatchType">
  <complexContent>
    <extension base="gml:AbstractSurfacePatchType">
      <sequence>
        <element ref="gml:exterior" minOccurs="0"/>
        <element ref="gml:interior" minOccurs="0" maxOccurs="unbounded"/>
      </sequence>
      <attribute name="interpolation" type="gml:SurfaceInterpolationType" fixed="planar"/>
    </extension>
  </complexContent>
</complexType>
```

Complex Type `gml:RingType`

Namespace	http://www.opengis.net/gml/3.2
Diagram	
Type	extension of gml:AbstractRingType
Type hierarchy	• gml:AbstractRingType • gml:RingType
Used by	Element gml:Ring
Model	gml:curveMember+
Children	gml:curveMember
Attributes	**QName** / **Type** / **Use** **aggregationType** / gml:AggregationType / optional

Source	`<complexType name="RingType">`
	`  <complexContent>`
	`  <extension base="gml:AbstractRingType">`
	`  <sequence>`
	`  <element ref="gml:curveMember" maxOccurs="unbounded"/>`
	`  </sequence>`
	`  <attributeGroup ref="gml:AggregationAttributeGroup"/>`
	`  </extension>`
	`  </complexContent>`
	`</complexType>`

Complex Type `gml:CodeType`

Namespace	http://www.opengis.net/gml/3.2
Annotations	`gml:CodeType is a generalized type to be used for a term, keyword or name. It adds a XML attribute codeSpace to a term, where the value of the codeSpace attribute (if present) shall indicate a dictionary, thesaurus, classification scheme, authority, or pattern for the term.`

Diagram	
Type	extension of string
Used by	Complex Type gml:CodeWithAuthorityType
Attributes	**QName** / **Type** / **Use** **codeSpace** / anyURI / optional
Source	`<complexType name="CodeType">` `  <annotation>` ` <documentation>gml:CodeType is a generalized type to be used for a term, keyword or name. It adds a XML attribute codeSpace to a term, where the value of the codeSpace attribute (if present) shall indicate a dictionary, thesaurus, classification scheme, authority, or pattern for the term.</documentation>` ` </annotation>` ` <simpleContent>` ` <extension base="string">` ` <attribute name="codeSpace" type="anyURI"/>` ` </extension>` ` </simpleContent>` `</complexType>`

Complex Type `gml:CodeWithAuthorityType`

Namespace	http://www.opengis.net/gml/3.2
Annotations	`gml:CodeWithAuthorityType requires that the codeSpace attribute is provided in an instance.`
Diagram	
Type	restriction of gml:CodeType
Type hierarchy	• string

	• gml:CodeType • gml:CodeWithAuthorityType
Attributes	**QName** / **Type** / **Use** **codeSpace** / anyURI / required

Source	`<complexType name="CodeWithAuthorityType">`
	`  <annotation>`
	`  <documentation>gml:CodeWithAuthorityType requires that the codeSpace attribute is provided in an instance.</documentation>`
	`  </annotation>`
	`  <simpleContent>`
	`  <restriction base="gml:CodeType">`
	`  <attribute name="codeSpace" type="anyURI" use="required"/>`
	`  </restriction>`
	`  </simpleContent>`
	`</complexType>`

Complex Type `gml:MeasureType`

Namespace	http://www.opengis.net/gml/3.2
Annotations	`gml:MeasureType supports recording an amount encoded as a value of XML Schema double, together with a units of measure indicated by an attribute uom, short for "units Of measure". The value of the uom attribute identifies a reference system for the amount, usually a ratio or interval scale.`
Diagram	
Type	extension of double
Used by	Element: gml:measure Complex Types: gml:AngleType, gml:LengthType, gml:VolumeType
Attributes	**QName** / **Type** / **Use** **uom** / gml:UomIdentifier / required
Source	`<complexType name="MeasureType">` `  <annotation>` ` <documentation>gml:MeasureType supports recording an amount encoded as a value of XML Schema double, together with a units of measure indicated by an attribute uom, short for "units Of measure". The value of the uom attribute identifies a reference system for the amount, usually a ratio or interval scale.</documentation>` ` </annotation>` ` <simpleContent>` ` <extension base="double">` ` <attribute name="uom" type="gml:UomIdentifier" use="required"/>` ` </extension>` ` </simpleContent>` `</complexType>`

Complex Type `gml:LengthType`

Namespace	http://www.opengis.net/gml/3.2
Annotations	`This is a prototypical definition for a specific measure type defined as a vacuous extension (i.e. aliases) of gml:MeasureType. In this case, the content model supports the description of a length (or distance) quantity, with its units. The unit of measure referenced by uom shall be suitable for a length, such as metres or feet.`

Diagram	
Type	extension of gml:MeasureType
Type hierarchy	• double • gml:MeasureType • gml:LengthType
Used by	Elements S100_ArcByCenterPointType/radius, S100_CircleByCenterPointType/radius
Attributes	**QName** / **Type** / **Use** **uom** / gml:UomIdentifier / required
Source	`<complexType name="LengthType">` `  <annotation>` ` <documentation>This is a prototypical definition for a specific measure type defined as a vacuous extension (i.e. aliases) of gml:MeasureType. In this case, the content model supports the description of a length (or distance) quantity, with its units. The unit of measure referenced by uom shall be suitable for a length, such as metres or feet.</documentation>` ` </annotation>` ` <simpleContent>` ` <extension base="gml:MeasureType"/>` ` </simpleContent>` `</complexType>`

Complex Type `gml:AngleType`

Namespace	http://www.opengis.net/gml/3.2

Diagram	
Type	extension of gml:MeasureType
Type hierarchy	• double • gml:MeasureType • gml:AngleType
Used by	Element gml:angle
Attributes	**QName** / **Type** / **Use** **uom** / gml:UomIdentifier / required

Source	`<complexType name="AngleType">`
	`  <simpleContent>`
	`  <extension base="gml:MeasureType"/>`
	`  </simpleContent>`
	`</complexType>`

Complex Type `gml:VolumeType`

Namespace	http://www.opengis.net/gml/3.2
Diagram	
Type	extension of gml:MeasureType
Type hierarchy	• double

	• gml:MeasureType • gml:VolumeType
Attributes	**QName** / **Type** / **Use** **uom** / gml:UomIdentifier / required

Source	`<complexType name="VolumeType">`
	`  <simpleContent>`
	`  <extension base="gml:MeasureType"/>`
	`  </simpleContent>`
	`</complexType>`

Simple Type(s)

Simple Type `gml:doubleList`

Namespace	http://www.opengis.net/gml/3.2
Annotations	`A type for a list of values of the respective simple type.`
Diagram	
Type	list of double
Used by	Complex Types: gml:DirectPositionListType, gml:DirectPositionType Element: VectorType/offset

Source	`<simpleType name="doubleList">`
	`  <annotation>`
	`  <documentation>A type for a list of values of the respective simple type.</documentation>`
	`  </annotation>`
	`  <list itemType="double"/>`
	`</simpleType>`

Simple Type `gml:NilReasonType`

Namespace	http://www.opengis.net/gml/3.2
Annotations	`gml:NilReasonType defines a content model that allows recording of an explanation for a void value or other exception. gml:NilReasonType is a union of the following enumerated values: - inapplicable there is no value - missing the correct value is not readily available to the sender of this data. Furthermore, a correct value may not exist - template the value will be available later - unknown the correct value is not known to, and not computable by, the sender of this data. However, a correct value probably exists - withheld the value is not divulged - other:text other brief explanation, where text is a string of two or more characters with no included spaces and - anyURI which should refer to a resource which describes the reason for the exception A particular community may choose to assign more detailed semantics to the standard values provided. Alternatively, the URI method enables a specific or more complete explanation for the absence of a value to be provided elsewhere and indicated by-reference in an instance document. gml:NilReasonType is used as a member of a union in a number of simple content types where it is necessary to permit a value from the NilReasonType union as an alternative to the primary type.`
Diagram	
Type	union of(gml:NilReasonEnumeration, anyURI)

Used by	Attributes	gml:AssociationAttributeGroup/@nilReason, gml:Boolean/@nilReason, gml:BoundingShapeType/@nilReason

Source

```
<simpleType name="NilReasonType">
  <annotation>
    <documentation>gml:NilReasonType defines a content model that allows recording of an explanation
 for a void value or other exception. gml:NilReasonType is a union of the following enumerated
 values: - inapplicable there is no value - missing the correct value is not readily available to
 the sender of this data. Furthermore, a correct value may not exist - template the value will be
 available later - unknown the correct value is not known to, and not computable by, the sender
 of this data. However, a correct value probably exists - withheld the value is not divulged -
 other:text other brief explanation, where text is a string of two or more characters with no
 included spaces and - anyURI which should refer to a resource which describes the reason for the
 exception A particular community may choose to assign more detailed semantics to the standard
 values provided. Alternatively, the URI method enables a specific or more complete explanation for
 the absence of a value to be provided elsewhere and indicated by-reference in an instance document.
 gml:NilReasonType is used as a member of a union in a number of simple content types where it is
 necessary to permit a value from the NilReasonType union as an alternative to the primary type.</
documentation>
  </annotation>
  <union memberTypes="gml:NilReasonEnumeration anyURI"/>
</simpleType>
```

Simple Type `gml:AggregationType`

Namespace	http://www.opengis.net/gml/3.2
Diagram	
Type	restriction of string
Properties	final: `restriction, list, union`
Facets	enumeration `set` enumeration `bag` enumeration `sequence` enumeration `array` enumeration `record` enumeration `table`
Used by	Attribute gml:AggregationAttributeGroup/@aggregationType

Source

```
<simpleType name="AggregationType" final="#all">
  <restriction base="string">
    <enumeration value="set"/>
    <enumeration value="bag"/>
    <enumeration value="sequence"/>
    <enumeration value="array"/>
    <enumeration value="record"/>
    <enumeration value="table"/>
  </restriction>
</simpleType>
```

Simple Type `gml:SignType`

Namespace	http://www.opengis.net/gml/3.2
Annotations	`gml:SignType is a convenience type with values "+" (plus) and "-" (minus).`
Diagram	

Type	restriction of string	
Facets	enumeration	-
	enumeration	+
Used by	Attribute	gml:OrientableCurveType/@orientation
Source		

```
<simpleType name="SignType">
  <annotation>
    <documentation>gml:SignType is a convenience type with values "+" (plus) and "-" (minus).</
documentation>
  </annotation>
  <restriction base="string">
    <enumeration value="-"/>
    <enumeration value="+"/>
  </restriction>
</simpleType>
```

Simple Type `gml:CurveInterpolationType`

Namespace	http://www.opengis.net/gml/3.2	

Annotations	`gml:CurveInterpolationType is a list of codes that may be used to identify the interpolation mechanisms specified by an applicationschema.`
	
	`S-100 3.1 note: The list has been extended by adding the S-100 3.1 interpolations, given that the new draft of ISO 19107 explicitly says "As a codelist, there is no intention of limiting the potential values ofCurveInterpolation."`	

Diagram		
Type	restriction of string	
Facets	enumeration	`none`
	enumeration	`linear`
	enumeration	`geodesic`
	enumeration	`circularArc3Points`
	enumeration	`loxodromic` — `Note that the new draft of 19107 now includes "rhumb".`
	enumeration	`elliptical`
	enumeration	`conic`
	enumeration	`circularArcCenter-PointWithRadius`
	enumeration	`polynomialSpline`
	enumeration	`bezierSpline`
	enumeration	`bSpline`
	enumeration	`cubicSpline`
	enumeration	`rationalSpline`
	enumeration	`blendedParabolic`
Used by	Attributes	S100_ArcByCenterPointType/@interpolation, S100_GM_CurveType/@interpolation, S100_GM_S-plineCurveType/@interpolation, gml:GeodesicStringType/@interpolation, gml:LineStringSegment-Type/@interpolation
Source		

```
<simpleType name="CurveInterpolationType">
  <annotation>
    <documentation>gml:CurveInterpolationType is a list of codes that may be used to identify the
 interpolation mechanisms specified by an applicationschema.</documentation>
    <documentation>S-100 3.1 note: The list has been extended by adding the S-100 3.1
 interpolations, given that the new draft of ISO 19107 explicitly says "As a codelist, there is no
 intention of limiting the potential values ofCurveInterpolation."</documentation>
  </annotation>
  <restriction base="string">
    <enumeration value="none"/>
    <enumeration value="linear"/>
    <enumeration value="geodesic"/>
```

```
    <enumeration value="circularArc3Points"/>
    <enumeration value="loxodromic">
      <annotation>
        <documentation>Note that the new draft of 19107 now includes "rhumb".</documentation>
      </annotation>
    </enumeration>
    <!--<enumeration value="circularArc2PointWithBulge"/>-->
    <enumeration value="elliptical"/>
    <!--<enumeration value="clothoid"/>-->
    <enumeration value="conic"/>
    <enumeration value="circularArcCenterPointWithRadius"/>
    <enumeration value="polynomialSpline"/>
    <enumeration value="bezierSpline"/>
    <enumeration value="bSpline"/>
    <enumeration value="cubicSpline"/>
    <enumeration value="rationalSpline"/>
    <enumeration value="blendedParabolic"/>
  </restriction>
</simpleType>
```

Simple Type `gml:SurfaceInterpolationType`

Namespace	http://www.opengis.net/gml/3.2
Annotations	`gml:SurfaceInterpolationType is a list of codes that may be used to identify the interpolation mechanisms specified by an application schema.`
Diagram	
Type	restriction of string
Facets	enumeration `none` enumeration `planar` enumeration `spherical` enumeration `elliptical` enumeration `conic` enumeration `tin` enumeration `parametricCurve` enumeration `polynomialSpline` enumeration `rationalSpline` enumeration `triangulatedSpline`
Used by	Attribute gml:PolygonPatchType/@interpolation

Source

```
<simpleType name="SurfaceInterpolationType">
  <annotation>
    <documentation>gml:SurfaceInterpolationType is a list of codes that may be used to identify the
 interpolation mechanisms specified by an application schema.</documentation>
  </annotation>
  <restriction base="string">
    <enumeration value="none"/>
    <enumeration value="planar"/>
    <enumeration value="spherical"/>
    <enumeration value="elliptical"/>
    <enumeration value="conic"/>
    <enumeration value="tin"/>
    <enumeration value="parametricCurve"/>
    <enumeration value="polynomialSpline"/>
    <enumeration value="rationalSpline"/>
    <enumeration value="triangulatedSpline"/>
  </restriction>
</simpleType>
```

Simple Type `gml:NilReasonEnumeration`

Namespace	http://www.opengis.net/gml/3.2

Diagram	
Type	union of(restriction of string, restriction of string)

Source	`<simpleType name="NilReasonEnumeration">`
	`  <union>`
	`  <simpleType>`
	`  <restriction base="string">`
	`  <enumeration value="inapplicable"/>`
	`  <enumeration value="missing"/>`
	`  <enumeration value="template"/>`
	`  <enumeration value="unknown"/>`
	`  <enumeration value="withheld"/>`
	`  </restriction>`
	`  </simpleType>`
	`  <simpleType>`
	`  <restriction base="string">`
	`  <pattern value="other:/w{2,}"/>`
	`  </restriction>`
	`  </simpleType>`
	`  </union>`
	`</simpleType>`

Simple Type `gml:booleanOrNilReason`

Namespace	http://www.opengis.net/gml/3.2
Annotations	Extension to the respective XML Schema built-in simple type to allow a choice of either a value of the built-in simple type or a reason for a nil value.
Diagram	
Type	union of(gml:NilReasonEnumeration, boolean)
Used by	Element S100_GM_SplineCurveType/isRational

Source	`<simpleType name="booleanOrNilReason">`
	`  <annotation>`
	`  <documentation>Extension to the respective XML Schema built-in simple type to allow a choice of either a value of the built-in simple type or a reason for a nil value.</documentation>`
	`  </annotation>`
	`  <union memberTypes="gml:NilReasonEnumeration boolean"/>`
	`</simpleType>`

Simple Type `gml:doubleOrNilReason`

Namespace	http://www.opengis.net/gml/3.2
Annotations	Extension to the respective XML Schema built-in simple type to allow a choice of either a value of the built-in simple type or a reason for a nil value.
Diagram	
Type	union of(gml:NilReasonEnumeration, double)
Source	`<simpleType name="doubleOrNilReason">` `  <annotation>`

```
    <documentation>Extension to the respective XML Schema built-in simple type to allow a choice of
 either a value of the built-in simple type or a reason for a nil value.</documentation>
  </annotation>
  <union memberTypes="gml:NilReasonEnumeration double"/>
</simpleType>
```

Simple Type `gml:integerOrNilReason`

Namespace	http://www.opengis.net/gml/3.2
Annotations	Extension to the respective XML Schema built-in simple type to allow a choice of either a value of the built-in simple type or a reason for a nil value.
Diagram	
Type	union of(gml:NilReasonEnumeration, integer)

Source	`<simpleType name="integerOrNilReason">`
	`  <annotation>`
	`  <documentation>Extension to the respective XML Schema built-in simple type to allow a choice of either a value of the built-in simple type or a reason for a nil value.</documentation>`
	`  </annotation>`
	`  <union memberTypes="gml:NilReasonEnumeration integer"/>`
	`</simpleType>`

Simple Type `gml:NameOrNilReason`

Namespace	http://www.opengis.net/gml/3.2
Annotations	Extension to the respective XML Schema built-in simple type to allow a choice of either a value of the built-in simple type or a reason for a nil value.
Diagram	
Type	union of(gml:NilReasonEnumeration, Name)

Source	`<simpleType name="NameOrNilReason">`
	`  <annotation>`
	`  <documentation>Extension to the respective XML Schema built-in simple type to allow a choice of either a value of the built-in simple type or a reason for a nil value.</documentation>`
	`  </annotation>`
	`  <union memberTypes="gml:NilReasonEnumeration Name"/>`
	`</simpleType>`

Simple Type `gml:stringOrNilReason`

Namespace	http://www.opengis.net/gml/3.2
Annotations	Extension to the respective XML Schema built-in simple type to allow a choice of either a value of the built-in simple type or a reason for a nil value.
Diagram	

Type	union of(gml:NilReasonEnumeration, string)

Source	`<simpleType name="stringOrNilReason">`
	`  <annotation>`
	`  <documentation>Extension to the respective XML Schema built-in simple type to allow a choice of either a value of the built-in simple type or a reason for a nil value.</documentation>`
	`  </annotation>`
	`  <union memberTypes="gml:NilReasonEnumeration string"/>`
	`</simpleType>`

Simple Type `gml:UomIdentifier`

Namespace	http://www.opengis.net/gml/3.2
Annotations	The simple type gml:UomIdentifer defines the syntax and value space of the unit of measure identifier.
Diagram	
Type	union of(gml:UomSymbol, gml:UomURI)
Used by	Attribute gml:MeasureType/@uom

Source	`<simpleType name="UomIdentifier">`
	`  <annotation>`
	`  <documentation>The simple type gml:UomIdentifer defines the syntax and value space of the unit of measure identifier.</documentation>`
	`  </annotation>`
	`  <union memberTypes="gml:UomSymbol gml:UomURI"/>`
	`</simpleType>`

Simple Type `gml:UomSymbol`

Namespace	http://www.opengis.net/gml/3.2
Annotations	This type specifies a character string of length at least one, and restricted such that it must not contain any of the following characters: ":" (colon), " " (space), (newline), (carriage return), (tab). This allows values corresponding to familiar abbreviations, such as "kg", "m/s", etc. It is recommended that the symbol be an identifier for a unit of measure as specified in the "Unified Code of Units of Measure" (UCUM) (http://aurora.regenstrief.org/UCUM). This provides a set of symbols and a grammar for constructing identifiers for units of measure that are unique, and may be easily entered with a keyboard supporting the limited character set known as 7-bit ASCII. ISO 2955 formerly provided a specification with this scope, but was withdrawn in 2001. UCUM largely follows ISO 2955 with modifications to remove ambiguities and other problems.
Diagram	
Type	restriction of string
Facets	pattern [^: /n/r/t]+

Source	`<simpleType name="UomSymbol">`
	`  <annotation>`
	`  <documentation>This type specifies a character string of length at least one, and restricted such that it must not contain any of the following characters: ":" (colon), " " (space), (newline), (carriage return), (tab). This allows values corresponding to familiar abbreviations, such as`

```
 "kg", "m/s", etc. It is recommended that the symbol be an identifier for a unit of measure as
 specified in the "Unified Code of Units of Measure" (UCUM) (http://aurora.regenstrief.org/UCUM).
 This provides a set of symbols and a grammar for constructing identifiers for units of measure that
 are unique, and may be easily entered with a keyboard supporting the limited character set known
 as 7-bit ASCII. ISO 2955 formerly provided a specification with this scope, but was withdrawn in
 2001. UCUM largely follows ISO 2955 with modifications to remove ambiguities and other problems.</
documentation>
  </annotation>
  <restriction base="string">
    <pattern value="[^: /n/r/t]+"/>
  </restriction>
</simpleType>
```

Simple Type `gml:UomURI`

Namespace	http://www.opengis.net/gml/3.2
Annotations	This type specifies a URI, restricted such that it must start with one of the following sequences: "#", "./", "../", or a string of characters followed by a ":". These patterns ensure that the most common URI forms are supported, including absolute and relative URIs and URIs that are simple fragment identifiers, but prohibits certain forms of relative URI that could be mistaken for unit of measure symbol . NOTE It is possible to re-write such a relative URI to conform to the restriction (e.g. "./m/s"). In an instance document, on elements of type gml:MeasureType the mandatory uom attribute shall carry a value corresponding to either - a conventional unit of measure symbol, - a link to a definition of a unit of measure that does not have a conventional symbol, or when it is desired to indicate a precise or variant definition.
Diagram	
Type	restriction of anyURI
Facets	pattern `([a-zA-Z][a-zA-Z0-9/-/+/.]*:|/././|/./|#).*`

Source	`<simpleType name="UomURI">`
	`  <annotation>`
	`  <documentation>`This type specifies a URI, restricted such that it must start with one of the following sequences: "#", "./", "../", or a string of characters followed by a ":". These patterns ensure that the most common URI forms are supported, including absolute and relative URIs and URIs that are simple fragment identifiers, but prohibits certain forms of relative URI that could be mistaken for unit of measure symbol . NOTE It is possible to re-write such a relative URI to conform to the restriction (e.g. "./m/s"). In an instance document, on elements of type gml:MeasureType the mandatory uom attribute shall carry a value corresponding to either - a conventional unit of measure symbol, - a link to a definition of a unit of measure that does not have a conventional symbol, or when it is desired to indicate a precise or variant definition.`</documentation>`
	`  </annotation>`
	`  <restriction base="anyURI">`
	`  <pattern value="([a-zA-Z][a-zA-Z0-9/-/+/.]*:|/././|/./|#).*"/>`
	`  </restriction>`
	`</simpleType>`

Attribute(s)

Attribute `@gml:id`

Namespace	http://www.opengis.net/gml/3.2
Annotations	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.
Type	ID
Properties	content: `simple`
Used by	Complex Type gml:AbstractGMLType
Source	`<attribute name="id" type="ID">` `  <annotation>`

```
    <documentation>The attribute gml:id supports provision of a handle for the XML element
 representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is
 constrained to be unique in the XML document within which it occurs.</documentation>
  </annotation>
</attribute>
```

Element Group(s)

Element Group `gml:geometricPositionGroup`

Namespace	http://www.opengis.net/gml/3.2
Annotations	GML supports two different ways to specify a geometric position: either by a direct position (a data type) or a point (a geometric object). pos elements are positions that are "owned" by the geometric primitive encapsulating this geometric position. pointProperty elements contain a point that may be referenced from other geometry elements or reference another point defined elsewhere (reuse of existing points).
Diagram	
Used by	Complex Types gml:GeodesicStringType, gml:GeodesicType
Model	gml:pos | gml:pointProperty
Children	gml:pointProperty, gml:pos
Source	`<group name="geometricPositionGroup">` `  <annotation>` ` <documentation>GML supports two different ways to specify a geometric position: either by a direct position (a data type) or a point (a geometric object). pos elements are positions that are "owned" by the geometric primitive encapsulating this geometric position. pointProperty elements contain a point that may be referenced from other geometry elements or reference another point defined elsewhere (reuse of existing points).</documentation>` ` </annotation>` ` <choice>` ` <element ref="gml:pos"/>` ` <element ref="gml:pointProperty"/>` ` </choice>` `</group>`

Attribute Group(s)

Attribute Group `gml:SRSReferenceGroup`

Namespace	http://www.opengis.net/gml/3.2
Annotations	The attribute group SRSReferenceGroup is an optional reference to the CRS used by this geometry, with optional additional information to simplify the processing of the coordinates when a more complete definition of the CRS is not needed. In general the attribute srsName points to a CRS instance of gml:AbstractCoordinateReferenceSystem. For well-known references it is not required that the CRS description exists at the location the URI points to. If no srsName attribute is given, the CRS shall be specified as part of the larger context this geometry element is part of.
Diagram	
Used by	Complex Types gml:AbstractGeometryType, gml:DirectPositionListType, gml:DirectPositionType, gml:EnvelopeType
Attributes	**QName** / **Type** / **Use** **srsDimension** / positiveInteger / optional

	QName	Type	Use	
	srsName	anyURI	optional	

Source

```
<attributeGroup name="SRSReferenceGroup">
  <annotation>
    <documentation>The attribute group SRSReferenceGroup is an optional reference to the CRS used by
 this geometry, with optional additional information to simplify the processing of the coordinates
 when a more complete definition of the CRS is not needed. In general the attribute srsName points
 to a CRS instance of gml:AbstractCoordinateReferenceSystem. For well-known references it is not
 required that the CRS description exists at the location the URI points to. If no srsName attribute
 is given, the CRS shall be specified as part of the larger context this geometry element is part
 of.</documentation>
  </annotation>
  <attribute name="srsName" type="anyURI"/>
  <attribute name="srsDimension" type="positiveInteger"/>
</attributeGroup>
```

Attribute Group `gml:AssociationAttributeGroup`

Namespace	http://www.opengis.net/gml/3.2
Annotations	XLink components are the standard method to support hypertext referencing in XML. An XML Schema attribute group, gml:AssociationAttributeGroup, is provided to support the use of Xlinks as the method for indicating the value of a property by reference in a uniform manner in GML.
Diagram	

Used by	Complex Types	CompositeCurvePropertyType, CurvePropertyType, FeaturePropertyType, InformationPropertyType, InverseInformationAssociationType, MultiPointPropertyType, OrientableCurvePropertyType, PointPropertyType, PolygonPropertyType, SurfacePropertyType, gml:AssociationRoleType, gml:CurvePropertyType, gml:FeaturePropertyType, gml:GeometricPrimitivePropertyType, gml:PointPropertyType, gml:ReferenceType, gml:SurfacePropertyType

Attributes

QName	Type	Fixed	Use	
nilReason	gml:NilReasonType		optional	
xlink:actuate	xlink:actuateType		optional	
xlink:arcrole	xlink:arcroleType		optional	
xlink:href	xlink:hrefType		optional	
xlink:role	xlink:roleType		optional	
xlink:show	xlink:showType		optional	
xlink:title	xlink:titleAttrType		optional	
xlink:type	xlink:typeType	simple	optional	

Source	`<attributeGroup name="AssociationAttributeGroup">` `  <annotation>` ` <documentation>XLink components are the standard method to support hypertext referencing in XML. An XML Schema attribute group, gml:AssociationAttributeGroup, is provided to support the use of Xlinks as the method for indicating the value of a property by reference in a uniform manner in GML.</documentation>` ` </annotation>` ` <attributeGroup ref="xlink:simpleAttrs"/>` ` <attribute name="nilReason" type="gml:NilReasonType"/>` `</attributeGroup>`

Attribute Group `gml:OwnershipAttributeGroup`

Namespace	http://www.opengis.net/gml/3.2
Annotations	Encoding a GML property inline vs. by-reference shall not imply anything about the "ownership" of the contained or referenced GML Object, i.e. the encoding style shall not imply any "deep-copy" or "deep-delete" semantics. To express ownership over the contained or referenced GML Object, the gml:OwnershipAttributeGroup attribute group may be added to object-valued property elements. If the attribute group is not part of the content model of such a property element, then the value may not be "owned". When the value of the owns attribute is "true", the existence of inline or referenced object(s) depends upon the existence of the parent object.
Diagram	
Used by	Complex Types: gml:AbstractFeatureMemberType, gml:AbstractMemberType, gml:AbstractMetadataPropertyType, gml:AssociationRoleType, gml:CurvePropertyType, gml:FeaturePropertyType, gml:GeometricPrimitivePropertyType, gml:InlinePropertyType, gml:PointPropertyType, gml:ReferenceType, gml:SurfacePropertyType

Attributes

QName	Type	Default	Use
owns	boolean	false	optional

Source

```
<attributeGroup name="OwnershipAttributeGroup">
  <annotation>
    <documentation>Encoding a GML property inline vs. by-reference shall not imply anything about
 the "ownership" of the contained or referenced GML Object, i.e. the encoding style shall not imply
 any "deep-copy" or "deep-delete" semantics. To express ownership over the contained or referenced
 GML Object, the gml:OwnershipAttributeGroup attribute group may be added to object-valued property
 elements. If the attribute group is not part of the content model of such a property element, then
 the value may not be "owned". When the value of the owns attribute is "true", the existence of
 inline or referenced object(s) depends upon the existence of the parent object.</documentation>
  </annotation>
  <attribute name="owns" type="boolean" default="false"/>
</attributeGroup>
```

Attribute Group `gml:AggregationAttributeGroup`

Namespace	http://www.opengis.net/gml/3.2
Annotations	A GML Object Collection is any GML Object with a property element in its content model whose content model is derived by extension from gml:AbstractMemberType. In addition, the complex type describing the content model of the GML Object Collection may also include a reference to the attribute group gml:AggregationAttributeGroup to provide additional information about the semantics of the object collection. This information may be used by applications to group GML objects, and optionally to order and index them. The allowed values for the aggregationType attribute are defined by gml:AggregationType. See 8.4 of ISO/IEC 11404:1996 for the meaning of the values in the enumeration.
Diagram	
Used by	Complex Types: gml:AbstractGeometricAggregateType, gml:CompositeCurveType, gml:RingType

Attributes	QName	Type	Use	
	aggregationType	gml:AggregationType	optional	

Source

```
<attributeGroup name="AggregationAttributeGroup">
  <annotation>
    <documentation>A GML Object Collection is any GML Object with a property element in its content
 model whose content model is derived by extension from gml:AbstractMemberType. In addition, the
 complex type describing the content model of the GML Object Collection may also include a reference
 to the attribute group gml:AggregationAttributeGroup to provide additional information about
 the semantics of the object collection. This information may be used by applications to group
 GML objects, and optionally to order and index them. The allowed values for the aggregationType
 attribute are defined by gml:AggregationType. See 8.4 of ISO/IEC 11404:1996 for the meaning of the
 values in the enumeration.</documentation>
  </annotation>
  <attribute name="aggregationType" type="gml:AggregationType"/>
</attributeGroup>
```

Namespace: "http://www.w3.org/1999/xlink"

Schema(s)

Imported schema `xlink.xsd`

Namespace	http://www.w3.org/1999/xlink
Annotations	This schema is not normative, or even definitive. The prose copy in the XLink 1.1 recommendation (http://www.w3.org/TR/xlink11/) is definitive, although it should not differ from this file, except for the absence of these two initial comments. In keeping with the W3C's standard versioning policy, this schema document will persist at http://www.w3.org/XML/2008/06/xlink.xsd. At the date of issue it can also be found at http://www.w3.org/1999/xlink.xsd. The schema document at that URI may however change in the future, in order to remain compatible with the latest version of XML Schema itself, or with the XLink namespace itself. In other words, if the XML Schema or XLink namespaces change, the version of this document at http://www.w3.org/1999/xlink.xsd will change accordingly; the version at http://www.w3.org/2008/06/xlink.xsd will not change. This schema document provides attribute declarations and attribute group, complex type and simple type definitions which can be used in the construction of user schemas to define the structure of particular linking constructs, e.g.<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns:xl="http://www.w3.org/1999/xlink"> <xs:import namespace="http://www.w3.org/1999/xlink" location="http://www.w3.org/1999/xlink.xsd">… <xs:element name="mySimple">… <xs:complexType>… <xs:attributeGroup ref="xl:simpleAttrs"/>… </xs:complexType> </xs:element> … </xs:schema>
Properties	attribute form default: `unqualified` element form default: `unqualified`

Element(s)

Element `xlink:title`

Namespace	http://www.w3.org/1999/xlink

Diagram	
Type	xlink:titleEltType
Properties	content: `complex` abstract: `true` mixed: `true`
Used by	Element Groups xlink:arcModel, xlink:extendedModel, xlink:locatorModel
Model	ANY element from ANY namespace

Attributes

QName	Type	Fixed	Use	
xlink:type	xlink:typeType	title	required	
xml:lang	union of(xs:language, restriction of xs:string)		optional	
	`Attempting to install the relevant ISO 2- and 3-letter codes as the enumerated possible values is probably never going to be a realistic possibility. See RFC 3066 at http://www.ietf.org/rfc/rfc3066.txt and the IANA registry at http://www.iana.org/assignments/lang-tag-apps.htm for further information.`  `The union allows for the 'un-declaration' of xml:lang with the empty string.`			

Source

```
<xs:element name="title" type="xlink:titleEltType" abstract="true"/>
```

Element `xlink:resource`

Namespace	http://www.w3.org/1999/xlink
Diagram	
Type	xlink:resourceType

Properties	content:	complex
	abstract:	true
	mixed:	true
Used by	Element Group	xlink:extendedModel
Model	ANY element from ANY namespace	

Attributes	QName	Type	Fixed	Use
	xlink:label	xlink:labelType		optional
	xlink:role	xlink:roleType		optional
	xlink:title	xlink:titleAttrType		optional
	xlink:type	xlink:typeType	resource	required

Source

```
<xs:element name="resource" type="xlink:resourceType" abstract="true"/>
```

Element `xlink:locator`

Namespace	http://www.w3.org/1999/xlink

Diagram

Type	xlink:locatorType	
Properties	content:	complex
	abstract:	true
Used by	Element Group	xlink:extendedModel
Model	xlink:title*	
Children	xlink:title	

Instance

```
<xlink:locator xlink:href="" xlink:label="" xlink:role="" xlink:title="" xlink:type="locator" xmlns:xlink="http://
www.w3.org/1999/xlink">
  <xlink:title xml:lang="" xlink:type="title">{0,unbounded}</xlink:title>
</xlink:locator>
```

Attributes	QName	Type	Fixed	Use
	xlink:href	xlink:hrefType		required
	xlink:label	xlink:labelType		optional
	xlink:role	xlink:roleType		optional
	xlink:title	xlink:titleAttrType		optional
	xlink:type	xlink:typeType	locator	required

Source

```
<xs:element name="locator" type="xlink:locatorType" abstract="true"/>
```

Element `xlink:arc`

Namespace	http://www.w3.org/1999/xlink

Diagram	
Type	xlink:arcType
Properties	content: `complex` abstract: `true`
Used by	Element Group xlink:extendedModel
Model	xlink:title*
Children	xlink:title

Instance	`<xlink:arc xlink:actuate="" xlink:arcrole="" xlink:from="" xlink:show="" xlink:title="" xlink:to="" xlink:type="arc www.w3.org/1999/xlink">`
	`  <xlink:title xml:lang="" xlink:type="title">{0,unbounded}</xlink:title>`
	`</xlink:arc>`

Attributes	

QName	Type	Fixed	Use	
xlink:actuate	xlink:actuateType		optional	
xlink:arcrole	xlink:arcroleType		optional	
xlink:from	xlink:fromType		optional	
xlink:show	xlink:showType		optional	
xlink:title	xlink:titleAttrType		optional	
xlink:to	xlink:toType		optional	
xlink:type	xlink:typeType	arc	required	

Source	`<xs:element name="arc" type="xlink:arcType" abstract="true"/>`

Simple Type(s)

Simple Type `xlink:typeType`

Namespace	http://www.w3.org/1999/xlink
Diagram	
Type	restriction of xs:token
Facets	enumeration `simple` enumeration `extended` enumeration `title` enumeration `resource` enumeration `locator` enumeration `arc`

Used by	Attribute @xlink:type

Source	`<xs:simpleType name="typeType">`
	`  <xs:restriction base="xs:token">`
	`  <xs:enumeration value="simple"/>`
	`  <xs:enumeration value="extended"/>`
	`  <xs:enumeration value="title"/>`
	`  <xs:enumeration value="resource"/>`
	`  <xs:enumeration value="locator"/>`
	`  <xs:enumeration value="arc"/>`
	`  </xs:restriction>`
	`</xs:simpleType>`

Simple Type `xlink:hrefType`

Namespace	http://www.w3.org/1999/xlink
Diagram	
Type	xs:anyURI
Used by	Attribute @xlink:href

Source	`<xs:simpleType name="hrefType">`
	`  <xs:restriction base="xs:anyURI"/>`
	`</xs:simpleType>`

Simple Type `xlink:roleType`

Namespace	http://www.w3.org/1999/xlink
Diagram	
Type	restriction of xs:anyURI
Facets	minLength 1
Used by	Attribute @xlink:role

Source	`<xs:simpleType name="roleType">`
	`  <xs:restriction base="xs:anyURI">`
	`  <xs:minLength value="1"/>`
	`  </xs:restriction>`
	`</xs:simpleType>`

Simple Type `xlink:arcroleType`

Namespace	http://www.w3.org/1999/xlink
Diagram	
Type	restriction of xs:anyURI
Facets	minLength 1
Used by	Attribute @xlink:arcrole

Source	`<xs:simpleType name="arcroleType">`
	`  <xs:restriction base="xs:anyURI">`
	`  <xs:minLength value="1"/>`

```
  </xs:restriction>
</xs:simpleType>
```

Simple Type `xlink:titleAttrType`

Namespace	http://www.w3.org/1999/xlink
Diagram	
Type	xs:string
Used by	Attribute @xlink:title

Source	`<xs:simpleType name="titleAttrType">`
	`  <xs:restriction base="xs:string"/>`
	`</xs:simpleType>`

Simple Type `xlink:showType`

Namespace	http://www.w3.org/1999/xlink
Diagram	
Type	restriction of xs:token
Facets	enumeration `new` enumeration `replace` enumeration `embed` enumeration `other` enumeration `none`
Used by	Attribute @xlink:show

Source	`<xs:simpleType name="showType">`
	`  <xs:restriction base="xs:token">`
	`  <xs:enumeration value="new"/>`
	`  <xs:enumeration value="replace"/>`
	`  <xs:enumeration value="embed"/>`
	`  <xs:enumeration value="other"/>`
	`  <xs:enumeration value="none"/>`
	`  </xs:restriction>`
	`</xs:simpleType>`

Simple Type `xlink:actuateType`

Namespace	http://www.w3.org/1999/xlink
Diagram	
Type	restriction of xs:token
Facets	enumeration `onLoad` enumeration `onRequest` enumeration `other` enumeration `none`
Used by	Attribute @xlink:actuate

Source	<xs:simpleType name="actuateType"> <xs:restriction base="xs:token"> <xs:enumeration value="onLoad"/> <xs:enumeration value="onRequest"/> <xs:enumeration value="other"/> <xs:enumeration value="none"/> </xs:restriction> </xs:simpleType>

Simple Type `xlink:labelType`

Namespace	http://www.w3.org/1999/xlink
Diagram	
Type	xs:NCName
Used by	Attribute @xlink:label
Source	<xs:simpleType name="labelType"> <xs:restriction base="xs:NCName"/> </xs:simpleType>

Simple Type `xlink:fromType`

Namespace	http://www.w3.org/1999/xlink
Diagram	
Type	xs:NCName
Used by	Attribute @xlink:from
Source	<xs:simpleType name="fromType"> <xs:restriction base="xs:NCName"/> </xs:simpleType>

Simple Type `xlink:toType`

Namespace	http://www.w3.org/1999/xlink
Diagram	
Type	xs:NCName
Used by	Attribute @xlink:to
Source	<xs:simpleType name="toType"> <xs:restriction base="xs:NCName"/> </xs:simpleType>

Complex Type(s)

Complex Type `xlink:simple`

Namespace	http://www.w3.org/1999/xlink
Annotations	Intended for use as the type of user-declared elements to make them simple links.

Diagram	
Properties	mixed: `true`
Model	ANY element from ANY namespace

Attributes

QName	Type	Fixed	Use	
xlink:actuate	xlink:actuateType		optional	
xlink:arcrole	xlink:arcroleType		optional	
xlink:href	xlink:hrefType		optional	
xlink:role	xlink:roleType		optional	
xlink:show	xlink:showType		optional	
xlink:title	xlink:titleAttrType		optional	
xlink:type	xlink:typeType	simple	optional	

Source

```
<xs:complexType mixed="true" name="simple">
  <xs:annotation>
    <xs:documentation>Intended for use as the type of user-declared elements to make them simple
 links.</xs:documentation>
  </xs:annotation>
  <xs:group ref="xlink:simpleModel"/>
  <xs:attributeGroup ref="xlink:simpleAttrs"/>
</xs:complexType>
```

Complex Type `xlink:titleEltType`

Namespace	http://www.w3.org/1999/xlink
Diagram	
Properties	mixed: `true`
Used by	Element xlink:title
Model	ANY element from ANY namespace

Attributes

QName	Type	Fixed	Use	
xlink:type	xlink:typeType	title	required	
xml:lang	union of(xs:language, restriction of xs:string)		optional	

	QName	Type	Fixed	Use	
		Attempting to install the relevant ISO 2- and 3-letter codes as the enumerated possible values is probably never going to be a realistic possibility. See RFC 3066 at http://www.ietf.org/rfc/rfc3066.txt and the IANA registry at http://www.iana.org/assignments/lang-tag-apps.htm for further information. The union allows for the 'un-declaration' of xml:lang with the empty string.			

Source

```
<xs:complexType mixed="true" name="titleEltType">
  <xs:group ref="xlink:titleModel"/>
  <xs:attributeGroup ref="xlink:titleAttrs"/>
</xs:complexType>
```

Complex Type `xlink:resourceType`

Namespace: http://www.w3.org/1999/xlink

Diagram

Properties: mixed: `true`

Used by: Element xlink:resource

Model: ANY element from ANY namespace

Attributes

QName	Type	Fixed	Use	
xlink:label	xlink:labelType		optional	
xlink:role	xlink:roleType		optional	
xlink:title	xlink:titleAttrType		optional	
xlink:type	xlink:typeType	resource	required	

Source

```
<xs:complexType mixed="true" name="resourceType">
  <xs:group ref="xlink:resourceModel"/>
  <xs:attributeGroup ref="xlink:resourceAttrs"/>
</xs:complexType>
```

Complex Type `xlink:locatorType`

Namespace: http://www.w3.org/1999/xlink

Diagram

Used by	Element xlink:locator
Model	xlink:title*
Children	xlink:title
Attributes	

QName	Type	Fixed	Use
xlink:href	xlink:hrefType		required
xlink:label	xlink:labelType		optional
xlink:role	xlink:roleType		optional
xlink:title	xlink:titleAttrType		optional
xlink:type	xlink:typeType	locator	required

Source

```
<xs:complexType name="locatorType">
  <xs:group ref="xlink:locatorModel"/>
  <xs:attributeGroup ref="xlink:locatorAttrs"/>
</xs:complexType>
```

Complex Type `xlink:arcType`

Namespace	http://www.w3.org/1999/xlink
Diagram	

Used by	Element xlink:arc
Model	xlink:title*
Children	xlink:title
Attributes	

QName	Type	Fixed	Use
xlink:actuate	xlink:actuateType		optional
xlink:arcrole	xlink:arcroleType		optional
xlink:from	xlink:fromType		optional
xlink:show	xlink:showType		optional
xlink:title	xlink:titleAttrType		optional
xlink:to	xlink:toType		optional
xlink:type	xlink:typeType	arc	required

Source

```
<xs:complexType name="arcType">
  <xs:group ref="xlink:arcModel"/>
  <xs:attributeGroup ref="xlink:arcAttrs"/>
</xs:complexType>
```

Complex Type `xlink:extended`

Namespace	http://www.w3.org/1999/xlink
Annotations	Intended for use as the type of user-declared elements to make them extended links. Note that the elements referenced in the content model are all abstract. The intention is that by simply declaring elements with these as their substitutionGroup, all the right things will happen.

Diagram	
Model	xlink:title | xlink:resource | xlink:locator | xlink:arc
Children	xlink:arc, xlink:locator, xlink:resource, xlink:title

Attributes

QName	Type	Fixed	Use	
xlink:role	xlink:roleType		optional	
xlink:title	xlink:titleAttrType		optional	
xlink:type	xlink:typeType	extended	required	

Source

```
<xs:complexType name="extended">
  <xs:annotation>
    <xs:documentation>Intended for use as the type of user-declared elements to make them extended
 links. Note that the elements referenced in the content model are all abstract. The intention is
 that by simply declaring elements with these as their substitutionGroup, all the right things will
 happen.</xs:documentation>
  </xs:annotation>
  <xs:group ref="xlink:extendedModel" minOccurs="0" maxOccurs="unbounded"/>
  <xs:attributeGroup ref="xlink:extendedAttrs"/>
</xs:complexType>
```

Attribute(s)

Attribute `@xlink:type`

Namespace	http://www.w3.org/1999/xlink	
Type	xlink:typeType	
Properties	content:	`simple`
Facets	enumeration	`simple`
	enumeration	`extended`
	enumeration	`title`
	enumeration	`resource`
	enumeration	`locator`
	enumeration	`arc`
Used by	Attribute Groups	xlink:arcAttrs, xlink:extendedAttrs, xlink:locatorAttrs, xlink:resourceAttrs, xlink:simpleAttrs, xlink:titleAttrs
Source	`<xs:attribute name="type" type="xlink:typeType"/>`	

Attribute `@xlink:href`

Namespace	http://www.w3.org/1999/xlink

Type	xlink:hrefType
Properties	content: simple
Used by	Attribute Groups xlink:locatorAttrs, xlink:simpleAttrs
Source	`<xs:attribute name="href" type="xlink:hrefType"/>`

Attribute @xlink:role

Namespace	http://www.w3.org/1999/xlink
Type	xlink:roleType
Properties	content: simple
Facets	minLength 1
Used by	Attribute Groups xlink:extendedAttrs, xlink:locatorAttrs, xlink:resourceAttrs, xlink:simpleAttrs
Source	`<xs:attribute name="role" type="xlink:roleType"/>`

Attribute @xlink:arcrole

Namespace	http://www.w3.org/1999/xlink
Type	xlink:arcroleType
Properties	content: simple
Facets	minLength 1
Used by	Attribute Groups xlink:arcAttrs, xlink:simpleAttrs
Source	`<xs:attribute name="arcrole" type="xlink:arcroleType"/>`

Attribute @xlink:title

Namespace	http://www.w3.org/1999/xlink
Type	xlink:titleAttrType
Properties	content: simple
Used by	Attribute Groups xlink:arcAttrs, xlink:extendedAttrs, xlink:locatorAttrs, xlink:resourceAttrs, xlink:simpleAttrs
Source	`<xs:attribute name="title" type="xlink:titleAttrType"/>`

Attribute @xlink:show

Namespace	http://www.w3.org/1999/xlink
Type	xlink:showType
Properties	content: simple
Facets	enumeration new enumeration replace enumeration embed enumeration other enumeration none
Used by	Attribute Groups xlink:arcAttrs, xlink:simpleAttrs
Source	`<xs:attribute name="show" type="xlink:showType"/>`

Attribute @xlink:actuate

Namespace	http://www.w3.org/1999/xlink
Type	xlink:actuateType

Properties	content:	simple
Facets	enumeration	onLoad
	enumeration	onRequest
	enumeration	other
	enumeration	none
Used by	Attribute Groups	xlink:arcAttrs, xlink:simpleAttrs
Source	`<xs:attribute name="actuate" type="xlink:actuateType"/>`	

Attribute @xlink:label

Namespace	http://www.w3.org/1999/xlink
Type	xlink:labelType
Properties	content: simple
Used by	Attribute Groups: xlink:locatorAttrs, xlink:resourceAttrs
Source	`<xs:attribute name="label" type="xlink:labelType"/>`

Attribute @xlink:from

Namespace	http://www.w3.org/1999/xlink
Type	xlink:fromType
Properties	content: simple
Used by	Attribute Group: xlink:arcAttrs
Source	`<xs:attribute name="from" type="xlink:fromType"/>`

Attribute @xlink:to

Namespace	http://www.w3.org/1999/xlink
Type	xlink:toType
Properties	content: simple
Used by	Attribute Group: xlink:arcAttrs
Source	`<xs:attribute name="to" type="xlink:toType"/>`

Element Group(s)

Element Group xlink:simpleModel

Namespace	http://www.w3.org/1999/xlink
Diagram	
Used by	Complex Type: xlink:simple
Model	ANY element from ANY namespace

Source	`<xs:group name="simpleModel">`
	`  <xs:sequence>`
	`  <xs:any processContents="lax" minOccurs="0" maxOccurs="unbounded"/>`
	`  </xs:sequence>`
	`</xs:group>`

Element Group xlink:extendedModel

Namespace	http://www.w3.org/1999/xlink

Diagram	
Used by	Complex Type xlink:extended
Model	xlink:title | xlink:resource | xlink:locator | xlink:arc
Children	xlink:arc, xlink:locator, xlink:resource, xlink:title

Source	`<xs:group name="extendedModel">`
	`  <xs:choice>`
	`  <xs:element ref="xlink:title"/>`
	`  <xs:element ref="xlink:resource"/>`
	`  <xs:element ref="xlink:locator"/>`
	`  <xs:element ref="xlink:arc"/>`
	`  </xs:choice>`
	`</xs:group>`

Element Group `xlink:titleModel`

Namespace	http://www.w3.org/1999/xlink
Diagram	
Used by	Complex Type xlink:titleEltType
Model	ANY element from ANY namespace

Source	`<xs:group name="titleModel">`
	`  <xs:sequence>`
	`  <xs:any processContents="lax" minOccurs="0" maxOccurs="unbounded"/>`
	`  </xs:sequence>`
	`</xs:group>`

Element Group `xlink:resourceModel`

Namespace	http://www.w3.org/1999/xlink
Diagram	
Used by	Complex Type xlink:resourceType
Model	ANY element from ANY namespace

Source	`<xs:group name="resourceModel">`
	`  <xs:sequence>`
	`  <xs:any processContents="lax" minOccurs="0" maxOccurs="unbounded"/>`
	`  </xs:sequence>`
	`</xs:group>`

Element Group `xlink:locatorModel`

Namespace	http://www.w3.org/1999/xlink
Diagram	
Used by	Complex Type xlink:locatorType
Model	xlink:title*
Children	xlink:title
Source	`<xs:group name="locatorModel">`

```
  <xs:sequence>
    <xs:element ref="xlink:title" minOccurs="0" maxOccurs="unbounded"/>
  </xs:sequence>
</xs:group>
```

Element Group `xlink:arcModel`

Namespace	http://www.w3.org/1999/xlink
Diagram	
Used by	Complex Type xlink:arcType
Model	xlink:title*
Children	xlink:title

Source	`<xs:group name="arcModel">`
	`  <xs:sequence>`
	`  <xs:element ref="xlink:title" minOccurs="0" maxOccurs="unbounded"/>`
	`  </xs:sequence>`
	`</xs:group>`

Attribute Group(s)

Attribute Group `xlink:simpleAttrs`

Namespace	http://www.w3.org/1999/xlink
Diagram	
Used by	Attribute Group gml:AssociationAttributeGroup Complex Type xlink:simple
Attributes	

QName	Type	Fixed	Use	
xlink:actuate	xlink:actuateType		optional	
xlink:arcrole	xlink:arcroleType		optional	
xlink:href	xlink:hrefType		optional	
xlink:role	xlink:roleType		optional	
xlink:show	xlink:showType		optional	
xlink:title	xlink:titleAttrType		optional	
xlink:type	xlink:typeType	simple	optional	

Source

```
<xs:attributeGroup name="simpleAttrs">
  <xs:attribute ref="xlink:type" fixed="simple"/>
  <xs:attribute ref="xlink:href"/>
  <xs:attribute ref="xlink:role"/>
  <xs:attribute ref="xlink:arcrole"/>
  <xs:attribute ref="xlink:title"/>
  <xs:attribute ref="xlink:show"/>
  <xs:attribute ref="xlink:actuate"/>
```

```
</xs:attributeGroup>
```

Attribute Group `xlink:extendedAttrs`

Namespace	http://www.w3.org/1999/xlink
Diagram	
Used by	Complex Type xlink:extended

Attributes

QName	Type	Fixed	Use
xlink:role	xlink:roleType		optional
xlink:title	xlink:titleAttrType		optional
xlink:type	xlink:typeType	extended	required

Source

```
<xs:attributeGroup name="extendedAttrs">
  <xs:attribute ref="xlink:type" fixed="extended" use="required"/>
  <xs:attribute ref="xlink:role"/>
  <xs:attribute ref="xlink:title"/>
</xs:attributeGroup>
```

Attribute Group `xlink:titleAttrs`

Namespace	http://www.w3.org/1999/xlink
Diagram	
Used by	Complex Type xlink:titleEltType

Attributes

QName	Type	Fixed	Use
xlink:type	xlink:typeType	title	required
xml:lang	union of(xs:language, restriction of xs:string)		optional
	Attempting to install the relevant ISO 2- and 3-letter codes as the enumerated possible values is probably never going to be a realistic possibility. See RFC 3066 at http://www.ietf.org/rfc/rfc3066.txt and the IANA registry at http://www.iana.org/assignments/lang-tag-apps.htm for further information. The union allows for the 'un-declaration' of xml:lang with the empty string.		

Source

```
<xs:attributeGroup name="titleAttrs">
  <xs:attribute ref="xlink:type" fixed="title" use="required"/>
  <xs:attribute ref="xml:lang">
    <xs:annotation>
      <xs:documentation>xml:lang is not required, but provides much of the motivation for title
 elements in addition to attributes, and so is provided here for convenience.</xs:documentation>
    </xs:annotation>
  </xs:attribute>
</xs:attributeGroup>
```

Attribute Group `xlink:resourceAttrs`

Namespace	http://www.w3.org/1999/xlink

Diagram	
Used by	Complex Type xlink:resourceType

Attributes

QName	Type	Fixed	Use	
xlink:label	xlink:labelType		optional	
xlink:role	xlink:roleType		optional	
xlink:title	xlink:titleAttrType		optional	
xlink:type	xlink:typeType	resource	required	

Source

```
<xs:attributeGroup name="resourceAttrs">
  <xs:attribute ref="xlink:type" fixed="resource" use="required"/>
  <xs:attribute ref="xlink:role"/>
  <xs:attribute ref="xlink:title"/>
  <xs:attribute ref="xlink:label"/>
</xs:attributeGroup>
```

Attribute Group `xlink:locatorAttrs`

Namespace	http://www.w3.org/1999/xlink
Diagram	
Used by	Complex Type xlink:locatorType

Attributes

QName	Type	Fixed	Use	
xlink:href	xlink:hrefType		required	
xlink:label	xlink:labelType		optional	
xlink:role	xlink:roleType		optional	
xlink:title	xlink:titleAttrType		optional	
xlink:type	xlink:typeType	locator	required	

Source

```
<xs:attributeGroup name="locatorAttrs">
  <xs:attribute ref="xlink:type" fixed="locator" use="required"/>
  <xs:attribute ref="xlink:href" use="required"/>
  <xs:attribute ref="xlink:role"/>
  <xs:attribute ref="xlink:title"/>
  <xs:attribute ref="xlink:label">
    <xs:annotation>
      <xs:documentation>label is not required, but locators have no particular XLink function if
 they are not labeled.</xs:documentation>
    </xs:annotation>
```

```
  </xs:attribute>
</xs:attributeGroup>
```

Attribute Group `xlink:arcAttrs`

Namespace	http://www.w3.org/1999/xlink
Diagram	
Used by	Complex Type xlink:arcType

Attributes

QName	Type	Fixed	Use	
xlink:actuate	xlink:actuateType		optional	
xlink:arcrole	xlink:arcroleType		optional	
xlink:from	xlink:fromType		optional	
xlink:show	xlink:showType		optional	
xlink:title	xlink:titleAttrType		optional	
xlink:to	xlink:toType		optional	
xlink:type	xlink:typeType	arc	required	

Source

```
<xs:attributeGroup name="arcAttrs">
  <xs:attribute ref="xlink:type" fixed="arc" use="required"/>
  <xs:attribute ref="xlink:arcrole"/>
  <xs:attribute ref="xlink:title"/>
  <xs:attribute ref="xlink:show"/>
  <xs:attribute ref="xlink:actuate"/>
  <xs:attribute ref="xlink:from"/>
  <xs:attribute ref="xlink:to">
    <xs:annotation>
      <xs:documentation>from and to have default behavior when values are missing</xs:documentation>
    </xs:annotation>
  </xs:attribute>
</xs:attributeGroup>
```

Namespace: "http://www.w3.org/XML/1998/namespace"

Schema(s)

Imported schema `xml.xsd`

Namespace	http://www.w3.org/XML/1998/namespace
Annotations	See http://www.w3.org/XML/1998/namespace.html and http://www.w3.org/TR/REC-xml for information about this namespace. This schema document describes the XML namespace, in a form suitable for import by other schema documents. Note that local names in this namespace are intended to be defined

```
    only by the World Wide Web Consortium or its subgroups.  The
    following names are currently defined in this namespace and should
    not be used with conflicting semantics by any Working Group,
    specification, or document instance:

    base (as an attribute name): denotes an attribute whose value
         provides a URI to be used as the base for interpreting any
         relative URIs in the scope of the element on which it
         appears; its value is inherited.  This name is reserved
         by virtue of its definition in the XML Base specification.

    id   (as an attribute name): denotes an attribute whose value
         should be interpreted as if declared to be of type ID.
         This name is reserved by virtue of its definition in the
         xml:id specification.

    lang (as an attribute name): denotes an attribute whose value
         is a language code for the natural language of the content of
         any element; its value is inherited.  This name is reserved
         by virtue of its definition in the XML specification.

    space (as an attribute name): denotes an attribute whose
         value is a keyword indicating what whitespace processing
         discipline is intended for the content of the element; its
         value is inherited.  This name is reserved by virtue of its
         definition in the XML specification.

    Father (in any context at all): denotes Jon Bosak, the chair of
         the original XML Working Group.  This name is reserved by
         the following decision of the W3C XML Plenary and
         XML Coordination groups:

             In appreciation for his vision, leadership and dedication
             the W3C XML Plenary on this 10th day of February, 2000
             reserves for Jon Bosak in perpetuity the XML name
             xml:Father

This schema defines attributes and an attribute group
        suitable for use by
        schemas wishing to allow xml:base, xml:lang, xml:space or xml:id
        attributes on elements they define.

        To enable this, such a schema must import this schema
        for the XML namespace, e.g. as follows:
        <schema . . .>
         . . .
         <import namespace="http://www.w3.org/XML/1998/namespace"
                    schemaLocation="http://www.w3.org/2001/xml.xsd"/>

        Subsequently, qualified reference to any of the attributes
        or the group defined below will have the desired effect, e.g.

        <type . . .>
         . . .
         <attributeGroup ref="xml:specialAttrs"/>

         will define a type which will schema-validate an instance
         element with any of those attributes

In keeping with the XML Schema WG's standard versioning
policy, this schema document will persist at
http://www.w3.org/2007/08/xml.xsd.
At the date of issue it can also be found at
http://www.w3.org/2001/xml.xsd.
The schema document at that URI may however change in the future,
in order to remain compatible with the latest version of XML Schema
itself, or with the XML namespace itself.  In other words, if the XML
Schema or XML namespaces change, the version of this document at
http://www.w3.org/2001/xml.xsd will change
accordingly; the version at
http://www.w3.org/2007/08/xml.xsd will not change.
```

Properties		
	attribute form default:	`unqualified`
	element form default:	`unqualified`

Attribute(s)

Attribute `@xml:lang`

Namespace	http://www.w3.org/XML/1998/namespace

Annotations	Attempting to install the relevant ISO 2- and 3-letter codes as the enumerated possible values is probably never going to be a realistic possibility. See RFC 3066 at http://www.ietf.org/rfc/rfc3066.txt and the IANA registry at http://www.iana.org/assignments/lang-tag-apps.htm for further information. The union allows for the 'un-declaration' of xml:lang with the empty string.
Type	union of(xs:language, restriction of xs:string)
Properties	content: simple
Used by	Attribute Groups xlink:titleAttrs, xml:specialAttrs
Source	`<xs:attribute name="lang">` `  <xs:annotation>` ` <xs:documentation>Attempting to install the relevant ISO 2- and 3-letter codes as the enumerated possible values is probably never going to be a realistic possibility. See RFC 3066 at http://www.ietf.org/rfc/rfc3066.txt and the IANA registry at http://www.iana.org/assignments/lang-tag-apps.htm for further information. The union allows for the 'un-declaration' of xml:lang with the empty string.</xs:documentation>` ` </xs:annotation>` ` <xs:simpleType>` ` <xs:union memberTypes="xs:language">` ` <xs:simpleType>` ` <xs:restriction base="xs:string">` ` <xs:enumeration value=""/>` ` </xs:restriction>` ` </xs:simpleType>` ` </xs:union>` ` </xs:simpleType>` `</xs:attribute>`

Attribute `@xml:space`

Namespace	http://www.w3.org/XML/1998/namespace
Type	restriction of xs:NCName
Properties	content: simple
Facets	enumeration default enumeration preserve
Used by	Attribute Group xml:specialAttrs

Source	`<xs:attribute name="space">`
	`  <xs:simpleType>`
	`  <xs:restriction base="xs:NCName">`
	`  <xs:enumeration value="default"/>`
	`  <xs:enumeration value="preserve"/>`
	`  </xs:restriction>`
	`  </xs:simpleType>`
	`</xs:attribute>`

Attribute `@xml:base`

Namespace	http://www.w3.org/XML/1998/namespace
Annotations	See http://www.w3.org/TR/xmlbase/ for information about this attribute.
Type	xs:anyURI
Properties	content: simple
Used by	Attribute Group xml:specialAttrs

Source	`<xs:attribute name="base" type="xs:anyURI">`
	`  <xs:annotation>`
	`  <xs:documentation>See http://www.w3.org/TR/xmlbase/ for information about this attribute.</xs:documentation>`
	`  </xs:annotation>`
	`</xs:attribute>`

Attribute `@xml:id`

Namespace	http://www.w3.org/XML/1998/namespace

Annotations	`See http://www.w3.org/TR/xml-id/ for information about this attribute.`
Type	xs:ID
Properties	content: `simple`
Used by	Attribute Group xml:specialAttrs

Source	`<xs:attribute name="id" type="xs:ID">`
	`  <xs:annotation>`
	`  <xs:documentation>See http://www.w3.org/TR/xml-id/ for information about this attribute.</xs:documentation>`
	`  </xs:annotation>`
	`</xs:attribute>`

Attribute Group(s)

Attribute Group `xml:specialAttrs`

Namespace	http://www.w3.org/XML/1998/namespace
Diagram	

Attributes

QName	Type	Use	
xml:base	xs:anyURI	optional	
	`See http://www.w3.org/TR/xmlbase/ for information about this attribute.`		
xml:id	xs:ID	optional	
	`See http://www.w3.org/TR/xml-id/ for information about this attribute.`		
xml:lang	union of(xs:language, restriction of xs:string)	optional	
	`Attempting to install the relevant ISO 2- and 3-letter codes as the enumerated possible values is probably never going to be a realistic possibility. See RFC 3066 at http://www.ietf.org/rfc/rfc3066.txt and the IANA registry at http://www.iana.org/assignments/lang-tag-apps.htm for further information.`  `The union allows for the 'un-declaration' of xml:lang with the empty string.`		
xml:space	restriction of xs:NCName	optional	

Source

```
<xs:attributeGroup name="specialAttrs">
  <xs:attribute ref="xml:base"/>
  <xs:attribute ref="xml:lang"/>
  <xs:attribute ref="xml:space"/>
  <xs:attribute ref="xml:id"/>
</xs:attributeGroup>
```

Namespace: "http://www.iho.int/s100gml/1.0"

Schema(s)

Imported schema `s100gmlbase.xsd`

Namespace	http://www.iho.int/s100gml/1.0
Annotations	`IHO TSMAD S-100 common components schema for S-100 GML data format - April 2014.`
Properties	attribute form default: `unqualified` element form default: `qualified` version: `4.0.0-20180502`

Element(s)

Element `AbstractFeatureType / featureObjectIdentifier`

Namespace	http://www.iho.int/s100gml/1.0
Diagram	
Type	FeatureObjectIdentifier
Properties	content: `complex` minOccurs: `0`
Model	agency , featureIdentificationNumber , featureIdentificationSubdivision
Children	agency, featureIdentificationNumber, featureIdentificationSubdivision

Instance	`<featureObjectIdentifier xmlns="http://www.iho.int/s100gml/1.0">`
	`  <agency>{1,1}</agency>`
	`  <featureIdentificationNumber>{1,1}</featureIdentificationNumber>`
	`  <featureIdentificationSubdivision>{1,1}</featureIdentificationSubdivision>`
	`</featureObjectIdentifier>`

Source	`<xs:element name="featureObjectIdentifier" type="FeatureObjectIdentifier" minOccurs="0"/>`

Element `FeatureObjectIdentifier / agency`

Namespace	http://www.iho.int/s100gml/1.0
Diagram	
Type	AgencyCodeType
Properties	content: `simple`
Facets	pattern `[a-zA-z0-9][a-zA-z0-9]`
Source	`<xs:element name="agency" type="AgencyCodeType"/>`

Element `FeatureObjectIdentifier / featureIdentificationNumber`

Namespace	http://www.iho.int/s100gml/1.0

Diagram	
Type	IdentificationNumberType
Properties	content: `simple`
Facets	maxInclusive `4294967294`
Source	`<xs:element name="featureIdentificationNumber" type="IdentificationNumberType"/>`

Element `FeatureObjectIdentifier / featureIdentificationSubdivision`

Namespace	http://www.iho.int/s100gml/1.0
Diagram	
Type	IdentificationSubdivisionType
Properties	content: `simple`
Facets	maxInclusive `65534`
Source	`<xs:element name="featureIdentificationSubdivision" type="IdentificationSubdivisionType"/>`

Element `informationAssociation`

Namespace	http://www.iho.int/s100gml/1.0
Diagram	
Type	InformationPropertyType

Type hierarchy	• gml:AbstractGMLType
	  • AbstractAttributeType
	  • InformationPropertyType

Properties	content: `complex`
Used by	Complex Types: AbstractFeatureType, AbstractInformationType, CompositeCurveType, CurveType, MultiPointType, PointType, PolygonType, SurfaceType, additionalSpatialInformationType, bauType, geographicFeatureType, governanceType, informationType, limitType, locationType, partyMemberType, partyType, responsibilityType, restrictionType, rightType, sourceType, zoneType

Attributes

QName	Type	Fixed	Use	
gml:id	ID		required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.			
nilReason	gml:NilReasonType		optional	
xlink:actuate	xlink:actuateType		optional	
xlink:arcrole	xlink:arcroleType		optional	
xlink:href	xlink:hrefType		optional	
xlink:role	xlink:roleType		optional	
xlink:show	xlink:showType		optional	
xlink:title	xlink:titleAttrType		optional	
xlink:type	xlink:typeType	simple	optional	

Source

```
<xs:element name="informationAssociation" type="InformationPropertyType"/>
```

Element `featureAssociation`

Namespace	http://www.iho.int/s100gml/1.0

Diagram	
Type	FeaturePropertyType

Type hierarchy	• gml:AbstractGMLType
	  • AbstractAttributeType
	  • FeaturePropertyType

Properties	content: `complex`
Used by	Complex Types AbstractFeatureType, geographicFeatureType, limitType, locationType, zoneType

Attributes

QName	Type	Fixed	Use	
gml:id	ID		required	
	`The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.`			
nilReason	gml:NilReasonType		optional	
xlink:actuate	xlink:actuateType		optional	
xlink:arcrole	xlink:arcroleType		optional	
xlink:href	xlink:hrefType		optional	
xlink:role	xlink:roleType		optional	
xlink:show	xlink:showType		optional	
xlink:title	xlink:titleAttrType		optional	
xlink:type	xlink:typeType	simple	optional	

Source

```
<xs:element name="featureAssociation" type="FeaturePropertyType"/>
```

Element `invFeatureAssociation`

Namespace	http://www.iho.int/s100gml/1.0
Diagram	
Type	FeaturePropertyType

Type hierarchy	• gml:AbstractGMLType
	  • AbstractAttributeType
	  • FeaturePropertyType

Properties	content: `complex`
Used by	Complex Types AbstractFeatureType, geographicFeatureType, limitType, locationType, zoneType

Attributes

QName	Type	Fixed	Use	
gml:id	ID		required	
	`The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.`			
nilReason	gml:NilReasonType		optional	
xlink:actuate	xlink:actuateType		optional	
xlink:arcrole	xlink:arcroleType		optional	
xlink:href	xlink:hrefType		optional	
xlink:role	xlink:roleType		optional	
xlink:show	xlink:showType		optional	
xlink:title	xlink:titleAttrType		optional	
xlink:type	xlink:typeType	simple	optional	

Source	`<xs:element name="invFeatureAssociation" type="FeaturePropertyType"/>`

Element `invInformationAssociation`

Namespace	http://www.iho.int/s100gml/1.0
Diagram	
Type	InverseInformationAssociationType

Type hierarchy	• gml:AbstractGMLType
	  • AbstractAttributeType
	  • InverseInformationAssociationType

Properties	content: `complex`
Used by	Complex Types: AbstractInformationType, additionalSpatialInformationType, bauType, governanceType, informationType, partyMemberType, partyType, responsibilityType, restrictionType, rightType, sourceType

Attributes

QName	Type	Fixed	Use	
gml:id	ID		required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.			
nilReason	gml:NilReasonType		optional	
xlink:actuate	xlink:actuateType		optional	
xlink:arcrole	xlink:arcroleType		optional	
xlink:href	xlink:hrefType		optional	
xlink:role	xlink:roleType		optional	
xlink:show	xlink:showType		optional	

	QName	Type	Fixed	Use	
	xlink:title	xlink:titleAttrType		optional	
	xlink:type	xlink:typeType	simple	optional	

Source
```
<xs:element name="invInformationAssociation" type="InverseInformationAssociationType"/>
```

Element DataSetIdentificationType / encodingSpecification

Namespace: http://www.iho.int/s100gml/1.0

Annotations: Encoding specification that defines the encoding.

Diagram

Type: xs:string

Properties

content:	simple
fixed:	S-100 Part 10b

Source
```
<xs:element name="encodingSpecification" type="xs:string" fixed="S-100 Part 10b">
  <xs:annotation>
    <xs:documentation>Encoding specification that defines the encoding.</xs:documentation>
  </xs:annotation>
</xs:element>
```

Element DataSetIdentificationType / encodingSpecificationEdition

Namespace: http://www.iho.int/s100gml/1.0

Annotations: Edition of the encoding specification

Diagram

Type: xs:string

Properties

content:	simple
fixed:	1.0

Source
```
<xs:element name="encodingSpecificationEdition" type="xs:string" fixed="1.0">
  <xs:annotation>
    <xs:documentation>Edition of the encoding specification</xs:documentation>
  </xs:annotation>
</xs:element>
```

Element DataSetIdentificationType / productIdentifier

Namespace: http://www.iho.int/s100gml/1.0

Annotations: Unique identifier of the data product as specified in the product specification

Diagram

Type: xs:string

Properties

content:	simple

Source
```
<xs:element name="productIdentifier" type="xs:string">
  <xs:annotation>
    <xs:documentation>Unique identifier of the data product as specified in the product
 specification</xs:documentation>
```

```
  </xs:annotation>
</xs:element>
```

Element DataSetIdentificationType / productEdition

Namespace	http://www.iho.int/s100gml/1.0
Annotations	Edition of the product specification
Diagram	
Type	xs:string
Properties	content: simple

Source	`<xs:element name="productEdition" type="xs:string">`
	`  <xs:annotation>`
	`  <xs:documentation>Edition of the product specification</xs:documentation>`
	`  </xs:annotation>`
	`</xs:element>`

Element DataSetIdentificationType / applicationProfile

Namespace	http://www.iho.int/s100gml/1.0
Annotations	Identifier that specifies a profile within the data product
Diagram	
Type	xs:string
Properties	content: simple

Source	`<xs:element name="applicationProfile" type="xs:string">`
	`  <xs:annotation>`
	`  <xs:documentation>Identifier that specifies a profile within the data product</xs:documentation>`
	`  </xs:annotation>`
	`</xs:element>`

Element DataSetIdentificationType / datasetFileIdentifier

Namespace	http://www.iho.int/s100gml/1.0
Annotations	The file identifier of the dataset
Diagram	
Type	xs:string
Properties	content: simple

Source	`<xs:element name="datasetFileIdentifier" type="xs:string">`
	`  <xs:annotation>`
	`  <xs:documentation>The file identifier of the dataset</xs:documentation>`
	`  </xs:annotation>`
	`</xs:element>`

Element DataSetIdentificationType / datasetTitle

Namespace	http://www.iho.int/s100gml/1.0
Annotations	The title of the dataset

Diagram	
Type	xs:string
Properties	content: simple

Source	`<xs:element name="datasetTitle" type="xs:string">`
	`  <xs:annotation>`
	`  <xs:documentation>The title of the dataset</xs:documentation>`
	`  </xs:annotation>`
	`</xs:element>`

Element DataSetIdentificationType / datasetReferenceDate

Namespace	http://www.iho.int/s100gml/1.0
Annotations	The reference date of the dataset
Diagram	
Type	xs:date
Properties	content: simple

Source	`<xs:element name="datasetReferenceDate" type="xs:date">`
	`  <xs:annotation>`
	`  <xs:documentation>The reference date of the dataset</xs:documentation>`
	`  </xs:annotation>`
	`</xs:element>`

Element DataSetIdentificationType / datasetLanguage

Namespace	http://www.iho.int/s100gml/1.0
Annotations	The (primary) language used in this dataset
Diagram	
Type	ISO-639-1
Properties	content: simple default: en
Facets	enumeration en English

Source	`<xs:element name="datasetLanguage" type="ISO-639-1" default="en">`
	`  <xs:annotation>`
	`  <xs:documentation>The (primary) language used in this dataset</xs:documentation>`
	`  </xs:annotation>`
	`</xs:element>`

Element DataSetIdentificationType / datasetAbstract

Namespace	http://www.iho.int/s100gml/1.0
Annotations	The abstract of the dataset
Diagram	

Type	xs:string
Properties	content: simple minOccurs: 0

Source	`<xs:element name="datasetAbstract" type="xs:string" minOccurs="0">`
	`  <xs:annotation>`
	`  <xs:documentation>The abstract of the dataset</xs:documentation>`
	`  </xs:annotation>`
	`</xs:element>`

Element DataSetIdentificationType / datasetTopicCategory

Namespace	http://www.iho.int/s100gml/1.0
Annotations	A set of topic categories
Diagram	
Type	MD_TopicCategoryCode
Properties	content: simple maxOccurs: unbounded
Facets	enumeration: farming — rearing of animals and/or cultivation of plants. Examples: agriculture, irrigation, aquaculture, plantations, herding, pests and diseases affecting crops and livestock enumeration: biota — flora and/or fauna in natural environment. Examples: wildlife, vegetation, biological sciences, ecology, wilderness, sealife, wetlands, habitat enumeration: boundaries — legal land descriptions. Examples: political and administrative boundaries enumeration: climatologyMeteorologyAtmosphere — processes and phenomena of the atmosphere. Examples: cloud cover, weather, climate, atmospheric conditions, climate change, precipitation enumeration: economy — economic activities, conditions and employment. Examples: production, labour, revenue, commerce, industry, tourism and ecotourism, forestry, fisheries, commercial or subsistence hunting, exploration and exploitation of resources such as minerals, oil and gas enumeration: elevation — height above or below sea level. Examples: altitude, bathymetry, digital elevation models, slope, derived products enumeration: environment — environmental resources, protection and conservation. Examples: environmental pollution, waste storage and treatment, environmental impact assessment, monitoring environmental risk, nature reserves, landscape enumeration: geoscientificInformation — information pertaining to earth sciences. Examples: geophysical features and processes, geology, minerals, sciences dealing with the composition, structure and origin of the earth s rocks, risks of earthquakes, volcanic activity, landslides, gravity information, soils, permafrost, hydrogeology, erosion enumeration: health — health, health services, human ecology, and safety. Examples: disease and illness, factors affecting health, hygiene, substance abuse, mental and physical health, health services enumeration: imageryBaseMapsEarthCover — base maps. Examples: land cover, topographic maps, imagery, unclassified images, annotations enumeration: intelligenceMilitary — military bases, structures, activities. Examples: barracks, training grounds, military transportation, information collection

	enumeration	inlandWaters	inland water features, drainage systems and their characteristics. Examples: rivers and glaciers, salt lakes, water utilization plans, dams, currents, floods, water quality, hydrographic charts
	enumeration	location	positional information and services. Examples: addresses, geodetic networks, control points, postal zones and services, place names
	enumeration	oceans	features and characteristics of salt water bodies (excluding inland waters). Examples: tides, tidal waves, coastal information, reefs
	enumeration	planningCadastre	information used for appropriate actions for future use of the land. Examples: land use maps, zoning maps, cadastral surveys, land ownership
	enumeration	society	characteristics of society and cultures. Examples: settlements, anthropology, archaeology, education, traditional beliefs, manners and customs, demographic data, recreational areas and activities, social impact assessments, crime and justice, census information
	enumeration	structure	man-made construction. Examples: buildings, museums, churches, factories, housing, monuments, shops, towers
	enumeration	transportation	means and aids for conveying persons and/or goods. Examples: roads, airports/airstrips, shipping routes, tunnels, nautical charts, vehicle or vessel location, aeronautical charts, railways
	enumeration	utilitiesCommunication	energy, water and waste systems and communications infrastructure and services. Examples: hydroelectricity, geothermal, solar and nuclear sources of energy, water purification and distribution, sewage collection and disposal, electricity and gas distribution, data communication, telecommunication, radio, communication networks

Source

```
<xs:element name="datasetTopicCategory" type="MD_TopicCategoryCode" maxOccurs="unbounded">
  <xs:annotation>
    <xs:documentation>A set of topic categories</xs:documentation>
  </xs:annotation>
</xs:element>
```

Element DataSetStructureInformationType / datasetCoordOriginX

Namespace	http://www.iho.int/s100gml/1.0
Annotations	Shift used to adjust X coordinate before encoding
Diagram	
Type	xs:double
Properties	content: simple minOccurs: 0

Source

```
<xs:element name="datasetCoordOriginX" type="xs:double" minOccurs="0">
  <xs:annotation>
    <xs:documentation>Shift used to adjust X coordinate before encoding</xs:documentation>
  </xs:annotation>
</xs:element>
```

Element DataSetStructureInformationType / datasetCoordOriginY

Namespace	http://www.iho.int/s100gml/1.0
Annotations	Shift used to adjust Y coordinate before encoding

Diagram	
Type	xs:double
Properties	content: simple minOccurs: 0

Source	`<xs:element name="datasetCoordOriginY" type="xs:double" minOccurs="0">`
	`  <xs:annotation>`
	`  <xs:documentation>Shift used to adjust Y coordinate before encoding</xs:documentation>`
	`  </xs:annotation>`
	`</xs:element>`

Element DataSetStructureInformationType / datasetCoordOriginZ

Namespace	http://www.iho.int/s100gml/1.0
Annotations	Shift used to adjust Z coordinate before encoding
Diagram	
Type	xs:double
Properties	content: simple minOccurs: 0

Source	`<xs:element name="datasetCoordOriginZ" type="xs:double" minOccurs="0">`
	`  <xs:annotation>`
	`  <xs:documentation>Shift used to adjust Z coordinate before encoding</xs:documentation>`
	`  </xs:annotation>`
	`</xs:element>`

Element DataSetStructureInformationType / coordMultFactorX

Namespace	http://www.iho.int/s100gml/1.0
Annotations	Floating point to integer multiplication factor for X coordinate or longitude
Diagram	
Type	xs:positiveInteger
Properties	content: simple minOccurs: 0

Source	`<xs:element name="coordMultFactorX" type="xs:positiveInteger" minOccurs="0">`
	`  <xs:annotation>`
	`  <xs:documentation>Floating point to integer multiplication factor for X coordinate or`
	`  longitude</xs:documentation>`
	`  </xs:annotation>`
	`</xs:element>`

Element DataSetStructureInformationType / coordMultFactorY

Namespace	http://www.iho.int/s100gml/1.0
Annotations	Floating point to integer multiplication factor for Y coordinate or latitude

Diagram	
Type	xs:positiveInteger
Properties	content: simple minOccurs: 0

Source	`<xs:element name="coordMultFactorY" type="xs:positiveInteger" minOccurs="0">`
	`  <xs:annotation>`
	`  <xs:documentation>Floating point to integer multiplication factor for Y coordinate or latitude</xs:documentation>`
	`  </xs:annotation>`
	`</xs:element>`

Element DataSetStructureInformationType / coordMultFactorZ

Namespace	http://www.iho.int/s100gml/1.0
Annotations	Floating point to integer multiplication factor for Z coordinate or depths or height
Diagram	
Type	xs:positiveInteger
Properties	content: simple minOccurs: 0

Source	`<xs:element name="coordMultFactorZ" type="xs:positiveInteger" minOccurs="0">`
	`  <xs:annotation>`
	`  <xs:documentation>Floating point to integer multiplication factor for Z coordinate or depths or height</xs:documentation>`
	`  </xs:annotation>`
	`</xs:element>`

Element DataSetStructureInformationType / nInfoRec

Namespace	http://www.iho.int/s100gml/1.0
Annotations	Number of information records in the data set
Diagram	
Type	xs:nonNegativeInteger
Properties	content: simple minOccurs: 0

Source	`<xs:element name="nInfoRec" type="xs:nonNegativeInteger" minOccurs="0">`
	`  <xs:annotation>`
	`  <xs:documentation>Number of information records in the data set</xs:documentation>`
	`  </xs:annotation>`
	`</xs:element>`

Element DataSetStructureInformationType / nPointRec

Namespace	http://www.iho.int/s100gml/1.0
Annotations	Number of point records in the data set

Diagram	
Type	xs:nonNegativeInteger
Properties	content: simple minOccurs: 0

Source	`<xs:element name="nPointRec" type="xs:nonNegativeInteger" minOccurs="0">`
	`  <xs:annotation>`
	`  <xs:documentation>Number of point records in the data set</xs:documentation>`
	`  </xs:annotation>`
	`</xs:element>`

Element DataSetStructureInformationType / nMultiPointRec

Namespace	http://www.iho.int/s100gml/1.0
Annotations	Number of multipoint records in the data set
Diagram	
Type	xs:nonNegativeInteger
Properties	content: simple minOccurs: 0

Source	`<xs:element name="nMultiPointRec" type="xs:nonNegativeInteger" minOccurs="0">`
	`  <xs:annotation>`
	`  <xs:documentation>Number of multipoint records in the data set</xs:documentation>`
	`  </xs:annotation>`
	`</xs:element>`

Element DataSetStructureInformationType / nCurveRec

Namespace	http://www.iho.int/s100gml/1.0
Annotations	Number of curve records in the data set
Diagram	
Type	xs:nonNegativeInteger
Properties	content: simple minOccurs: 0

Source	`<xs:element name="nCurveRec" type="xs:nonNegativeInteger" minOccurs="0">`
	`  <xs:annotation>`
	`  <xs:documentation>Number of curve records in the data set</xs:documentation>`
	`  </xs:annotation>`
	`</xs:element>`

Element DataSetStructureInformationType / nCompositeCurveRec

Namespace	http://www.iho.int/s100gml/1.0
Annotations	Number of composite curve records in the data set
Diagram	

Type	xs:nonNegativeInteger
Properties	content: simple minOccurs: 0

Source	`<xs:element name="nCompositeCurveRec" type="xs:nonNegativeInteger" minOccurs="0">`
	`  <xs:annotation>`
	`  <xs:documentation>Number of composite curve records in the data set</xs:documentation>`
	`  </xs:annotation>`
	`</xs:element>`

Element DataSetStructureInformationType / nSurfaceRec

Namespace	http://www.iho.int/s100gml/1.0
Annotations	Number of surface records in the data set
Diagram	
Type	xs:nonNegativeInteger
Properties	content: simple minOccurs: 0

Source	`<xs:element name="nSurfaceRec" type="xs:nonNegativeInteger" minOccurs="0">`
	`  <xs:annotation>`
	`  <xs:documentation>Number of surface records in the data set</xs:documentation>`
	`  </xs:annotation>`
	`</xs:element>`

Element DataSetStructureInformationType / nFeatureRec

Namespace	http://www.iho.int/s100gml/1.0
Annotations	Number of feature records in the data set
Diagram	
Type	xs:nonNegativeInteger
Properties	content: simple minOccurs: 0

Source	`<xs:element name="nFeatureRec" type="xs:nonNegativeInteger" minOccurs="0">`
	`  <xs:annotation>`
	`  <xs:documentation>Number of feature records in the data set</xs:documentation>`
	`  </xs:annotation>`
	`</xs:element>`

Element Point

Namespace	http://www.iho.int/s100gml/1.0

Diagram	
Type	PointType

Type hierarchy	• gml:AbstractGMLType • gml:AbstractGeometryType • gml:AbstractGeometricPrimitiveType • gml:PointType • PointType
Properties	content: `complex`
Substitution Group Affiliation	• gml:AbstractGeometricPrimitive
Used by	Element Group: Geometry Complex Type: PointPropertyType
Model	gml:pos , informationAssociation*
Children	gml:pos, informationAssociation

Instance	`<Point gml:id="" srsDimension="" srsName="" xmlns="http://www.iho.int/s100gml/1.0" xmlns:gml="http://www.opengis.net/gml/3.2">`
	`  <gml:pos srsDimension="" srsName="">{1,1}</gml:pos>`
	`  <informationAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="" xlin`
	`informationAssociation>`
	`</Point>`

Attributes	**QName** / **Type** / **Use** **gml:id** / ID / required The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs. **srsDimension** / positiveInteger / optional **srsName** / anyURI / optional
Source	`<xs:element name="Point" type="PointType" substitutionGroup="gml:AbstractGeometricPrimitive"/>`

Element `MultiPoint`

Namespace	http://www.iho.int/s100gml/1.0

Diagram

MultiPointType
gml:MultiPointType (extension base)
gml:AbstractGeometricAggregateType (extension base)
gml:AbstractGeometryType (extension base)
gml:AbstractGMLType (extension base)
Attributes
gml:id
The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory...
Attributes
gml:SRSReferenceGroup
The attribute group SRSReferenceGroup is an optional reference to the CRS used by this geometry, with optional...
All geometry elements are derived directly or indirectly from this abstract supertype. A geometry element may have an...
Attributes
gml:AggregationAttributeGroup
A GML Object Collection is any GML Object with a property element in its content model whose content model is derived...
MultiPoint
0..∞
gml:pointMember
This property element either references a Point via the XLink-attributes or contains the Point element.
0..∞
informationAssociation
S-100 multipoint type adds an information association to the GML spatial type MultiPoint
Substitution Group
AbstractGeometricAggregate
gml:AbstractGeometricAggregate is the abstract head of the substitution group for all geometric aggregates.

Type	MultiPointType
Type hierarchy	• gml:AbstractGMLType • gml:AbstractGeometryType • gml:AbstractGeometricAggregateType • gml:MultiPointType • MultiPointType
Properties	content: complex
Substitution Group Affiliation	• gml:AbstractGeometricAggregate
Used by	Element Group: Geometry Complex Type: MultiPointPropertyType
Model	gml:pointMember* , informationAssociation*
Children	gml:pointMember, informationAssociation

Instance	`<MultiPoint aggregationType="" gml:id="" srsDimension="" srsName="" xmlns="http://www.iho.int/s100gml/1.0" xmlns:gml="http://www.opengis.net/gml/3.2">`
	`  <gml:pointMember xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:sh gml:pointMember>`
	`  <informationAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="" xlin informationAssociation>`
	`</MultiPoint>`

Attributes

QName	Type	Use	
aggregationType	gml:AggregationType	optional	
gml:id	ID	required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		
srsDimension	positiveInteger	optional	
srsName	anyURI	optional	

Source

```
<xs:element name="MultiPoint" type="MultiPointType"
 substitutionGroup="gml:AbstractGeometricAggregate"/>
```

Element Curve

Namespace	http://www.iho.int/s100gml/1.0

Diagram

CurveType
gml:CurveType (extension base)
gml:AbstractCurveType (extension base)
gml:AbstractGeometricPrimitiveType (extension base)
gml:AbstractGeometryType (extension base)
gml:AbstractGMLType (extension base)
Attributes
gml:id
The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory...
Attributes
gml:SRSReferenceGroup
The attribute group SRSReferenceGroup is an optional reference to the CRS used by this geometry, with optional...
All geometry elements are derived directly or indirectly from this abstract supertype. A geometry element may have an...
gml:AbstractGeometricPrimitiveType is the abstract root type of the geometric primitives. A geometric primitive is a...
Curve
gml:AbstractCurveType is an abstraction of a curve to support the different levels of complexity. The curve may always...
gml:segments
This property element contains a list of curve segments. The order of the elements is significant and shall be...
0..∞
informationAssociation
S-100 curve type adds an information association to the GML spatial type Curve
Substitution Group
Curve
A curve is a 1-dimensional primitive. Curves are continuous, connected, and have a measurable length in terms of the...

Type	CurveType
Type hierarchy	• gml:AbstractGMLType • gml:AbstractGeometryType • gml:AbstractGeometricPrimitiveType • gml:AbstractCurveType • gml:CurveType • CurveType
Properties	content: complex
Substitution Group Affiliation	• gml:Curve
Used by	Element Group: curves Complex Type: CurvePropertyType
Model	gml:segments , informationAssociation*
Children	gml:segments, informationAssociation

Instance	`<Curve gml:id="" srsDimension="" srsName="" xmlns="http://www.iho.int/s100gml/1.0" xmlns:gml="http://www.opengis.net/gml/3.2">`
	`<gml:segments>{1,1}</gml:segments>`
	`<informationAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="" xlin`
	`informationAssociation>`
	`</Curve>`

Attributes	**QName** / **Type** / **Use** **gml:id** / ID / required The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs. **srsDimension** / positiveInteger / optional **srsName** / anyURI / optional
Source	`<xs:element name="Curve" type="CurveType" substitutionGroup="gml:Curve"/>`

Element CompositeCurve

Namespace	http://www.iho.int/s100gml/1.0

Diagram	
Type	CompositeCurveType

Type hierarchy	• gml:AbstractGMLType • gml:AbstractGeometryType • gml:AbstractGeometricPrimitiveType • gml:AbstractCurveType • gml:CompositeCurveType • CompositeCurveType
Properties	content: `complex`
Used by	Element Group: curves Complex Type: CompositeCurvePropertyType
Model	gml:curveMember+ , informationAssociation*
Children	gml:curveMember, informationAssociation

Instance	`<CompositeCurve aggregationType="" gml:id="" srsDimension="" srsName="" xmlns="http://www.iho.int/s100gml/1.0" xmlns:gml="http://www.opengis.net/gml/3.2">`
	`  <gml:curveMember xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:sh gml:curveMember>`
	`  <informationAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="" xlin informationAssociation>`
	`</CompositeCurve>`

Attributes	QName	Type	Use	
	aggregationType	gml:AggregationType	optional	
	gml:id	ID	required	
		The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		
	srsDimension	positiveInteger	optional	
	srsName	anyURI	optional	

Source	`<xs:element name="CompositeCurve" type="CompositeCurveType"/>`

Element `OrientableCurve`

Namespace	http://www.iho.int/s100gml/1.0
Annotations	S-100 orientable curve is the same as GML orientable curve. Added for consistency.

Diagram	
Type	gml:OrientableCurveType

Type hierarchy	• gml:AbstractGMLType • gml:AbstractGeometryType • gml:AbstractGeometricPrimitiveType • gml:AbstractCurveType • gml:OrientableCurveType
Properties	content: complex
Substitution Group Affiliation	• gml:AbstractCurve
Used by	Element Group: curves Complex Type: OrientableCurvePropertyType
Model	gml:baseCurve
Children	gml:baseCurve

Instance	`<OrientableCurve gml:id="" orientation="+" srsDimension="" srsName="" xmlns="http://www.iho.int/s100gml/1.0" xmlns:gml="http://www.opengis.net/gml/3.2">`
	`  <gml:baseCurve xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink:show`
	`gml:baseCurve>`
	`</OrientableCurve>`

Attributes

QName	Type	Default	Use	
gml:id	ID		required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.			
orientation	gml:SignType	+	optional	
srsDimension	positiveInteger		optional	
srsName	anyURI		optional	

Source

```
<xs:element name="OrientableCurve" type="gml:OrientableCurveType"
 substitutionGroup="gml:AbstractCurve">
  <xs:annotation>
    <xs:documentation>S-100 orientable curve is the same as GML orientable curve. Added for
 consistency.</xs:documentation>
  </xs:annotation>
</xs:element>
```

Element Surface

Namespace	http://www.iho.int/s100gml/1.0

Diagram

SurfaceType
gml:SurfaceType (extension base)
gml:AbstractSurfaceType (extension base)
gml:AbstractGeometricPrimitiveType (extension base)
gml:AbstractGeometryType (extension base)
gml:AbstractGMLType (extension base)
Attributes
gml:id
The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory...
Attributes
gml:SRSReferenceGroup
The attribute group SRSReferenceGroup is an optional reference to the CRS used by this geometry, with optional...
All geometry elements are derived directly or indirectly from this abstract supertype. A geometry element may have an...
gml:AbstractGeometricPrimitiveType is the abstract root type of the geometric primitives. A geometric primitive is a...
Surface
gml:AbstractSurfaceType is an abstraction of a surface to support the different levels of complexity. A surface is...
gml:patches
The patches property element contains the sequence of surface patches. The order of the elements is significant and...
0..∞
informationAssociation
S-100 surface type adds an information association to the GML spatial type Surface
Substitution Group
Surface
A Surface is a 2-dimensional primitive and is composed of one or more surface patches as specified in ISO 19107:2003,...

Type	SurfaceType
Type hierarchy	• gml:AbstractGMLType • gml:AbstractGeometryType • gml:AbstractGeometricPrimitiveType • gml:AbstractSurfaceType • gml:SurfaceType • SurfaceType
Properties	content: complex
Substitution Group Affiliation	• gml:Surface
Used by	Element Group Geometry
Model	gml:patches , informationAssociation*
Children	gml:patches, informationAssociation

Instance	`<Surface gml:id="" srsDimension="" srsName="" xmlns="http://www.iho.int/s100gml/1.0" xmlns:gml="http://www.opengis.net/gml/3.2">`
	`  <gml:patches>{1,1}</gml:patches>`
	`  <informationAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="" xlin`
	`informationAssociation>`
	`</Surface>`

Attributes	

QName	Type	Use	
gml:id	ID	required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		
srsDimension	positiveInteger	optional	
srsName	anyURI	optional	

Source	`<xs:element name="Surface" type="SurfaceType" substitutionGroup="gml:Surface"/>`

Element Polygon

Namespace	http://www.iho.int/s100gml/1.0
Annotations	S100 version of polygon type

Diagram

PolygonType
gml:PolygonType (extension base)
gml:AbstractSurfaceType (extension base)
gml:AbstractGeometricPrimitiveType (extension base)
gml:AbstractGeometryType (extension base)
gml:AbstractGMLType (extension base)
Attributes
gml:id
The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory...
Attributes
gml:SRSReferenceGroup
The attribute group SRSReferenceGroup is an optional reference to the CRS used by this geometry, with optional...
All geometry elements are derived directly or indirectly from this abstract supertype. A geometry element may have an...
gml:AbstractGeometricPrimitiveType is the abstract root type of the geometric primitives. A geometric primitive is a...
gml:AbstractSurfaceType is an abstraction of a surface to support the different levels of complexity. A surface is...
gml:exterior
A boundary of a surface consists of a number of rings. In the normal 2D case, one of these rings is distinguished as...
0..∞
gml:interior
A boundary of a surface consists of a number of rings. The "interior" rings separate the surface / surface patch from...
Polygon
S100 version of polygon type
0..∞
informationAssociation
S-100 polygon type adds an information association to the GML spatial type Polygon
Substitution Group
Polygon
A Polygon is a special surface that is defined by a single surface patch (see D.3.6). The boundary of this patch is...

Type	PolygonType
Type hierarchy	• gml:AbstractGMLType • gml:AbstractGeometryType • gml:AbstractGeometricPrimitiveType • gml:AbstractSurfaceType • gml:PolygonType • PolygonType
Properties	content: complex
Substitution Group Affiliation	• gml:Polygon
Used by	Element Group: Geometry Complex Type: PolygonPropertyType
Model	gml:exterior{0,1} , gml:interior* , informationAssociation*
Children	gml:exterior, gml:interior, informationAssociation

Instance	`<Polygon gml:id="" srsDimension="" srsName="" xmlns="http://www.iho.int/s100gml/1.0" xmlns:gml="http://www.opengis.net/gml/3.2">`
	`<gml:exterior>{0,1}</gml:exterior>`
	`<gml:interior>{0,unbounded}</gml:interior>`
	`<informationAssociation xlink:actuate="" xlink:arcrole="" xlink:href="" gml:id="" nilReason="" xlink:role="" xlin`
	`informationAssociation>`
	`</Polygon>`

Attributes

QName	Type	Use	
gml:id	ID	required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		
srsDimension	positiveInteger	optional	
srsName	anyURI	optional	

Source

```
<xs:element name="Polygon" type="PolygonType" substitutionGroup="gml:Polygon">
  <xs:annotation>
    <xs:documentation>S100 version of polygon type</xs:documentation>
  </xs:annotation>
</xs:element>
```

Element pointProperty

Namespace	http://www.iho.int/s100gml/1.0

Diagram	
Type	PointPropertyType
Properties	content: complex
Model	Point{0,1}
Children	Point

Instance	`<pointProperty xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" xlink:role="" xlink:show="" xlink:title www.iho.int/s100gml/1.0">`
	`  <Point gml:id="" srsDimension="" srsName="">{0,1}</Point>`
	`</pointProperty>`

Attributes

QName	Type	Fixed	Use	
nilReason	gml:NilReasonType		optional	
xlink:actuate	xlink:actuateType		optional	
xlink:arcrole	xlink:arcroleType		optional	
xlink:href	xlink:hrefType		optional	
xlink:role	xlink:roleType		optional	
xlink:show	xlink:showType		optional	
xlink:title	xlink:titleAttrType		optional	
xlink:type	xlink:typeType	simple	optional	

Source

```
<xs:element name="pointProperty" type="PointPropertyType"/>
```

Element `multiPointProperty`

Namespace	http://www.iho.int/s100gml/1.0

Diagram	
Type	MultiPointPropertyType
Properties	content: `complex`
Model	MultiPoint{0,1}
Children	MultiPoint

Instance	`<multiPointProperty xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" xlink:role="" xlink:show="" xlink www.iho.int/s100gml/1.0">`
	`  <MultiPoint aggregationType="" gml:id="" srsDimension="" srsName="">{0,1}</MultiPoint>`
	`</multiPointProperty>`

Attributes

QName	Type	Fixed	Use	
nilReason	gml:NilReasonType		optional	
xlink:actuate	xlink:actuateType		optional	
xlink:arcrole	xlink:arcroleType		optional	
xlink:href	xlink:hrefType		optional	
xlink:role	xlink:roleType		optional	
xlink:show	xlink:showType		optional	
xlink:title	xlink:titleAttrType		optional	
xlink:type	xlink:typeType	simple	optional	

Source

```
<xs:element name="multiPointProperty" type="MultiPointPropertyType"/>
```

Element `curveProperty`

Namespace	http://www.iho.int/s100gml/1.0

Diagram	
Type	CurvePropertyType
Properties	content: complex
Used by	Element Group curveProperties
Model	Curve{0,1}
Children	Curve

Instance	`<curveProperty xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" xlink:role="" xlink:show="" xlink:title www.iho.int/s100gml/1.0">`
	`  <Curve gml:id="" srsDimension="" srsName="">{0,1}</Curve>`
	`</curveProperty>`

Attributes

QName	Type	Fixed	Use	
nilReason	gml:NilReasonType		optional	
xlink:actuate	xlink:actuateType		optional	
xlink:arcrole	xlink:arcroleType		optional	
xlink:href	xlink:hrefType		optional	
xlink:role	xlink:roleType		optional	
xlink:show	xlink:showType		optional	
xlink:title	xlink:titleAttrType		optional	
xlink:type	xlink:typeType	simple	optional	

Source

```
<xs:element name="curveProperty" type="CurvePropertyType"/>
```

Element compositeCurveProperty

Namespace	http://www.iho.int/s100gml/1.0

Diagram	
Type	CompositeCurvePropertyType
Properties	content: complex
Used by	Element Group curveProperties
Model	CompositeCurve{0,1}
Children	CompositeCurve

Instance	`<compositeCurveProperty xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" xlink:role="" xlink:show="" x`
	`www.iho.int/s100gml/1.0">`
	`  <CompositeCurve aggregationType="" gml:id="" srsDimension="" srsName="">{0,1}</CompositeCurve>`
	`</compositeCurveProperty>`

Attributes				
QName	**Type**	**Fixed**	**Use**	
nilReason	gml:NilReasonType		optional	
xlink:actuate	xlink:actuateType		optional	
xlink:arcrole	xlink:arcroleType		optional	
xlink:href	xlink:hrefType		optional	
xlink:role	xlink:roleType		optional	
xlink:show	xlink:showType		optional	
xlink:title	xlink:titleAttrType		optional	
xlink:type	xlink:typeType	simple	optional	

Source	`<xs:element name="compositeCurveProperty" type="CompositeCurvePropertyType"/>`

Element `orientableCurveProperty`

Namespace	http://www.iho.int/s100gml/1.0

Diagram	
Type	OrientableCurvePropertyType
Properties	content: `complex`
Used by	Element Group curveProperties
Model	OrientableCurve{0,1}
Children	OrientableCurve

Instance	`<orientableCurveProperty xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" xlink:role="" xlink:show="" x www.iho.int/s100gml/1.0">`
	`  <OrientableCurve gml:id="" orientation="+" srsDimension="" srsName="">{0,1}</OrientableCurve>`
	`</orientableCurveProperty>`

Attributes

QName	Type	Fixed	Use	
nilReason	gml:NilReasonType		optional	
xlink:actuate	xlink:actuateType		optional	
xlink:arcrole	xlink:arcroleType		optional	
xlink:href	xlink:hrefType		optional	
xlink:role	xlink:roleType		optional	
xlink:show	xlink:showType		optional	
xlink:title	xlink:titleAttrType		optional	
xlink:type	xlink:typeType	simple	optional	

Source

```
<xs:element name="orientableCurveProperty" type="OrientableCurvePropertyType"/>
```

Element `surfaceProperty`

Namespace	http://www.iho.int/s100gml/1.0

Diagram	
Type	SurfacePropertyType
Properties	content: complex
Model	gml:AbstractSurface{0,1}
Children	gml:AbstractSurface

Instance	`<surfaceProperty xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" xlink:role="" xlink:show="" xlink:ti`
	`www.iho.int/s100gml/1.0" xmlns:gml="http://www.opengis.net/gml/3.2">`
	`  <gml:AbstractSurface gml:id="" srsDimension="" srsName="">{0,1}</gml:AbstractSurface>`
	`</surfaceProperty>`

Attributes

QName	Type	Fixed	Use	
nilReason	gml:NilReasonType		optional	
xlink:actuate	xlink:actuateType		optional	
xlink:arcrole	xlink:arcroleType		optional	
xlink:href	xlink:hrefType		optional	
xlink:role	xlink:roleType		optional	
xlink:show	xlink:showType		optional	
xlink:title	xlink:titleAttrType		optional	
xlink:type	xlink:typeType	simple	optional	

Source

```
<xs:element name="surfaceProperty" type="SurfacePropertyType"/>
```

Element polygonProperty

Namespace	http://www.iho.int/s100gml/1.0

Diagram	
Type	PolygonPropertyType
Properties	content: `complex`
Model	Polygon{0,1}
Children	Polygon

Instance	`<polygonProperty xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" xlink:role="" xlink:show="" xlink:ti`
	`www.iho.int/s100gml/1.0">`
	`  <Polygon gml:id="" srsDimension="" srsName="">{0,1}</Polygon>`
	`</polygonProperty>`

Attributes

QName	Type	Fixed	Use	
nilReason	gml:NilReasonType		optional	
xlink:actuate	xlink:actuateType		optional	
xlink:arcrole	xlink:arcroleType		optional	
xlink:href	xlink:hrefType		optional	
xlink:role	xlink:roleType		optional	
xlink:show	xlink:showType		optional	
xlink:title	xlink:titleAttrType		optional	
xlink:type	xlink:typeType	simple	optional	

Source

```
<xs:element name="polygonProperty" type="PolygonPropertyType"/>
```

Element `S100_ArcByCenterPointType / radius`

Namespace	http://www.iho.int/s100gml/1.0

Diagram	
Type	gml:LengthType

Type hierarchy	• double
	  • gml:MeasureType
	  • gml:LengthType

Properties	content: complex
Attributes	**QName** / **Type** / **Use** **uom** / gml:UomIdentifier / required
Source	`<xs:element name="radius" type="gml:LengthType"/>`

Element S100_ArcByCenterPointType / startAngle

Namespace	http://www.iho.int/s100gml/1.0
Diagram	
Type	BearingType
Properties	content: simple minOccurs: 0
Facets	fractionDigits 1 maxInclusive 360.0 minInclusive 0.0
Source	`<xs:element name="startAngle" type="BearingType" minOccurs="0"/>`

Element S100_ArcByCenterPointType / angularDistance

Namespace	http://www.iho.int/s100gml/1.0
Diagram	

Type	PlusOrMinus360Degrees	
Properties	content:	simple
	minOccurs:	0
Facets	fractionDigits	1
	maxInclusive	360.0
	minInclusive	-360.0
Source	`<xs:element name="angularDistance" type="PlusOrMinus360Degrees" minOccurs="0"/>`	

Element S100_ArcByCenterPoint

Namespace	http://www.iho.int/s100gml/1.0
Annotations	This variant of the arc requires that the points on the arc shall be computed instead of storing the coordinates directly. The single control point is the center point of the arc. The other parameters are the radius, the bearing at start, and the angle from the start to the end relative to the center of the arc. This representation can be used only in 2D. The element radius specifies the radius of the arc. The element startAngle specifies the bearing of the arc at the start. The element angularDistance specifies the difference in bearing from the start to the end. The sign of angularDistance specifies the direction of the arc, positive values mean the direction is clockwise from start to end looking down from a point vertically above the center of the arc. Drawing starts at a bearing of 0.0 from the ray pointing due north from the center. If the center is at a pole the reference direction follows the prime meridian starting from the pole. The interpolation is fixed as "circularArcCenterPointWithRadius". Since this type always describes a single arc, the GML attribute "numArc" is not used.

Diagram	
Type	S100_ArcByCenterPointType
Type hierarchy	• gml:AbstractCurveSegmentType • S100_ArcByCenterPointType
Properties	content: complex
Substitution Group	• S100_CircleByCenterPoint
Substitution Group Affiliation	• gml:AbstractCurveSegment
Model	(gml:pos | gml:pointProperty) , radius , startAngle{0,1} , angularDistance{0,1}
Children	angularDistance, gml:pointProperty, gml:pos, radius, startAngle

Instance	`<S100_ArcByCenterPoint interpolation="circularArcCenterPointWithRadius" numDerivativeInterior="0" numDerivativesAtE www.iho.int/s100gml/1.0" xmlns:gml="http://www.opengis.net/gml/3.2">`
	`  <gml:pos srsDimension="" srsName="">{1,1}</gml:pos>`
	`  <gml:pointProperty xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink gml:pointProperty>`

```
  <radius uom="">{1,1}</radius>
  <startAngle>{0,1}</startAngle>
  <angularDistance>{0,1}</angularDistance>
</S100_ArcByCenterPoint>
```

Attributes

QName	Type	Fixed	Default	Use	
interpolation	gml:CurveInterpolationType	circularArcCenter-PointWithRadius		optional	
numDerivativeInterior	integer		0	optional	
numDerivativesAtEnd	integer		0	optional	
numDerivativesAtStart	integer		0	optional	

Source

```
<xs:element name="S100_ArcByCenterPoint" type="S100_ArcByCenterPointType"
 substitutionGroup="gml:AbstractCurveSegment">
  <xs:annotation>
    <xs:documentation>This variant of the arc requires that the points on the arc shall be computed
 instead of storing the coordinates directly. The single control point is the center point of the
 arc. The other parameters are the radius, the bearing at start, and the angle from the start to
 the end relative to the center of the arc. This representation can be used only in 2D. The element
 radius specifies the radius of the arc. The element startAngle specifies the bearing of the arc
 at the start. The element angularDistance specifies the difference in bearing from the start to
 the end. The sign of angularDistance specifies the direction of the arc, positive values mean the
 direction is clockwise from start to end looking down from a point vertically above the center of
 the arc. Drawing starts at a bearing of 0.0 from the ray pointing due north from the center. If the
 center is at a pole the reference direction follows the prime meridian starting from the pole. The
 interpolation is fixed as "circularArcCenterPointWithRadius". Since this type always describes a
 single arc, the GML attribute "numArc" is not used.</xs:documentation>
  </xs:annotation>
</xs:element>
```

Element S100_CircleByCenterPointType / radius

Namespace: http://www.iho.int/s100gml/1.0

Diagram

Type: gml:LengthType

Type hierarchy
- double
  - gml:MeasureType
    - gml:LengthType

Properties: content: complex

Attributes	**QName**	**Type**	**Use**	
	uom	gml:UomIdentifier	required	
Source	`<xs:element name="radius" type="gml:LengthType"/>`			

Element S100_CircleByCenterPointType / startAngle

Namespace	http://www.iho.int/s100gml/1.0	
Diagram	startAngle — BearingType	
Type	BearingType	
Properties	content:	simple
	default:	0.0
Facets	fractionDigits	1
	maxInclusive	360.0
	minInclusive	0.0
Source	`<xs:element name="startAngle" type="BearingType" default="0.0"/>`	

Element S100_CircleByCenterPointType / angularDistance

Namespace	http://www.iho.int/s100gml/1.0	
Diagram	angularDistance — restricts: PlusOrMinus360Degrees	
Type	restriction of PlusOrMinus360Degrees	
Type hierarchy	• xs:decimal • PlusOrMinus360Degrees	
Properties	content:	simple
	default:	360.0
Facets	fractionDigits	1
	maxInclusive	360.0
	minInclusive	-360.0
	enumeration	360.0
	enumeration	-360.0
Source		

```
<xs:element name="angularDistance" default="360.0">
  <xs:simpleType>
    <xs:restriction base="PlusOrMinus360Degrees">
      <xs:enumeration value="360.0"/>
      <xs:enumeration value="-360.0"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
```

Element S100_CircleByCenterPoint

Namespace	http://www.iho.int/s100gml/1.0
Annotations	An S100_CircleByCenterPoint is an S100_ArcByCenterPoint with angular distance +/- 360.0 degrees to form a full circle. Angular distance is assumed to be +360.0 degrees if it is missing. The interpolation is fixed as "circularArcCenterPointWithRadius". This representation can be used only in 2D.

Diagram	
Type	S100_CircleByCenterPointType

Type hierarchy	• gml:AbstractCurveSegmentType
	  • S100_ArcByCenterPointType
	  • S100_CircleByCenterPointType

Properties	content: `complex`
Substitution Group Affiliation	• S100_ArcByCenterPoint
Model	(gml:pos | gml:pointProperty) , radius , startAngle , angularDistance
Children	angularDistance, gml:pointProperty, gml:pos, radius, startAngle

Instance	`<S100_CircleByCenterPoint interpolation="circularArcCenterPointWithRadius" numDerivativeInterior="0" numDerivatives www.iho.int/s100gml/1.0" xmlns:gml="http://www.opengis.net/gml/3.2">`
	`  <gml:pos srsDimension="" srsName="">{1,1}</gml:pos>`
	`  <gml:pointProperty xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink gml:pointProperty>`
	`  <radius uom="">{1,1}</radius>`
	`  <startAngle>{1,1}</startAngle>`
	`  <angularDistance>{1,1}</angularDistance>`
	`</S100_CircleByCenterPoint>`

Attributes

QName	Type	Fixed	Default	Use	
interpolation	gml:CurveInterpolationType	circularArcCenter-PointWithRadius		optional	
numDerivativeInterior	integer		0	optional	
numDerivativesAtEnd	integer		0	optional	
numDerivativesAtStart	integer		0	optional	

Source

```
<xs:element name="S100_CircleByCenterPoint" type="S100_CircleByCenterPointType"
 substitutionGroup="S100_ArcByCenterPoint">
  <xs:annotation>
    <xs:documentation>An S100_CircleByCenterPoint is an S100_ArcByCenterPoint with angular distance
 +/- 360.0 degrees to form a full circle. Angular distance is assumed to be +360.0 degrees if it is
 missing. The interpolation is fixed as "circularArcCenterPointWithRadius". This representation can
 be used only in 2D.</xs:documentation>
  </xs:annotation>
</xs:element>
```

Element S100_GM_KnotType / value

Namespace	http://www.iho.int/s100gml/1.0
Diagram	
Type	xs:double
Properties	content: simple
Source	`<xs:element name="value" type="xs:double"/>`

Element S100_GM_KnotType / multiplicity

Namespace	http://www.iho.int/s100gml/1.0
Diagram	
Type	xs:nonNegativeInteger
Properties	content: simple
Source	`<xs:element name="multiplicity" type="xs:nonNegativeInteger"/>`

Element KnotPropertyType / Knot

Namespace	http://www.iho.int/s100gml/1.0
Annotations	A knot is a breakpoint on a piecewise spline curve. value is the value of the parameter at the knot of the spline (see ISO 19107:2003, 6.4.24.2). multiplicity is the multiplicity of this knot used in the definition of the spline (with the same weight). weight is the value of the averaging weight used for this knot of the spline.

Diagram	
Type	S100_GM_KnotType
Properties	content: complex
Model	value , multiplicity
Children	multiplicity, value

Instance	`<Knot xmlns="http://www.iho.int/s100gml/1.0">`
	`  <value>{1,1}</value>`
	`  <multiplicity>{1,1}</multiplicity>`
	`</Knot>`

Source	`<xs:element name="Knot" type="S100_GM_KnotType">` `  <xs:annotation>` ` <xs:documentation>A knot is a breakpoint on a piecewise spline curve. value is the value of the parameter at the knot of the spline (see ISO 19107:2003, 6.4.24.2). multiplicity is the multiplicity of this knot used in the definition of the spline (with the same weight). weight is the value of the averaging weight used for this knot of the spline.</xs:documentation>` ` </xs:annotation>` `</xs:element>`

Element VectorType / origin

Namespace	http://www.iho.int/s100gml/1.0
Diagram	
Properties	content: complex minOccurs: 1 maxOccurs: 1
Model	gml:pos | gml:pointProperty
Children	gml:pointProperty, gml:pos

Instance	`<origin xmlns="http://www.iho.int/s100gml/1.0" xmlns:gml="http://www.opengis.net/gml/3.2">`
	`  <gml:pos srsDimension="" srsName="">{1,1}</gml:pos>`
	`  <gml:pointProperty xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink`
	`gml:pointProperty>`
	`</origin>`

Source	`<xs:element name="origin" minOccurs="1" maxOccurs="1">`
	`  <xs:complexType>`
	`  <xs:choice>`
	`  <xs:element ref="gml:pos"/>`
	`  <xs:element ref="gml:pointProperty"/>`

```
    </xs:choice>
  </xs:complexType>
</xs:element>
```

Element VectorType / dimension

Namespace	http://www.iho.int/s100gml/1.0
Diagram	
Type	xs:nonNegativeInteger
Properties	content: simple minOccurs: 1 maxOccurs: 1
Source	`<xs:element name="dimension" type="xs:nonNegativeInteger" minOccurs="1" maxOccurs="1"/>`

Element VectorType / offset

Namespace	http://www.iho.int/s100gml/1.0
Annotations	The number of values must be the same as "dimension" value
Diagram	
Type	gml:doubleList
Properties	content: simple minOccurs: 1 maxOccurs: 1

Source	`<xs:element name="offset" type="gml:doubleList" minOccurs="1" maxOccurs="1">`
	`  <xs:annotation>`
	`  <xs:documentation>The number of values must be the same as "dimension" value</xs:documentation>`
	`  </xs:annotation>`
	`</xs:element>`

Element S100_GM_SplineCurveType / degree

Namespace	http://www.iho.int/s100gml/1.0
Diagram	
Type	xs:nonNegativeInteger
Properties	content: simple
Source	`<xs:element name="degree" type="xs:nonNegativeInteger"/>`

Element S100_GM_SplineCurveType / knot

Namespace	http://www.iho.int/s100gml/1.0

Diagram	
Type	KnotPropertyType
Properties	content: complex minOccurs: 0 maxOccurs: unbounded
Model	Knot
Children	Knot

Instance	`<knot xmlns="http://www.iho.int/s100gml/1.0">`
	`  <Knot>{1,1}</Knot>`
	`</knot>`

Source	`<xs:element name="knot" type="KnotPropertyType" minOccurs="0" maxOccurs="unbounded"/>`

Element S100_GM_SplineCurveType / knotSpec

Namespace	http://www.iho.int/s100gml/1.0
Diagram	
Type	S100_GM_KnotTypeType
Properties	content: simple minOccurs: 0 maxOccurs: 1
Facets	enumeration: uniform — knots are equally spaced, all multiplicity 1 enumeration: quasiUniform — the interior knots are uniform, but the first and last have multiplicity one larger than the degree of the spline enumeration: piecewiseBezier — the underlying spline is formally a Bézier spline, but knot multiplicity is always the degree of the spline except at the ends where the knot degree is (p+1). Such a spline is a pure Bézier spline between its distinct knots enumeration: nonUniform — knots have varying spacing and multiplicity
Source	`<xs:element name="knotSpec" type="S100_GM_KnotTypeType" minOccurs="0" maxOccurs="1"/>`

Element S100_GM_SplineCurveType / isRational

Namespace	http://www.iho.int/s100gml/1.0

Diagram	
Type	gml:booleanOrNilReason
Properties	content: `simple`
Source	`<xs:element name="isRational" type="gml:booleanOrNilReason"/>`

Element `S100_GM_SplineCurve`

Namespace	http://www.iho.int/s100gml/1.0
Annotations	
Diagram	
Type	S100_GM_SplineCurveType
Type hierarchy	• gml:AbstractCurveSegmentType • S100_GM_SplineCurveType
Properties	content: `complex`
Substitution Group Affiliation	• gml:AbstractCurveSegment
Model	(gml:pos | gml:pointProperty | gml:posList) , degree , knot* , knotSpec{0,1} , isRational
Children	degree, gml:pointProperty, gml:pos, gml:posList, isRational, knot, knotSpec

Instance	`<S100_GM_SplineCurve interpolation="" numDerivativeInterior="0" numDerivativesAtEnd="0" numDerivativesAtStart="0" x www.iho.int/s100gml/1.0" xmlns:gml="http://www.opengis.net/gml/3.2">`
	`<gml:pos srsDimension="" srsName="">{1,1}</gml:pos>`
	`<gml:pointProperty xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink gml:pointProperty>`
	`<gml:posList count="" srsDimension="" srsName="">{1,1}</gml:posList>`
	`<degree>{1,1}</degree>`
	`<knot>{0,unbounded}</knot>`
	`<knotSpec>{0,1}</knotSpec>`
	`<isRational>{1,1}</isRational>`
	`</S100_GM_SplineCurve>`

Attributes	QName	Type	Default	Use
	interpolation	gml:CurveInterpolationType		optional
	numDerivativeInterior	integer	0	optional
	numDerivativesAtEnd	integer	0	optional
	numDerivativesAtStart	integer	0	optional

Source	`<xs:element name="S100_GM_SplineCurve" type="S100_GM_SplineCurveType" substitutionGroup="gml:AbstractCurveSegment">`
	`<xs:annotation>`
	`<xs:documentation/>`
	`</xs:annotation>`
	`</xs:element>`

Element S100_GM_PolynomialSplineType / derivativeAtStart

Namespace	http://www.iho.int/s100gml/1.0
Diagram	
Type	VectorType
Properties	content: complex minOccurs: 0 maxOccurs: unbounded
Model	origin , dimension , offset
Children	dimension, offset, origin

Instance	`<derivativeAtStart xmlns="http://www.iho.int/s100gml/1.0">`
	`<origin>{1,1}</origin>`
	`<dimension>{1,1}</dimension>`
	`<offset>{1,1}</offset>`
	`</derivativeAtStart>`

Source	`<xs:element name="derivativeAtStart" type="VectorType" minOccurs="0" maxOccurs="unbounded"/>`

Element S100_GM_PolynomialSplineType / derivativeAtEnd

Namespace	http://www.iho.int/s100gml/1.0

Diagram	
Type	VectorType
Properties	content: complex minOccurs: 0 maxOccurs: unbounded
Model	origin , dimension , offset
Children	dimension, offset, origin

Instance	`<derivativeAtEnd xmlns="http://www.iho.int/s100gml/1.0">`
	`  <origin>{1,1}</origin>`
	`  <dimension>{1,1}</dimension>`
	`  <offset>{1,1}</offset>`
	`</derivativeAtEnd>`

Source	`<xs:element name="derivativeAtEnd" type="VectorType" minOccurs="0" maxOccurs="unbounded"/>`

Element S100_GM_PolynomialSplineType / numDerivativeInterior

Namespace	http://www.iho.int/s100gml/1.0
Diagram	
Type	xs:nonNegativeInteger
Properties	content: simple
Source	`<xs:element name="numDerivativeInterior" type="xs:nonNegativeInteger"/>`

Element S100_GM_PolynomialSpline

Namespace	http://www.iho.int/s100gml/1.0
Annotations	

Diagram	
Type	S100_GM_PolynomialSplineType

Type hierarchy	• gml:AbstractCurveSegmentType
	  • S100_GM_SplineCurveType
	  • S100_GM_PolynomialSplineType

Properties	content: complex
Substitution Group Affiliation	• gml:AbstractCurveSegment
Model	(gml:pos | gml:pointProperty | gml:posList) , degree , knot* , knotSpec{0,1} , isRational , derivativeAtStart* , derivativeAtEnd* , numDerivativeInterior
Children	degree, derivativeAtEnd, derivativeAtStart, gml:pointProperty, gml:pos, gml:posList, isRational, knot, knotSpec, numDerivativeInterior

Instance	`<S100_GM_PolynomialSpline interpolation="" numDerivativeInterior="0" numDerivativesAtEnd="0" numDerivativesAtStart=`
	`www.iho.int/s100gml/1.0" xmlns:gml="http://www.opengis.net/gml/3.2">`
	`  <gml:pos srsDimension="" srsName="">{1,1}</gml:pos>`
	`  <gml:pointProperty xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink`
	`gml:pointProperty>`
	`  <gml:posList count="" srsDimension="" srsName="">{1,1}</gml:posList>`
	`  <degree>{1,1}</degree>`
	`  <knot>{0,unbounded}</knot>`

```
  <knotSpec>{0,1}</knotSpec>
  <isRational>{1,1}</isRational>
  <derivativeAtStart>{0,unbounded}</derivativeAtStart>
  <derivativeAtEnd>{0,unbounded}</derivativeAtEnd>
  <numDerivativeInterior>{1,1}</numDerivativeInterior>
</S100_GM_PolynomialSpline>
```

Attributes

QName	Type	Default	Use
interpolation	gml:CurveInterpolationType		optional
numDerivativeInterior	integer	0	optional
numDerivativesAtEnd	integer	0	optional
numDerivativesAtStart	integer	0	optional

Source

```
<xs:element name="S100_GM_PolynomialSpline" type="S100_GM_PolynomialSplineType"
 substitutionGroup="gml:AbstractCurveSegment">
  <xs:annotation>
    <xs:documentation/>
  </xs:annotation>
</xs:element>
```

Element S100_GM_Curve

Namespace: http://www.iho.int/s100gml/1.0

Annotations: `<xs:documentation>Curve segments with other interpolations</xs:documentation>`

Diagram

Type: S100_GM_CurveType

Type hierarchy:
- gml:AbstractCurveSegmentType
  - S100_GM_CurveType

Properties: content: `complex`

Substitution Group Affiliation:
- gml:AbstractCurveSegment

Model: (gml:pos | gml:pointProperty | gml:posList)

Children	gml:pointProperty, gml:pos, gml:posList

Instance	`<S100_GM_Curve interpolation="" numDerivativeInterior="0" numDerivativesAtEnd="0" numDerivativesAtStart="0" xmlns=" www.iho.int/s100gml/1.0" xmlns:gml="http://www.opengis.net/gml/3.2">`
	`<gml:pos srsDimension="" srsName="">{1,1}</gml:pos>`
	`<gml:pointProperty xlink:actuate="" xlink:arcrole="" xlink:href="" nilReason="" owns="false" xlink:role="" xlink gml:pointProperty>`
	`<gml:posList count="" srsDimension="" srsName="">{1,1}</gml:posList>`
	`</S100_GM_Curve>`

Attributes

QName	Type	Default	Use
interpolation	gml:CurveInterpolationType		optional
numDerivativeInterior	integer	0	optional
numDerivativesAtEnd	integer	0	optional
numDerivativesAtStart	integer	0	optional

Source

```
<xs:element name="S100_GM_Curve" type="S100_GM_CurveType"
 substitutionGroup="gml:AbstractCurveSegment">
  <xs:annotation>
    <xs:documentation>
      <xs:documentation>Curve segments with other interpolations</xs:documentation>
    </xs:documentation>
  </xs:annotation>
</xs:element>
```

Complex Type(s)

Complex Type `AbstractFeatureType`

Namespace	http://www.iho.int/s100gml/1.0
Annotations	Abstract type for an S-100 feature. This is the base type from which domain application schemas derive definitions for their individual features. It derives from GML AbstractFeatureType. It provides for all information types in the data product's GML application schema to have feature identifiers and properties for feature associations, information associations and inverse information associations.

Diagram

Type	extension of gml:AbstractFeatureType

Type hierarchy	• gml:AbstractGMLType • gml:AbstractFeatureType • AbstractFeatureType
Used by	Complex Type geographicFeatureType
Model	gml:boundedBy{0,1} , featureObjectIdentifier{0,1} , informationAssociation* , featureAssociation* , invFeatureAssociation*
Children	featureAssociation, featureObjectIdentifier, gml:boundedBy, informationAssociation, invFeatureAssociation
Attributes	**QName** / **Type** / **Use** **gml:id** / ID / required The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.
Source	`<xs:complexType name="AbstractFeatureType">` `<xs:annotation>` `<xs:documentation>Abstract type for an S-100 feature. This is the base type from which domain application schemas derive definitions for their individual features. It derives from GML AbstractFeatureType. It provides for all information types in the data product's GML application schema to have feature identifiers and properties for feature associations, information associations and inverse information associations.</xs:documentation>` `</xs:annotation>` `<xs:complexContent>` `<xs:extension base="gml:AbstractFeatureType">` `<xs:sequence>` `<xs:element name="featureObjectIdentifier" type="FeatureObjectIdentifier" minOccurs="0"/>` `<xs:element minOccurs="0" maxOccurs="unbounded" ref="informationAssociation"/>` `<xs:element minOccurs="0" maxOccurs="unbounded" ref="featureAssociation"/>` `<xs:element minOccurs="0" maxOccurs="unbounded" ref="invFeatureAssociation"/>` `</xs:sequence>` `</xs:extension>` `</xs:complexContent>` `</xs:complexType>`

Complex Type `FeatureObjectIdentifier`

Namespace	http://www.iho.int/s100gml/1.0
Annotations	Complex type for feature object identifier combines agency, FIDN, FIDS
Diagram	
Used by	Element AbstractFeatureType/featureObjectIdentifier
Model	agency , featureIdentificationNumber , featureIdentificationSubdivision
Children	agency, featureIdentificationNumber, featureIdentificationSubdivision

Source	`<xs:complexType name="FeatureObjectIdentifier">`
	`<xs:annotation>`
	`<xs:documentation>Complex type for feature object identifier combines agency, FIDN, FIDS</xs:documentation>`
	`</xs:annotation>`
	`<xs:sequence>`
	`<xs:element name="agency" type="AgencyCodeType"/>`
	`<xs:element name="featureIdentificationNumber" type="IdentificationNumberType"/>`
	`<xs:element name="featureIdentificationSubdivision" type="IdentificationSubdivisionType"/>`
	`</xs:sequence>`
	`</xs:complexType>`

Complex Type `InformationPropertyType`

Namespace	http://www.iho.int/s100gml/1.0
Annotations	Abstract type for an S-100 information associations

Diagram	
Type	extension of AbstractAttributeType

Type hierarchy	• gml:AbstractGMLType
	  • AbstractAttributeType
	  • InformationPropertyType

Used by	Element informationAssociation

Attributes

QName	Type	Fixed	Use	
gml:id	ID		required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.			
nilReason	gml:NilReasonType		optional	
xlink:actuate	xlink:actuateType		optional	
xlink:arcrole	xlink:arcroleType		optional	
xlink:href	xlink:hrefType		optional	
xlink:role	xlink:roleType		optional	
xlink:show	xlink:showType		optional	
xlink:title	xlink:titleAttrType		optional	
xlink:type	xlink:typeType	simple	optional	

Source

```
<xs:complexType name="InformationPropertyType">
  <xs:annotation>
    <xs:documentation>Abstract type for an S-100 information associations</xs:documentation>
  </xs:annotation>
  <xs:complexContent>
    <xs:extension base="AbstractAttributeType">
      <xs:attributeGroup ref="gml:AssociationAttributeGroup"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Complex Type `AbstractAttributeType`

Namespace	http://www.iho.int/s100gml/1.0

Annotations	`Abstract type for attributes`
Diagram	
Type	extension of gml:AbstractGMLType
Type hierarchy	• gml:AbstractGMLType • AbstractAttributeType
Properties	abstract: `true`
Used by	Complex Types FeaturePropertyType, InformationPropertyType, InverseInformationAssociationType
Attributes	**QName** / **Type** / **Use** **gml:id** / ID / required `The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.`

Source	`<xs:complexType name="AbstractAttributeType" abstract="true">`
	`  <xs:annotation>`
	`  <xs:documentation>Abstract type for attributes</xs:documentation>`
	`  </xs:annotation>`
	`  <xs:complexContent>`
	`  <xs:extension base="gml:AbstractGMLType"/>`
	`  </xs:complexContent>`
	`</xs:complexType>`

Complex Type `FeaturePropertyType`

Namespace	http://www.iho.int/s100gml/1.0
Annotations	`Abstract type for an S-100 feature association`

Diagram

Type

extension of AbstractAttributeType

Type hierarchy

- gml:AbstractGMLType
  - AbstractAttributeType
    - FeaturePropertyType

Used by

Elements featureAssociation, invFeatureAssociation

Attributes

QName	Type	Fixed	Use	
gml:id	ID		required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.			
nilReason	gml:NilReasonType		optional	
xlink:actuate	xlink:actuateType		optional	
xlink:arcrole	xlink:arcroleType		optional	
xlink:href	xlink:hrefType		optional	
xlink:role	xlink:roleType		optional	
xlink:show	xlink:showType		optional	
xlink:title	xlink:titleAttrType		optional	
xlink:type	xlink:typeType	simple	optional	

Source

```
<xs:complexType name="FeaturePropertyType">
  <xs:annotation>
    <xs:documentation>Abstract type for an S-100 feature association</xs:documentation>
  </xs:annotation>
  <xs:complexContent>
    <xs:extension base="AbstractAttributeType">
      <xs:attributeGroup ref="gml:AssociationAttributeGroup"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Complex Type `AbstractInformationType`

Namespace	http://www.iho.int/s100gml/1.0
Annotations	`Abstract type for an S-100 information type. This is the base type from which domain application schemas derive definitions for their individual information types. It provides for all information types in the data product's GML application schema to have properties for information associations and inverse information associations.`
Diagram	
Type	extension of gml:AbstractGMLType
Type hierarchy	• gml:AbstractGMLType • AbstractInformationType
Used by	Complex Type informationType
Model	informationAssociation* , invInformationAssociation*
Children	informationAssociation, invInformationAssociation
Attributes	**QName** / **Type** / **Use** **gml:id** / ID / required `The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.`

Source

```
<xs:complexType name="AbstractInformationType">
  <xs:annotation>
    <xs:documentation>Abstract type for an S-100 information type. This is the base type from which
 domain application schemas derive definitions for their individual information types. It provides
 for all information types in the data product's GML application schema to have properties for
 information associations and inverse information associations.</xs:documentation>
  </xs:annotation>
  <xs:complexContent>
    <xs:extension base="gml:AbstractGMLType">
      <xs:sequence>
        <xs:element ref="informationAssociation" maxOccurs="unbounded" minOccurs="0"/>
        <xs:element ref="invInformationAssociation" maxOccurs="unbounded" minOccurs="0"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Complex Type `InverseInformationAssociationType`

Namespace	http://www.iho.int/s100gml/1.0
Annotations	`Abstract type for the inverse association to an information association.`

Diagram	
Type	extension of AbstractAttributeType

Type hierarchy	• gml:AbstractGMLType
	  • AbstractAttributeType
	  • InverseInformationAssociationType

Used by	Element invInformationAssociation

Attributes

QName	Type	Fixed	Use	
gml:id	ID		required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.			
nilReason	gml:NilReasonType		optional	
xlink:actuate	xlink:actuateType		optional	
xlink:arcrole	xlink:arcroleType		optional	
xlink:href	xlink:hrefType		optional	
xlink:role	xlink:roleType		optional	
xlink:show	xlink:showType		optional	
xlink:title	xlink:titleAttrType		optional	
xlink:type	xlink:typeType	simple	optional	

Source

```
<xs:complexType name="InverseInformationAssociationType">
  <xs:annotation>
    <xs:documentation>Abstract type for the inverse association to an information association.</
xs:documentation>
  </xs:annotation>
  <xs:complexContent>
    <xs:extension base="AbstractAttributeType">
      <xs:attributeGroup ref="gml:AssociationAttributeGroup"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Complex Type `DataSetIdentificationType`

Namespace	http://www.iho.int/s100gml/1.0
Annotations	S-100 Data Set Identification. The fields correspond to S-100 10a-5.1.2.1 fields.

	Attributes encodingSpecification and encodingSpecificationEdition are actually redundant here because in an XML schema the encoding specification and encoding specification edition are usually implicit in the namespace URI.
Diagram	
Used by	Element CollectionType/metadata/DatasetIdentificationInformation
Model	encodingSpecification , encodingSpecificationEdition , productIdentifier , productEdition , applicationProfile , datasetFileIdentifier , datasetTitle , datasetReferenceDate , datasetLanguage , datasetAbstract{0,1} , datasetTopicCategory+
Children	applicationProfile, datasetAbstract, datasetFileIdentifier, datasetLanguage, datasetReferenceDate, datasetTitle, datasetTopicCategory, encodingSpecification, encodingSpecificationEdition, productEdition, productIdentifier
Source	<xs:complexType name="DataSetIdentificationType"> <xs:annotation> <xs:documentation>S-100 Data Set Identification. The fields correspond to S-100 10a-5.1.2.1 fields. Attributes encodingSpecification and encodingSpecificationEdition are actually redundant here because in an XML schema the encoding specification and encoding specification edition are usually implicit in the namespace URI.</xs:documentation> </xs:annotation> <xs:sequence> <xs:element name="encodingSpecification" type="xs:string" fixed="S-100 Part 10b"> <xs:annotation> <xs:documentation>Encoding specification that defines the encoding.</xs:documentation> </xs:annotation> </xs:element> <xs:element name="encodingSpecificationEdition" type="xs:string" fixed="1.0"> <xs:annotation> <xs:documentation>Edition of the encoding specification</xs:documentation> </xs:annotation>

```
    </xs:element>
    <xs:element name="productIdentifier" type="xs:string">
      <xs:annotation>
        <xs:documentation>Unique identifier of the data product as specified in the product
 specification</xs:documentation>
      </xs:annotation>
    </xs:element>
    <xs:element name="productEdition" type="xs:string">
      <xs:annotation>
        <xs:documentation>Edition of the product specification</xs:documentation>
      </xs:annotation>
    </xs:element>
    <xs:element name="applicationProfile" type="xs:string">
      <xs:annotation>
        <xs:documentation>Identifier that specifies a profile within the data product</
xs:documentation>
      </xs:annotation>
    </xs:element>
    <xs:element name="datasetFileIdentifier" type="xs:string">
      <xs:annotation>
        <xs:documentation>The file identifier of the dataset</xs:documentation>
      </xs:annotation>
    </xs:element>
    <xs:element name="datasetTitle" type="xs:string">
      <xs:annotation>
        <xs:documentation>The title of the dataset</xs:documentation>
      </xs:annotation>
    </xs:element>
    <xs:element name="datasetReferenceDate" type="xs:date">
      <xs:annotation>
        <xs:documentation>The reference date of the dataset</xs:documentation>
      </xs:annotation>
    </xs:element>
    <xs:element name="datasetLanguage" type="ISO-639-1" default="en">
      <xs:annotation>
        <xs:documentation>The (primary) language used in this dataset</xs:documentation>
      </xs:annotation>
    </xs:element>
    <xs:element name="datasetAbstract" type="xs:string" minOccurs="0">
      <xs:annotation>
        <xs:documentation>The abstract of the dataset</xs:documentation>
      </xs:annotation>
    </xs:element>
    <xs:element name="datasetTopicCategory" type="MD_TopicCategoryCode" maxOccurs="unbounded">
      <xs:annotation>
        <xs:documentation>A set of topic categories</xs:documentation>
      </xs:annotation>
    </xs:element>
  </xs:sequence>
</xs:complexType>
```

Complex Type `DataSetStructureInformationType`

Namespace	http://www.iho.int/s100gml/1.0
Annotations	`Data Set Structure information`

Diagram	
Used by	Element CollectionType/metadata/DatasetStructureInformation
Model	datasetCoordOriginX{0,1} , datasetCoordOriginY{0,1} , datasetCoordOriginZ{0,1} , coordMultFactorX{0,1} , coordMultFactorY{0,1} , coordMultFactorZ{0,1} , nInfoRec{0,1} , nPointRec{0,1} , nMultiPointRec{0,1} , nCurveRec{0,1} , nCompositeCurveRec{0,1} , nSurfaceRec{0,1} , nFeatureRec{0,1}
Children	coordMultFactorX, coordMultFactorY, coordMultFactorZ, datasetCoordOriginX, datasetCoordOriginY, datasetCoordOriginZ, nCompositeCurveRec, nCurveRec, nFeatureRec, nInfoRec, nMultiPointRec, nPointRec, nSurfaceRec
Source	<xs:complexType name="DataSetStructureInformationType"> <xs:annotation> <xs:documentation>Data Set Structure information</xs:documentation> </xs:annotation> <xs:sequence> <xs:element name="datasetCoordOriginX" type="xs:double" minOccurs="0"> <xs:annotation> <xs:documentation>Shift used to adjust X coordinate before encoding</xs:documentation> </xs:annotation> </xs:element>

```
    <xs:element name="datasetCoordOriginY" type="xs:double" minOccurs="0">
      <xs:annotation>
        <xs:documentation>Shift used to adjust Y coordinate before encoding</xs:documentation>
      </xs:annotation>
    </xs:element>
    <xs:element name="datasetCoordOriginZ" type="xs:double" minOccurs="0">
      <xs:annotation>
        <xs:documentation>Shift used to adjust Z coordinate before encoding</xs:documentation>
      </xs:annotation>
    </xs:element>
    <xs:element name="coordMultFactorX" type="xs:positiveInteger" minOccurs="0">
      <xs:annotation>
        <xs:documentation>Floating point to integer multiplication factor for X coordinate or
longitude</xs:documentation>
      </xs:annotation>
    </xs:element>
    <xs:element name="coordMultFactorY" type="xs:positiveInteger" minOccurs="0">
      <xs:annotation>
        <xs:documentation>Floating point to integer multiplication factor for Y coordinate or
latitude</xs:documentation>
      </xs:annotation>
    </xs:element>
    <xs:element name="coordMultFactorZ" type="xs:positiveInteger" minOccurs="0">
      <xs:annotation>
        <xs:documentation>Floating point to integer multiplication factor for Z coordinate or depths
or height</xs:documentation>
      </xs:annotation>
    </xs:element>
    <xs:element name="nInfoRec" type="xs:nonNegativeInteger" minOccurs="0">
      <xs:annotation>
        <xs:documentation>Number of information records in the data set</xs:documentation>
      </xs:annotation>
    </xs:element>
    <xs:element name="nPointRec" type="xs:nonNegativeInteger" minOccurs="0">
      <xs:annotation>
        <xs:documentation>Number of point records in the data set</xs:documentation>
      </xs:annotation>
    </xs:element>
    <xs:element name="nMultiPointRec" type="xs:nonNegativeInteger" minOccurs="0">
      <xs:annotation>
        <xs:documentation>Number of multipoint records in the data set</xs:documentation>
      </xs:annotation>
    </xs:element>
    <xs:element name="nCurveRec" type="xs:nonNegativeInteger" minOccurs="0">
      <xs:annotation>
        <xs:documentation>Number of curve records in the data set</xs:documentation>
      </xs:annotation>
    </xs:element>
    <xs:element name="nCompositeCurveRec" type="xs:nonNegativeInteger" minOccurs="0">
      <xs:annotation>
        <xs:documentation>Number of composite curve records in the data set</xs:documentation>
      </xs:annotation>
    </xs:element>
    <xs:element name="nSurfaceRec" type="xs:nonNegativeInteger" minOccurs="0">
      <xs:annotation>
        <xs:documentation>Number of surface records in the data set</xs:documentation>
      </xs:annotation>
    </xs:element>
    <xs:element name="nFeatureRec" type="xs:nonNegativeInteger" minOccurs="0">
      <xs:annotation>
        <xs:documentation>Number of feature records in the data set</xs:documentation>
      </xs:annotation>
    </xs:element>
  </xs:sequence>
</xs:complexType>
```

Complex Type `PointType`

Namespace	http://www.iho.int/s100gml/1.0
Annotations	`S-100 point type adds an information association to the GML spatial type Point`

Diagram	
Type	extension of gml:PointType
Type hierarchy	• gml:AbstractGMLType • gml:AbstractGeometryType • gml:AbstractGeometricPrimitiveType • gml:PointType • PointType
Used by	Element Point
Model	gml:pos , informationAssociation*
Children	gml:pos, informationAssociation
Attributes	

QName	Type	Use	
gml:id	ID	required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML		

	QName	Type	Use	
		type ID, so is constrained to be unique in the XML document within which it occurs.		
	srsDimension	positiveInteger	optional	
	srsName	anyURI	optional	

Source

```
<xs:complexType name="PointType">
  <xs:annotation>
    <xs:documentation>S-100 point type adds an information association to the GML spatial type
 Point</xs:documentation>
  </xs:annotation>
  <xs:complexContent>
    <xs:extension base="gml:PointType">
      <xs:sequence>
        <xs:element ref="informationAssociation" maxOccurs="unbounded" minOccurs="0"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Complex Type `MultiPointType`

Namespace	http://www.iho.int/s100gml/1.0
Annotations	S-100 multipoint type adds an information association to the GML spatial type MultiPoint

Diagram	
Type	extension of gml:MultiPointType
Type hierarchy	• gml:AbstractGMLType • gml:AbstractGeometryType • gml:AbstractGeometricAggregateType • gml:MultiPointType • MultiPointType
Used by	Element MultiPoint
Model	gml:pointMember* , informationAssociation*
Children	gml:pointMember, informationAssociation

Attributes	**QName**	**Type**	**Use**	
	aggregationType	gml:AggregationType	optional	
	gml:id	ID	required	
		The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		
	srsDimension	positiveInteger	optional	
	srsName	anyURI	optional	

Source

```
<xs:complexType name="MultiPointType">
  <xs:annotation>
    <xs:documentation>S-100 multipoint type adds an information association to the GML spatial type
 MultiPoint</xs:documentation>
  </xs:annotation>
  <xs:complexContent>
    <xs:extension base="gml:MultiPointType">
      <xs:sequence>
        <xs:element ref="informationAssociation" maxOccurs="unbounded" minOccurs="0"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Complex Type `CurveType`

Namespace	http://www.iho.int/s100gml/1.0
Annotations	S-100 curve type adds an information association to the GML spatial type Curve

Diagram	
Type	extension of gml:CurveType
Type hierarchy	• gml:AbstractGMLType • gml:AbstractGeometryType • gml:AbstractGeometricPrimitiveType • gml:AbstractCurveType • gml:CurveType • CurveType
Used by	Element Curve
Model	gml:segments , informationAssociation*
Children	gml:segments, informationAssociation

Attributes	**QName**	**Type**	**Use**	
	gml:id	ID	required	
		The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		
	srsDimension	positiveInteger	optional	
	srsName	anyURI	optional	

Source

```
<xs:complexType name="CurveType">
  <xs:annotation>
    <xs:documentation>S-100 curve type adds an information association to the GML spatial type
 Curve</xs:documentation>
  </xs:annotation>
  <xs:complexContent>
    <xs:extension base="gml:CurveType">
      <xs:sequence>
        <xs:element ref="informationAssociation" maxOccurs="unbounded" minOccurs="0"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Complex Type `CompositeCurveType`

Namespace	http://www.iho.int/s100gml/1.0
Annotations	S-100 composite curve type adds an information association to the GML spatial type CompositeCurve

Diagram	
Type	extension of gml:CompositeCurveType
Type hierarchy	• gml:AbstractGMLType • gml:AbstractGeometryType • gml:AbstractGeometricPrimitiveType • gml:AbstractCurveType • gml:CompositeCurveType • CompositeCurveType
Used by	Element CompositeCurve
Model	gml:curveMember+ , informationAssociation*
Children	gml:curveMember, informationAssociation

Attributes	**QName**	**Type**	**Use**	
	aggregationType	gml:AggregationType	optional	
	gml:id	ID	required	
		The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		
	srsDimension	positiveInteger	optional	
	srsName	anyURI	optional	

Source

```
<xs:complexType name="CompositeCurveType">
  <xs:annotation>
    <xs:documentation>S-100 composite curve type adds an information association to the GML spatial
 type CompositeCurve</xs:documentation>
  </xs:annotation>
  <xs:complexContent>
    <xs:extension base="gml:CompositeCurveType">
      <xs:sequence>
        <xs:element ref="informationAssociation" maxOccurs="unbounded" minOccurs="0"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Complex Type `SurfaceType`

Namespace	http://www.iho.int/s100gml/1.0
Annotations	S-100 surface type adds an information association to the GML spatial type Surface

Diagram	
Type	extension of gml:SurfaceType
Type hierarchy	• gml:AbstractGMLType • gml:AbstractGeometryType • gml:AbstractGeometricPrimitiveType • gml:AbstractSurfaceType • gml:SurfaceType • SurfaceType
Used by	Element Surface
Model	gml:patches , informationAssociation*
Children	gml:patches, informationAssociation

Attributes	**QName**	**Type**	**Use**	
	gml:id	ID	required	
		The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		
	srsDimension	positiveInteger	optional	
	srsName	anyURI	optional	

Source

```
<xs:complexType name="SurfaceType">
  <xs:annotation>
    <xs:documentation>S-100 surface type adds an information association to the GML spatial type
 Surface</xs:documentation>
  </xs:annotation>
  <xs:complexContent>
    <xs:extension base="gml:SurfaceType">
      <xs:sequence>
        <xs:element ref="informationAssociation" maxOccurs="unbounded" minOccurs="0"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Complex Type PolygonType

Namespace	http://www.iho.int/s100gml/1.0
Annotations	S-100 polygon type adds an information association to the GML spatial type Polygon

Diagram	
Type	extension of gml:PolygonType
Type hierarchy	• gml:AbstractGMLType • gml:AbstractGeometryType • gml:AbstractGeometricPrimitiveType • gml:AbstractSurfaceType • gml:PolygonType • PolygonType

Used by	Element Polygon
Model	gml:exterior{0,1} , gml:interior* , informationAssociation*
Children	gml:exterior, gml:interior, informationAssociation
Attributes	

QName	Type	Use	
gml:id	ID	required	
	The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.		
srsDimension	positiveInteger	optional	
srsName	anyURI	optional	

Source

```
<xs:complexType name="PolygonType">
  <xs:annotation>
    <xs:documentation>S-100 polygon type adds an information association to the GML spatial type
 Polygon</xs:documentation>
  </xs:annotation>
  <xs:complexContent>
    <xs:extension base="gml:PolygonType">
      <xs:sequence>
        <xs:element ref="informationAssociation" maxOccurs="unbounded" minOccurs="0"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Complex Type `PointPropertyType`

Namespace	http://www.iho.int/s100gml/1.0
Annotations	Point property using the S-100 point type.
Diagram	

Used by	Element pointProperty
Model	Point{0,1}
Children	Point
Attributes	

QName	Type	Fixed	Use	
nilReason	gml:NilReasonType		optional	
xlink:actuate	xlink:actuateType		optional	
xlink:arcrole	xlink:arcroleType		optional	
xlink:href	xlink:hrefType		optional	
xlink:role	xlink:roleType		optional	
xlink:show	xlink:showType		optional	
xlink:title	xlink:titleAttrType		optional	
xlink:type	xlink:typeType	simple	optional	

Source

```
<xs:complexType name="PointPropertyType">
  <xs:annotation>
    <xs:documentation>Point property using the S-100 point type.</xs:documentation>
  </xs:annotation>
```

```
  <xs:sequence>
    <xs:element ref="Point" minOccurs="0"/>
  </xs:sequence>
  <xs:attributeGroup ref="gml:AssociationAttributeGroup"/>
</xs:complexType>
```

Complex Type `MultiPointPropertyType`

Namespace	http://www.iho.int/s100gml/1.0
Annotations	`MultiPoint property using the S-100 multipoint type.`
Diagram	
Used by	Element multiPointProperty
Model	MultiPoint{0,1}
Children	MultiPoint

Attributes

QName	Type	Fixed	Use	
nilReason	gml:NilReasonType		optional	
xlink:actuate	xlink:actuateType		optional	
xlink:arcrole	xlink:arcroleType		optional	
xlink:href	xlink:hrefType		optional	
xlink:role	xlink:roleType		optional	
xlink:show	xlink:showType		optional	
xlink:title	xlink:titleAttrType		optional	
xlink:type	xlink:typeType	simple	optional	

Source

```
<xs:complexType name="MultiPointPropertyType">
  <xs:annotation>
    <xs:documentation>MultiPoint property using the S-100 multipoint type.</xs:documentation>
  </xs:annotation>
  <xs:sequence>
    <xs:element ref="MultiPoint" minOccurs="0"/>
  </xs:sequence>
  <xs:attributeGroup ref="gml:AssociationAttributeGroup"/>
</xs:complexType>
```

Complex Type `CurvePropertyType`

Namespace	http://www.iho.int/s100gml/1.0
Annotations	`Curve property using the S-100 curve type.`

Diagram	
Used by	Element curveProperty
Model	Curve{0,1}
Children	Curve

Attributes

QName	Type	Fixed	Use
nilReason	gml:NilReasonType		optional
xlink:actuate	xlink:actuateType		optional
xlink:arcrole	xlink:arcroleType		optional
xlink:href	xlink:hrefType		optional
xlink:role	xlink:roleType		optional
xlink:show	xlink:showType		optional
xlink:title	xlink:titleAttrType		optional
xlink:type	xlink:typeType	simple	optional

Source

```
<xs:complexType name="CurvePropertyType">
  <xs:annotation>
    <xs:documentation>Curve property using the S-100 curve type.</xs:documentation>
  </xs:annotation>
  <xs:sequence>
    <xs:element ref="Curve" minOccurs="0"/>
  </xs:sequence>
  <xs:attributeGroup ref="gml:AssociationAttributeGroup"/>
</xs:complexType>
```

Complex Type `CompositeCurvePropertyType`

Namespace	http://www.iho.int/s100gml/1.0
Annotations	Composite Curve property using the S-100 composite curve type.
Diagram	
Used by	Element compositeCurveProperty
Model	CompositeCurve{0,1}
Children	CompositeCurve

Attributes

QName	Type	Fixed	Use
nilReason	gml:NilReasonType		optional
xlink:actuate	xlink:actuateType		optional

	QName	Type	Fixed	Use	
	xlink:arcrole	xlink:arcroleType		optional	
	xlink:href	xlink:hrefType		optional	
	xlink:role	xlink:roleType		optional	
	xlink:show	xlink:showType		optional	
	xlink:title	xlink:titleAttrType		optional	
	xlink:type	xlink:typeType	simple	optional	

Source

```
<xs:complexType name="CompositeCurvePropertyType">
  <xs:annotation>
    <xs:documentation>Composite Curve property using the S-100 composite curve type.</
xs:documentation>
  </xs:annotation>
  <xs:sequence>
    <xs:element ref="CompositeCurve" minOccurs="0"/>
  </xs:sequence>
  <xs:attributeGroup ref="gml:AssociationAttributeGroup"/>
</xs:complexType>
```

Complex Type `OrientableCurvePropertyType`

Namespace: http://www.iho.int/s100gml/1.0

Annotations: `Orientable Curve property using the S-100 orientable curve element.`

Diagram

Used by: Element orientableCurveProperty

Model: OrientableCurve{0,1}

Children: OrientableCurve

Attributes

QName	Type	Fixed	Use	
nilReason	gml:NilReasonType		optional	
xlink:actuate	xlink:actuateType		optional	
xlink:arcrole	xlink:arcroleType		optional	
xlink:href	xlink:hrefType		optional	
xlink:role	xlink:roleType		optional	
xlink:show	xlink:showType		optional	
xlink:title	xlink:titleAttrType		optional	
xlink:type	xlink:typeType	simple	optional	

Source

```
<xs:complexType name="OrientableCurvePropertyType">
  <xs:annotation>
    <xs:documentation>Orientable Curve property using the S-100 orientable curve element.</
xs:documentation>
  </xs:annotation>
  <xs:sequence>
    <xs:element ref="OrientableCurve" minOccurs="0"/>
  </xs:sequence>
  <xs:attributeGroup ref="gml:AssociationAttributeGroup"/>
</xs:complexType>
```

Complex Type `SurfacePropertyType`

Namespace: http://www.iho.int/s100gml/1.0

Annotations	`Surface property using the S-100 surface type.`
Diagram	
Used by	Element surfaceProperty
Model	gml:AbstractSurface{0,1}
Children	gml:AbstractSurface

Attributes

QName	Type	Fixed	Use
nilReason	gml:NilReasonType		optional
xlink:actuate	xlink:actuateType		optional
xlink:arcrole	xlink:arcroleType		optional
xlink:href	xlink:hrefType		optional
xlink:role	xlink:roleType		optional
xlink:show	xlink:showType		optional
xlink:title	xlink:titleAttrType		optional
xlink:type	xlink:typeType	simple	optional

Source

```
<xs:complexType name="SurfacePropertyType">
  <xs:annotation>
    <xs:documentation>Surface property using the S-100 surface type.</xs:documentation>
  </xs:annotation>
  <xs:sequence>
    <xs:element ref="gml:AbstractSurface" minOccurs="0"/>
    <!-- add substitution group heads like abstractsurface -->
  </xs:sequence>
  <xs:attributeGroup ref="gml:AssociationAttributeGroup"/>
</xs:complexType>
```

Complex Type `PolygonPropertyType`

Namespace	http://www.iho.int/s100gml/1.0
Annotations	`Polygon property using the S-100 polygon type.`
Diagram	
Used by	Element polygonProperty
Model	Polygon{0,1}

Children	Polygon
Attributes	

QName	Type	Fixed	Use	
nilReason	gml:NilReasonType		optional	
xlink:actuate	xlink:actuateType		optional	
xlink:arcrole	xlink:arcroleType		optional	
xlink:href	xlink:hrefType		optional	
xlink:role	xlink:roleType		optional	
xlink:show	xlink:showType		optional	
xlink:title	xlink:titleAttrType		optional	
xlink:type	xlink:typeType	simple	optional	

Source

```
<xs:complexType name="PolygonPropertyType">
  <xs:annotation>
    <xs:documentation>Polygon property using the S-100 polygon type.</xs:documentation>
  </xs:annotation>
  <xs:sequence>
    <xs:element ref="Polygon" minOccurs="0"/>
  </xs:sequence>
  <xs:attributeGroup ref="gml:AssociationAttributeGroup"/>
</xs:complexType>
```

Complex Type `S100_ArcByCenterPointType`

Namespace	http://www.iho.int/s100gml/1.0
Annotations	Type for S-100 arc by center point geometry
Diagram	

Type	extension of gml:AbstractCurveSegmentType
Type hierarchy	• gml:AbstractCurveSegmentType • S100_ArcByCenterPointType
Used by	Element S100_ArcByCenterPoint Complex Type S100_CircleByCenterPointType
Model	(gml:pos | gml:pointProperty) , radius , startAngle{0,1} , angularDistance{0,1}
Children	angularDistance, gml:pointProperty, gml:pos, radius, startAngle

Attributes	QName	Type	Fixed	Default	Use	
	interpolation	gml:CurveInterpolationType	circularArcCenter-PointWithRadius		optional	
	numDerivativeInterior	integer		0	optional	
	numDerivativesAtEnd	integer		0	optional	
	numDerivativesAtStart	integer		0	optional	

Source

```
<xs:complexType name="S100_ArcByCenterPointType">
  <xs:annotation>
    <xs:documentation>Type for S-100 arc by center point geometry</xs:documentation>
  </xs:annotation>
  <xs:complexContent>
    <xs:extension base="gml:AbstractCurveSegmentType">
      <xs:sequence>
        <xs:choice>
          <xs:element ref="gml:pos"/>
          <xs:element ref="gml:pointProperty"/>
        </xs:choice>
        <xs:element name="radius" type="gml:LengthType"/>
        <xs:element name="startAngle" type="BearingType" minOccurs="0"/>
        <xs:element name="angularDistance" type="PlusOrMinus360Degrees" minOccurs="0"/>
      </xs:sequence>
      <xs:attribute name="interpolation" type="gml:CurveInterpolationType"
 fixed="circularArcCenterPointWithRadius"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Complex Type `S100_CircleByCenterPointType`

Namespace	http://www.iho.int/s100gml/1.0

Diagram	
Type	restriction of S100_ArcByCenterPointType
Type hierarchy	• gml:AbstractCurveSegmentType • S100_ArcByCenterPointType • S100_CircleByCenterPointType
Used by	Element S100_CircleByCenterPoint
Model	(gml:pos | gml:pointProperty) , radius , startAngle , angularDistance
Children	angularDistance, gml:pointProperty, gml:pos, radius, startAngle

Attributes

QName	Type	Fixed	Default	Use	
interpolation	gml:CurveInterpolationType	circularArcCenter-PointWithRadius		optional	
numDerivativeInterior	integer		0	optional	
numDerivativesAtEnd	integer		0	optional	
numDerivativesAtStart	integer		0	optional	

Source

```
<xs:complexType name="S100_CircleByCenterPointType">
  <xs:complexContent>
    <xs:restriction base="S100_ArcByCenterPointType">
      <xs:sequence>
        <xs:choice>
          <xs:element ref="gml:pos"/>
```

```
          <xs:element ref="gml:pointProperty"/>
        </xs:choice>
        <xs:element name="radius" type="gml:LengthType"/>
        <xs:element name="startAngle" type="BearingType" default="0.0"/>
        <xs:element name="angularDistance" default="360.0">
          <xs:simpleType>
            <xs:restriction base="PlusOrMinus360Degrees">
              <xs:enumeration value="360.0"/>
              <xs:enumeration value="-360.0"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:element>
      </xs:sequence>
    </xs:restriction>
  </xs:complexContent>
</xs:complexType>
```

Complex Type `S100_GM_KnotType`

Namespace	http://www.iho.int/s100gml/1.0
Annotations	`S-100 Knot is the GML 3.2.1 definition of Knot with the erroneous "weight" element removed.`
Diagram	
Used by	Element KnotPropertyType/Knot
Model	value , multiplicity
Children	multiplicity, value

Source	`<xs:complexType name="S100_GM_KnotType">`
	`  <xs:annotation>`
	`  <xs:documentation>S-100 Knot is the GML 3.2.1 definition of Knot with the erroneous "weight" element removed.</xs:documentation>`
	`  </xs:annotation>`
	`  <xs:sequence>`
	`  <xs:element name="value" type="xs:double"/>`
	`  <xs:element name="multiplicity" type="xs:nonNegativeInteger"/>`
	`  </xs:sequence>`
	`</xs:complexType>`

Complex Type `KnotPropertyType`

Namespace	http://www.iho.int/s100gml/1.0
Annotations	`gml:KnotPropertyType encapsulates a knot to use it in a geometric type. The S100 version is needed so as to use the updated definition of knots`
Diagram	
Used by	Element S100_GM_SplineCurveType/knot
Model	Knot
Children	Knot

Source	`<xs:complexType name="KnotPropertyType">`
	`  <xs:annotation>`
	`  <xs:documentation>gml:KnotPropertyType encapsulates a knot to use it in a geometric type. The S100 version is needed so as to use the updated definition of knots</xs:documentation>`
	`  </xs:annotation>`
	`  <xs:sequence>`
	`  <xs:element name="Knot" type="S100_GM_KnotType">`

```
      <xs:annotation>
        <xs:documentation>A knot is a breakpoint on a piecewise spline curve. value is the value
 of the parameter at the knot of the spline (see ISO 19107:2003, 6.4.24.2). multiplicity is the
 multiplicity of this knot used in the definition of the spline (with the same weight). weight is
 the value of the averaging weight used for this knot of the spline.</xs:documentation>
      </xs:annotation>
    </xs:element>
  </xs:sequence>
</xs:complexType>
```

Complex Type `VectorType`

Namespace	http://www.iho.int/s100gml/1.0
Annotations	Defintion of the Vector datatype used in splines
Diagram	
Used by	Elements S100_GM_PolynomialSplineType/derivativeAtEnd, S100_GM_PolynomialSplineType/derivativeAtStart
Model	origin , dimension , offset
Children	dimension, offset, origin
Source	

```
<xs:complexType name="VectorType">
  <xs:annotation>
    <xs:documentation>Defintion of the Vector datatype used in splines</xs:documentation>
  </xs:annotation>
  <xs:sequence>
    <xs:element name="origin" minOccurs="1" maxOccurs="1">
      <xs:complexType>
        <xs:choice>
          <xs:element ref="gml:pos"/>
          <xs:element ref="gml:pointProperty"/>
        </xs:choice>
      </xs:complexType>
    </xs:element>
    <xs:element name="dimension" type="xs:nonNegativeInteger" minOccurs="1" maxOccurs="1"/>
    <xs:element name="offset" type="gml:doubleList" minOccurs="1" maxOccurs="1">
      <xs:annotation>
        <xs:documentation>The number of values must be the same as "dimension" value</
xs:documentation>
      </xs:annotation>
    </xs:element>
  </xs:sequence>
</xs:complexType>
```

Complex Type `S100_GM_SplineCurveType`

Namespace	http://www.iho.int/s100gml/1.0
Annotations	`<xs:documentation>Type for general splines including b-splines</xs:documentation>`

Diagram

Type: extension of gml:AbstractCurveSegmentType

Type hierarchy

- gml:AbstractCurveSegmentType
  - S100_GM_SplineCurveType

Used by

Element	S100_GM_SplineCurve
Complex Type	S100_GM_PolynomialSplineType

Model: (gml:pos | gml:pointProperty | gml:posList) , degree , knot* , knotSpec{0,1} , isRational

Children: degree, gml:pointProperty, gml:pos, gml:posList, isRational, knot, knotSpec

Attributes

QName	Type	Default	Use
interpolation	gml:CurveInterpolationType		optional
numDerivativeInterior	integer	0	optional
numDerivativesAtEnd	integer	0	optional
numDerivativesAtStart	integer	0	optional

Source

```
<xs:complexType name="S100_GM_SplineCurveType">
  <xs:annotation>
    <xs:documentation>
      <xs:documentation>Type for general splines including b-splines</xs:documentation>
    </xs:documentation>
  </xs:annotation>
  <xs:complexContent>
    <xs:extension base="gml:AbstractCurveSegmentType">
      <xs:sequence>
        <xs:choice>
          <xs:choice minOccurs="0" maxOccurs="unbounded">
            <xs:element ref="gml:pos"/>
            <xs:element ref="gml:pointProperty"/>
          </xs:choice>
          <xs:element ref="gml:posList"/>
        </xs:choice>
        <xs:element name="degree" type="xs:nonNegativeInteger"/>
        <xs:element name="knot" type="KnotPropertyType" minOccurs="0" maxOccurs="unbounded"/>
        <xs:element name="knotSpec" type="S100_GM_KnotTypeType" minOccurs="0" maxOccurs="1"/>
        <xs:element name="isRational" type="gml:booleanOrNilReason"/>
      </xs:sequence>
      <xs:attribute name="interpolation" type="gml:CurveInterpolationType"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Complex Type `S100_GM_PolynomialSplineType`

Namespace	http://www.iho.int/s100gml/1.0
Annotations	`<xs:documentation>Type for polynomial splines</xs:documentation>`
Diagram	
Type	extension of S100_GM_SplineCurveType

Type hierarchy	• gml:AbstractCurveSegmentType
	  • S100_GM_SplineCurveType
	  • S100_GM_PolynomialSplineType

Used by	Element S100_GM_PolynomialSpline
Model	(gml:pos | gml:pointProperty | gml:posList) , degree , knot* , knotSpec{0,1} , isRational , derivativeAtStart* , derivativeAtEnd* , numDerivativeInterior
Children	degree, derivativeAtEnd, derivativeAtStart, gml:pointProperty, gml:pos, gml:posList, isRational, knot, knotSpec, numDerivativeInterior

Attributes

QName	Type	Default	Use
interpolation	gml:CurveInterpolationType		optional
numDerivativeInterior	integer	0	optional
numDerivativesAtEnd	integer	0	optional
numDerivativesAtStart	integer	0	optional

Source

```
<xs:complexType name="S100_GM_PolynomialSplineType">
  <xs:annotation>
    <xs:documentation>
      <xs:documentation>Type for polynomial splines</xs:documentation>
    </xs:documentation>
  </xs:annotation>
  <xs:complexContent>
    <xs:extension base="S100_GM_SplineCurveType">
      <xs:sequence>
        <xs:element name="derivativeAtStart" type="VectorType" minOccurs="0" maxOccurs="unbounded"/>
        <xs:element name="derivativeAtEnd" type="VectorType" minOccurs="0" maxOccurs="unbounded"/>
```

```
        <xs:element name="numDerivativeInterior" type="xs:nonNegativeInteger"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Complex Type `S100_GM_CurveType`

Namespace	http://www.iho.int/s100gml/1.0
Annotations	`<xs:documentation>Type for curve segments with other interpolations</xs:documentation>`
Diagram	
Type	extension of gml:AbstractCurveSegmentType
Type hierarchy	• gml:AbstractCurveSegmentType • S100_GM_CurveType
Used by	Element S100_GM_Curve
Model	(gml:pos | gml:pointProperty | gml:posList)
Children	gml:pointProperty, gml:pos, gml:posList

Attributes

QName	Type	Default	Use
interpolation	gml:CurveInterpolationType		optional
numDerivativeInterior	integer	0	optional
numDerivativesAtEnd	integer	0	optional
numDerivativesAtStart	integer	0	optional

Source

```
<xs:complexType name="S100_GM_CurveType">
  <xs:annotation>
    <xs:documentation>
      <xs:documentation>Type for curve segments with other interpolations</xs:documentation>
    </xs:documentation>
  </xs:annotation>
  <xs:complexContent>
    <xs:extension base="gml:AbstractCurveSegmentType">
      <xs:sequence>
        <xs:choice>
          <xs:choice minOccurs="0" maxOccurs="unbounded">
            <xs:element ref="gml:pos"/>
            <xs:element ref="gml:pointProperty"/>
          </xs:choice>
          <xs:element ref="gml:posList"/>
        </xs:choice>
      </xs:sequence>
      <xs:attribute name="interpolation" type="gml:CurveInterpolationType"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Simple Type(s)

Simple Type AgencyCodeType

Namespace	http://www.iho.int/s100gml/1.0
Annotations	Type for agency codes (AGEN)
Diagram	
Type	restriction of xs:string
Facets	pattern [a-zA-z0-9][a-zA-z0-9]
Used by	Element FeatureObjectIdentifier/agency

Source	`<xs:simpleType name="AgencyCodeType">`
	`  <xs:annotation>`
	`  <xs:documentation>Type for agency codes (AGEN)</xs:documentation>`
	`  </xs:annotation>`
	`  <xs:restriction base="xs:string">`
	`  <xs:pattern value="[a-zA-z0-9][a-zA-z0-9]"/>`
	`  </xs:restriction>`
	`</xs:simpleType>`

Simple Type IdentificationNumberType

Namespace	http://www.iho.int/s100gml/1.0
Annotations	Type for identifier FIDN. Range [1, 2^32 - 2]
Diagram	
Type	restriction of xs:positiveInteger
Facets	maxInclusive 4294967294
Used by	Element FeatureObjectIdentifier/featureIdentificationNumber

Source	`<xs:simpleType name="IdentificationNumberType">`
	`  <xs:annotation>`
	`  <xs:documentation>Type for identifier FIDN. Range [1, 2^32 - 2]</xs:documentation>`
	`  </xs:annotation>`
	`  <xs:restriction base="xs:positiveInteger">`
	`  <xs:maxInclusive value="4294967294"/>`
	`  </xs:restriction>`
	`</xs:simpleType>`

Simple Type IdentificationSubdivisionType

Namespace	http://www.iho.int/s100gml/1.0
Annotations	type for identification subdivision (FIDS). Range [1, 2^16 - 2]
Diagram	
Type	restriction of xs:positiveInteger
Facets	maxInclusive 65534
Used by	Element FeatureObjectIdentifier/featureIdentificationSubdivision

Source	`<xs:simpleType name="IdentificationSubdivisionType">`
	`  <xs:annotation>`
	`  <xs:documentation>type for identification subdivision (FIDS). Range [1, 2^16 - 2]</`
	`xs:documentation>`

```
  </xs:annotation>
  <xs:restriction base="xs:positiveInteger">
    <xs:maxInclusive value="65534"/>
  </xs:restriction>
</xs:simpleType>
```

Simple Type ISO-639-1

Namespace	http://www.iho.int/s100gml/1.0
Annotations	Utility type for subset of ISO 639-1 alpha-2 language codes
Diagram	
Type	restriction of xs:string
Facets	enumeration: en — English
Used by	Element: DataSetIdentificationType/datasetLanguage

Source

```
<xs:simpleType name="ISO-639-1">
  <xs:annotation>
    <xs:documentation>Utility type for subset of ISO 639-1 alpha-2 language codes</xs:documentation>
  </xs:annotation>
  <xs:restriction base="xs:string">
    <xs:enumeration value="en">
      <xs:annotation>
        <xs:documentation>English</xs:documentation>
      </xs:annotation>
    </xs:enumeration>
    <!-- others? -->
  </xs:restriction>
</xs:simpleType>
```

Simple Type MD_TopicCategoryCode

Namespace	http://www.iho.int/s100gml/1.0
Annotations	Topic categories in S-100 Edition 1.0.0 and gmxCodelists.xml from OGC ISO 19139 XML schemas - see MD_TopicCategoryCode. Alternatives to this enumeration: (1) Add the ISO 19139 schemas to this profile and use the codelist MD_TopicCategoryCode instead. (2) Ise numeric codes for literals instead of labels, e.g., "1" instead of "farming".
Diagram	
Type	restriction of xs:string

Facets

enumeration	farming	rearing of animals and/or cultivation of plants. Examples: agriculture, irrigation, aquaculture, plantations, herding, pests and diseases affecting crops and livestock
enumeration	biota	flora and/or fauna in natural environment. Examples: wildlife, vegetation, biological sciences, ecology, wilderness, sealife, wetlands, habitat
enumeration	boundaries	legal land descriptions. Examples: political and administrative boundaries
enumeration	climatologyMeteorologyAtmosphere	processes and phenomena of the atmosphere. Examples: cloud cover, weather, climate, atmospheric conditions, climate change, precipitation
enumeration	economy	economic activities, conditions and employment. Examples: production, labour, revenue, commerce, industry, tourism and ecotourism, forestry, fisheries, commercial or subsistence hunting, exploration and exploitation of resources such as minerals, oil and gas

	enumeration	elevation	height above or below sea level. Examples: altitude, bathymetry, digital elevation models, slope, derived products
	enumeration	environment	environmental resources, protection and conservation. Examples: environmental pollution, waste storage and treatment, environmental impact assessment, monitoring environmental risk, nature reserves, landscape
	enumeration	geoscientificInformation	information pertaining to earth sciences. Examples: geophysical features and processes, geology, minerals, sciences dealing with the composition, structure and origin of the earth s rocks, risks of earthquakes, volcanic activity, landslides, gravity information, soils, permafrost, hydrogeology, erosion
	enumeration	health	health, health services, human ecology, and safety. Examples: disease and illness, factors affecting health, hygiene, substance abuse, mental and physical health, health services
	enumeration	imageryBaseMapsEarthCover	base maps. Examples: land cover, topographic maps, imagery, unclassified images, annotations
	enumeration	intelligenceMilitary	military bases, structures, activities. Examples: barracks, training grounds, military transportation, information collection
	enumeration	inlandWaters	inland water features, drainage systems and their characteristics. Examples: rivers and glaciers, salt lakes, water utilization plans, dams, currents, floods, water quality, hydrographic charts
	enumeration	location	positional information and services. Examples: addresses, geodetic networks, control points, postal zones and services, place names
	enumeration	oceans	features and characteristics of salt water bodies (excluding inland waters). Examples: tides, tidal waves, coastal information, reefs
	enumeration	planningCadastre	information used for appropriate actions for future use of the land. Examples: land use maps, zoning maps, cadastral surveys, land ownership
	enumeration	society	characteristics of society and cultures. Examples: settlements, anthropology, archaeology, education, traditional beliefs, manners and customs, demographic data, recreational areas and activities, social impact assessments, crime and justice, census information
	enumeration	structure	man-made construction. Examples: buildings, museums, churches, factories, housing, monuments, shops, towers
	enumeration	transportation	means and aids for conveying persons and/or goods. Examples: roads, airports/airstrips, shipping routes, tunnels, nautical charts, vehicle or vessel location, aeronautical charts, railways
	enumeration	utilitiesCommunication	energy, water and waste systems and communications infrastructure and services. Examples: hydroelectricity, geothermal, solar and nuclear sources of energy, water purification and distribution, sewage collection and disposal, electricity and gas distribution, data communication, telecommunication, radio, communication networks
Used by	Element	DataSetIdentificationType/datasetTopicCategory	

Source

```
<xs:simpleType name="MD_TopicCategoryCode">
  <xs:annotation>
    <xs:documentation>Topic categories in S-100 Edition 1.0.0 and gmxCodelists.xml from OGC ISO
 19139 XML schemas - see MD_TopicCategoryCode. Alternatives to this enumeration: (1) Add the ISO
 19139 schemas to this profile and use the codelist MD_TopicCategoryCode instead. (2) Ise numeric
 codes for literals instead of labels, e.g., "1" instead of "farming".</xs:documentation>
  </xs:annotation>
  <xs:restriction base="xs:string">
    <xs:enumeration value="farming">
      <xs:annotation>
```

```
        <xs:documentation>rearing of animals and/or cultivation of plants. Examples: agriculture,
 irrigation, aquaculture, plantations, herding, pests and diseases affecting crops and livestock</
xs:documentation>
      </xs:annotation>
    </xs:enumeration>
    <xs:enumeration value="biota">
      <xs:annotation>
        <xs:documentation>flora and/or fauna in natural environment. Examples: wildlife, vegetation,
 biological sciences, ecology, wilderness, sealife, wetlands, habitat</xs:documentation>
      </xs:annotation>
    </xs:enumeration>
    <xs:enumeration value="boundaries">
      <xs:annotation>
        <xs:documentation>legal land descriptions. Examples: political and administrative
 boundaries</xs:documentation>
      </xs:annotation>
    </xs:enumeration>
    <xs:enumeration value="climatologyMeteorologyAtmosphere">
      <xs:annotation>
        <xs:documentation>processes and phenomena of the atmosphere. Examples: cloud cover, weather,
 climate, atmospheric conditions, climate change, precipitation</xs:documentation>
      </xs:annotation>
    </xs:enumeration>
    <xs:enumeration value="economy">
      <xs:annotation>
        <xs:documentation>economic activities, conditions and employment. Examples: production,
 labour, revenue, commerce, industry, tourism and ecotourism, forestry, fisheries, commercial or
 subsistence hunting, exploration and exploitation of resources such as minerals, oil and gas</
xs:documentation>
      </xs:annotation>
    </xs:enumeration>
    <xs:enumeration value="elevation">
      <xs:annotation>
        <xs:documentation>height above or below sea level. Examples: altitude, bathymetry, digital
 elevation models, slope, derived products</xs:documentation>
      </xs:annotation>
    </xs:enumeration>
    <xs:enumeration value="environment">
      <xs:annotation>
        <xs:documentation>environmental resources, protection and conservation. Examples:
 environmental pollution, waste storage and treatment, environmental impact assessment, monitoring
 environmental risk, nature reserves, landscape</xs:documentation>
      </xs:annotation>
    </xs:enumeration>
    <xs:enumeration value="geoscientificInformation">
      <xs:annotation>
        <xs:documentation>information pertaining to earth sciences. Examples: geophysical features
 and processes, geology, minerals, sciences dealing with the composition, structure and origin of
 the earth s rocks, risks of earthquakes, volcanic activity, landslides, gravity information, soils,
 permafrost, hydrogeology, erosion</xs:documentation>
      </xs:annotation>
    </xs:enumeration>
    <xs:enumeration value="health">
      <xs:annotation>
        <xs:documentation>health, health services, human ecology, and safety. Examples: disease and
 illness, factors affecting health, hygiene, substance abuse, mental and physical health, health
 services</xs:documentation>
      </xs:annotation>
    </xs:enumeration>
    <xs:enumeration value="imageryBaseMapsEarthCover">
      <xs:annotation>
        <xs:documentation>base maps. Examples: land cover, topographic maps, imagery, unclassified
 images, annotations</xs:documentation>
      </xs:annotation>
    </xs:enumeration>
    <xs:enumeration value="intelligenceMilitary">
      <xs:annotation>
        <xs:documentation>military bases, structures, activities. Examples: barracks, training
 grounds, military transportation, information collection</xs:documentation>
      </xs:annotation>
    </xs:enumeration>
    <xs:enumeration value="inlandWaters">
      <xs:annotation>
        <xs:documentation>inland water features, drainage systems and their characteristics.
 Examples: rivers and glaciers, salt lakes, water utilization plans, dams, currents, floods, water
 quality, hydrographic charts</xs:documentation>
      </xs:annotation>
    </xs:enumeration>
    <xs:enumeration value="location">
      <xs:annotation>
        <xs:documentation>positional information and services. Examples: addresses, geodetic
 networks, control points, postal zones and services, place names</xs:documentation>
      </xs:annotation>
```

```
    </xs:enumeration>
    <xs:enumeration value="oceans">
      <xs:annotation>
        <xs:documentation>features and characteristics of salt water bodies (excluding inland
 waters). Examples: tides, tidal waves, coastal information, reefs</xs:documentation>
      </xs:annotation>
    </xs:enumeration>
    <xs:enumeration value="planningCadastre">
      <xs:annotation>
        <xs:documentation>information used for appropriate actions for future use of the land.
 Examples: land use maps, zoning maps, cadastral surveys, land ownership</xs:documentation>
      </xs:annotation>
    </xs:enumeration>
    <xs:enumeration value="society">
      <xs:annotation>
        <xs:documentation>characteristics of society and cultures. Examples: settlements,
 anthropology, archaeology, education, traditional beliefs, manners and customs, demographic
 data, recreational areas and activities, social impact assessments, crime and justice, census
 information</xs:documentation>
      </xs:annotation>
    </xs:enumeration>
    <xs:enumeration value="structure">
      <xs:annotation>
        <xs:documentation>man-made construction. Examples: buildings, museums, churches, factories,
 housing, monuments, shops, towers</xs:documentation>
      </xs:annotation>
    </xs:enumeration>
    <xs:enumeration value="transportation">
      <xs:annotation>
        <xs:documentation>means and aids for conveying persons and/or goods. Examples: roads,
 airports/airstrips, shipping routes, tunnels, nautical charts, vehicle or vessel location,
 aeronautical charts, railways</xs:documentation>
      </xs:annotation>
    </xs:enumeration>
    <xs:enumeration value="utilitiesCommunication">
      <xs:annotation>
        <xs:documentation>energy, water and waste systems and communications infrastructure and
 services. Examples: hydroelectricity, geothermal, solar and nuclear sources of energy, water
 purification and distribution, sewage collection and disposal, electricity and gas distribution,
 data communication, telecommunication, radio, communication networks</xs:documentation>
      </xs:annotation>
    </xs:enumeration>
  </xs:restriction>
</xs:simpleType>
```

Simple Type `BearingType`

Namespace	http://www.iho.int/s100gml/1.0
Diagram	
Type	restriction of xs:decimal
Facets	fractionDigits: 1 maxInclusive: 360.0 minInclusive: 0.0
Used by	Elements: S100_ArcByCenterPointType/startAngle, S100_CircleByCenterPointType/startAngle
Source	

```
<xs:simpleType name="BearingType">
  <xs:restriction base="xs:decimal">
    <xs:fractionDigits value="1"/>
    <xs:minInclusive value="0.0"/>
    <xs:maxInclusive value="360.0"/>
  </xs:restriction>
</xs:simpleType>
```

Simple Type `PlusOrMinus360Degrees`

Namespace	http://www.iho.int/s100gml/1.0

Diagram	
Type	restriction of xs:decimal
Facets	fractionDigits `1` maxInclusive `360.0` minInclusive `-360.0`
Used by	Elements S100_ArcByCenterPointType/angularDistance, S100_CircleByCenterPointType/angularDistance

Source	`<xs:simpleType name="PlusOrMinus360Degrees">`
	`  <xs:restriction base="xs:decimal">`
	`  <xs:fractionDigits value="1"/>`
	`  <xs:minInclusive value="-360.0"/>`
	`  <xs:maxInclusive value="360.0"/>`
	`  </xs:restriction>`
	`</xs:simpleType>`

Simple Type `ISO-639-3`

Namespace	http://www.iho.int/s100gml/1.0
Annotations	`Utility type for ISO 639-3 codes`
Diagram	
Type	restriction of xs:string
Facets	enumeration `eng`

Source	`<xs:simpleType name="ISO-639-3">`
	`  <xs:annotation>`
	`  <xs:documentation>Utility type for ISO 639-3 codes</xs:documentation>`
	`  </xs:annotation>`
	`  <xs:restriction base="xs:string">`
	`  <xs:enumeration value="eng"/>`
	`  </xs:restriction>`
	`</xs:simpleType>`

Simple Type `ISO-3166-1-alpha2`

Namespace	http://www.iho.int/s100gml/1.0
Annotations	`Utility type for ISO 3166-1-alpha2 codes`
Diagram	
Type	restriction of xs:string
Facets	enumeration `KR` enumeration `US` enumeration `JS` `Jussland - Not ISO 3166, but needed for sample datasets`

Source	`<xs:simpleType name="ISO-3166-1-alpha2">`
	`  <xs:annotation>`
	`  <xs:documentation>Utility type for ISO 3166-1-alpha2 codes</xs:documentation>`
	`  </xs:annotation>`
	`  <xs:restriction base="xs:string">`
	`  <xs:enumeration value="KR"/>`
	`  <xs:enumeration value="US"/>`
	`  <xs:enumeration value="JS">`

```
      <xs:annotation>
        <xs:documentation>Jussland - Not ISO 3166, but needed for sample datasets</xs:documentation>
      </xs:annotation>
    </xs:enumeration>
  </xs:restriction>
</xs:simpleType>
```

Simple Type `S100_GM_KnotTypeType`

Namespace	http://www.iho.int/s100gml/1.0
Annotations	This enumeration type specifies values for the knots' type (see ISO 19107:2003, 6.4.25). The S-100 3.1 type extends it with "nonUniform" in keeping with the 2017 draft of 19107
Diagram	
Type	restriction of xs:string
Facets	enumeration `uniform` knots are equally spaced, all multiplicity 1 enumeration `quasiUniform` the interior knots are uniform, but the first and last have multiplicity one larger than the degree of the spline enumeration `piecewiseBezier` the underlying spline is formally a Bézier spline, but knot multiplicity is always the degree of the spline except at the ends where the knot degree is (p+1). Such a spline is a pure Bézier spline between its distinct knots enumeration `nonUniform` knots have varying spacing and multiplicity
Used by	Element S100_GM_SplineCurveType/knotSpec

Source

```
<xs:simpleType name="S100_GM_KnotTypeType">
  <xs:annotation>
    <xs:documentation>This enumeration type specifies values for the knots' type (see ISO
 19107:2003, 6.4.25).</xs:documentation>
    <xs:documentation>The S-100 3.1 type extends it with "nonUniform" in keeping with the 2017 draft
 of 19107</xs:documentation>
  </xs:annotation>
  <xs:restriction base="xs:string">
    <xs:enumeration value="uniform">
      <xs:annotation>
        <xs:documentation>knots are equally spaced, all multiplicity 1</xs:documentation>
      </xs:annotation>
    </xs:enumeration>
    <xs:enumeration value="quasiUniform">
      <xs:annotation>
        <xs:documentation>the interior knots are uniform, but the first and last have multiplicity
 one larger than the degree of the spline</xs:documentation>
      </xs:annotation>
    </xs:enumeration>
    <xs:enumeration value="piecewiseBezier">
      <xs:annotation>
        <xs:documentation>the underlying spline is formally a Bézier spline, but knot multiplicity
 is always the degree of the spline except at the ends where the knot degree is (p+1). Such a spline
 is a pure Bézier spline between its distinct knots</xs:documentation>
      </xs:annotation>
    </xs:enumeration>
    <xs:enumeration value="nonUniform">
      <xs:annotation>
        <xs:documentation>knots have varying spacing and multiplicity</xs:documentation>
      </xs:annotation>
    </xs:enumeration>
  </xs:restriction>
</xs:simpleType>
```

Element Group(s)

Element Group `Geometry`

Namespace	http://www.iho.int/s100gml/1.0
Annotations	group combining all the allowed S-100 geometries (point, all curve types, surface, multipoint)

Diagram	
Used by	Complex Type CollectionType
Model	Point | MultiPoint | Curve | CompositeCurve | OrientableCurve | Surface | Polygon
Children	CompositeCurve, Curve, MultiPoint, OrientableCurve, Point, Polygon, Surface

Source	`<xs:group name="Geometry">`
	`  <xs:annotation>`
	`  <xs:documentation>group combining all the allowed S-100 geometries (point, all curve types, surface, multipoint)</xs:documentation>`
	`  </xs:annotation>`
	`  <xs:choice>`
	`  <xs:element ref="Point"/>`
	`  <xs:element ref="MultiPoint"/>`
	`  <xs:group ref="curves"/>`
	`  <xs:element ref="Surface"/>`
	`  <xs:element ref="Polygon"/>`
	`  </xs:choice>`
	`</xs:group>`

Element Group curves

Namespace	http://www.iho.int/s100gml/1.0
Annotations	Group of all S-100 curve types.
Diagram	
Used by	Element Group Geometry
Model	Curve | CompositeCurve | OrientableCurve
Children	CompositeCurve, Curve, OrientableCurve

Source	`<xs:group name="curves">`
	`  <xs:annotation>`
	`  <xs:documentation>Group of all S-100 curve types.</xs:documentation>`
	`  </xs:annotation>`
	`  <xs:choice>`
	`  <xs:element ref="Curve"/>`

```
    <xs:element ref="CompositeCurve"/>
    <xs:element ref="OrientableCurve"/>
  </xs:choice>
</xs:group>
```

Element Group `curveProperties`

Namespace	http://www.iho.int/s100gml/1.0
Annotations	This property allows a feature definition to allow curve geometry to be encoded as curve/composite curve/orientable curve.
Diagram	
Model	curveProperty | compositeCurveProperty | orientableCurveProperty
Children	compositeCurveProperty, curveProperty, orientableCurveProperty

Source	`<xs:group name="curveProperties">`
	`  <xs:annotation>`
	`  <xs:documentation>This property allows a feature definition to allow curve geometry to be encoded as curve/composite curve/orientable curve.</xs:documentation>`
	`  </xs:annotation>`
	`  <xs:choice>`
	`  <xs:element ref="curveProperty"/>`
	`  <xs:element ref="compositeCurveProperty"/>`
	`  <xs:element ref="orientableCurveProperty"/>`
	`  </xs:choice>`
	`</xs:group>`

Namespace: "http://www.iho.int/S-100/profile/s100_gmlProfile"

Schema(s)

Imported schema `S100_gmlProfileLevels.xsd`

Namespace	http://www.iho.int/S-100/profile/s100_gmlProfile
Annotations	Compliance levels schema for the S-100 GML 3.2.1 Profile.
Properties	attribute form default: unqualified element form default: qualified version: 4.0.0-20180502

Element(s)

Element `s100_profile:complianceLevel`

Namespace	http://www.iho.int/S-100/profile/s100_gmlProfile
Annotations	Level 1 = Level 2 =
Diagram	
Type	restriction of integer
Properties	content: simple
Facets	enumeration 1 enumeration 2

Source	`<element name="complianceLevel">`
	`  <annotation>`
	`  <documentation>Level 1 = Level 2 =</documentation>`
	`  </annotation>`
	`  <simpleType>`
	`  <restriction base="integer">`
	`  <enumeration value="1"/>`
	`  <enumeration value="2"/>`
	`  </restriction>`
	`  </simpleType>`
	`</element>`

Element `s100_profile:gmlProfileSchema`

Namespace	http://www.iho.int/S-100/profile/s100_gmlProfile
Annotations	This URI references the profile schema to which a GML application schema conforms.
Diagram	
Type	anyURI
Properties	content: simple

Source	`<element name="gmlProfileSchema" type="anyURI">`
	`  <annotation>`
	`  <documentation>This URI references the profile schema to which a GML application schema conforms.</documentation>`
	`  </annotation>`
	`</element>`

Namespace: ""

Attribute(s)

Attribute `gml:SRSReferenceGroup / @srsName`

Namespace	No namespace
Type	anyURI
Properties	content: simple
Used by	Attribute Group gml:SRSReferenceGroup
Source	`<attribute name="srsName" type="anyURI"/>`

Attribute `gml:SRSReferenceGroup / @srsDimension`

Namespace	No namespace
Type	positiveInteger
Properties	content: simple
Used by	Attribute Group gml:SRSReferenceGroup
Source	`<attribute name="srsDimension" type="positiveInteger"/>`

Attribute `gml:BoundingShapeType / @nilReason`

Namespace	No namespace
Type	gml:NilReasonType
Properties	content: simple
Used by	Complex Type gml:BoundingShapeType
Source	`<attribute name="nilReason" type="gml:NilReasonType"/>`

Attribute gml:AssociationAttributeGroup / @nilReason

Namespace	No namespace
Type	gml:NilReasonType
Properties	content: simple
Used by	Attribute Group gml:AssociationAttributeGroup
Source	`<attribute name="nilReason" type="gml:NilReasonType"/>`

Attribute gml:OwnershipAttributeGroup / @owns

Namespace	No namespace
Type	boolean
Properties	default: false
Used by	Attribute Group gml:OwnershipAttributeGroup
Source	`<attribute name="owns" type="boolean" default="false"/>`

Attribute gml:AggregationAttributeGroup / @aggregationType

Namespace	No namespace
Type	gml:AggregationType
Properties	content: simple
	final: restriction, list, union
Facets	enumeration set
	enumeration bag
	enumeration sequence
	enumeration array
	enumeration record
	enumeration table
Used by	Attribute Group gml:AggregationAttributeGroup
Source	`<attribute name="aggregationType" type="gml:AggregationType"/>`

Attribute gml:AbstractCurveSegmentType / @numDerivativesAtStart

Namespace	No namespace
Type	integer
Properties	default: 0
Used by	Complex Type gml:AbstractCurveSegmentType
Source	`<attribute name="numDerivativesAtStart" type="integer" default="0"/>`

Attribute gml:AbstractCurveSegmentType / @numDerivativesAtEnd

Namespace	No namespace
Type	integer
Properties	default: 0
Used by	Complex Type gml:AbstractCurveSegmentType
Source	`<attribute name="numDerivativesAtEnd" type="integer" default="0"/>`

Attribute gml:AbstractCurveSegmentType / @numDerivativeInterior

Namespace	No namespace
Type	integer
Properties	default: 0

Used by	Complex Type	gml:AbstractCurveSegmentType
Source	`<attribute name="numDerivativeInterior" type="integer" default="0"/>`	

Attribute gml:OrientableCurveType / @orientation

Namespace	No namespace	
Type	gml:SignType	
Properties	default:	+
Facets	enumeration	-
	enumeration	+
Used by	Complex Type	gml:OrientableCurveType
Source	`<attribute name="orientation" type="gml:SignType" default="+"/>`	

Attribute gml:DirectPositionListType / @count

Namespace	No namespace	
Type	positiveInteger	
Properties	content:	simple
Used by	Complex Type	gml:DirectPositionListType
Source	`<attribute name="count" type="positiveInteger"/>`	

Attribute gml:LineStringSegmentType / @interpolation

Namespace	No namespace		
Type	gml:CurveInterpolationType		
Properties	fixed:	linear	
Facets	enumeration	none	
	enumeration	linear	
	enumeration	geodesic	
	enumeration	circularArc3Points	
	enumeration	loxodromic	Note that the new draft of 19107 now includes "rhumb".
	enumeration	elliptical	
	enumeration	conic	
	enumeration	circularArcCenter-PointWithRadius	
	enumeration	polynomialSpline	
	enumeration	bezierSpline	
	enumeration	bSpline	
	enumeration	cubicSpline	
	enumeration	rationalSpline	
	enumeration	blendedParabolic	
Used by	Complex Type	gml:LineStringSegmentType	
Source	`<attribute name="interpolation" type="gml:CurveInterpolationType" fixed="linear"/>`		

Attribute gml:GeodesicStringType / @interpolation

Namespace	No namespace	
Type	gml:CurveInterpolationType	
Properties	fixed:	geodesic
Facets	enumeration	none

	enumeration	linear	
	enumeration	geodesic	
	enumeration	circularArc3Points	
	enumeration	loxodromic	Note that the new draft of 19107 now includes "rhumb".
	enumeration	elliptical	
	enumeration	conic	
	enumeration	circularArcCenter-PointWithRadius	
	enumeration	polynomialSpline	
	enumeration	bezierSpline	
	enumeration	bSpline	
	enumeration	cubicSpline	
	enumeration	rationalSpline	
	enumeration	blendedParabolic	
Used by	Complex Type	gml:GeodesicStringType	
Source	`<attribute name="interpolation" type="gml:CurveInterpolationType" fixed="geodesic"/>`		

Attribute gml:PolygonPatchType / @interpolation

Namespace	No namespace	
Type	gml:SurfaceInterpolationType	
Properties	fixed:	planar
Facets	enumeration	none
	enumeration	planar
	enumeration	spherical
	enumeration	elliptical
	enumeration	conic
	enumeration	tin
	enumeration	parametricCurve
	enumeration	polynomialSpline
	enumeration	rationalSpline
	enumeration	triangulatedSpline
Used by	Complex Type	gml:PolygonPatchType
Source	`<attribute name="interpolation" type="gml:SurfaceInterpolationType" fixed="planar"/>`	

Attribute gml:CodeType / @codeSpace

Namespace	No namespace	
Type	anyURI	
Properties	content:	simple
Used by	Complex Type	gml:CodeType
Source	`<attribute name="codeSpace" type="anyURI"/>`	

Attribute gml:CodeWithAuthorityType / @codeSpace

Namespace	No namespace	
Type	anyURI	
Properties	use:	required
Used by	Complex Type	gml:CodeWithAuthorityType
Source	`<attribute name="codeSpace" type="anyURI" use="required"/>`	

Attribute gml:MeasureType / @uom

Namespace	No namespace	
Type	gml:UomIdentifier	
Properties	use:	required
Used by	Complex Type	gml:MeasureType
Source	`<attribute name="uom" type="gml:UomIdentifier" use="required"/>`	

Attribute gml:Boolean / @nilReason

Namespace	No namespace	
Type	gml:NilReasonType	
Properties	content:	simple
Used by	Element	gml:Boolean
Source	`<attribute name="nilReason" type="gml:NilReasonType"/>`	

Attribute S100_ArcByCenterPointType / @interpolation

Namespace	No namespace		
Type	gml:CurveInterpolationType		
Properties	fixed:	circularArcCenterPointWithRadius	
Facets	enumeration	none	
	enumeration	linear	
	enumeration	geodesic	
	enumeration	circularArc3Points	
	enumeration	loxodromic	Note that the new draft of 19107 now includes "rhumb".
	enumeration	elliptical	
	enumeration	conic	
	enumeration	circularArcCenter-PointWithRadius	
	enumeration	polynomialSpline	
	enumeration	bezierSpline	
	enumeration	bSpline	
	enumeration	cubicSpline	
	enumeration	rationalSpline	
	enumeration	blendedParabolic	
Used by	Complex Type	S100_ArcByCenterPointType	
Source	`<xs:attribute name="interpolation" type="gml:CurveInterpolationType" fixed="circularArcCenterPointWithRadius"/>`		

Attribute S100_GM_SplineCurveType / @interpolation

Namespace	No namespace		
Type	gml:CurveInterpolationType		
Properties	content:	simple	
Facets	enumeration	none	
	enumeration	linear	
	enumeration	geodesic	
	enumeration	circularArc3Points	
	enumeration	loxodromic	Note that the new draft of 19107 now includes "rhumb".

	enumeration	elliptical
	enumeration	conic
	enumeration	circularArcCenter-PointWithRadius
	enumeration	polynomialSpline
	enumeration	bezierSpline
	enumeration	bSpline
	enumeration	cubicSpline
	enumeration	rationalSpline
	enumeration	blendedParabolic
Used by	Complex Type	S100_GM_SplineCurveType
Source	`<xs:attribute name="interpolation" type="gml:CurveInterpolationType"/>`	

Attribute S100_GM_CurveType / @interpolation

Namespace	No namespace	
Type	gml:CurveInterpolationType	
Properties	content:	simple
Facets	enumeration	none
	enumeration	linear
	enumeration	geodesic
	enumeration	circularArc3Points
	enumeration	loxodromic Note that the new draft of 19107 now includes "rhumb".
	enumeration	elliptical
	enumeration	conic
	enumeration	circularArcCenter-PointWithRadius
	enumeration	polynomialSpline
	enumeration	bezierSpline
	enumeration	bSpline
	enumeration	cubicSpline
	enumeration	rationalSpline
	enumeration	blendedParabolic
Used by	Complex Type	S100_GM_CurveType
Source	`<xs:attribute name="interpolation" type="gml:CurveInterpolationType"/>`	