Schema documentation for S100_IC.xsd

july 21, 2016

Table of Contents

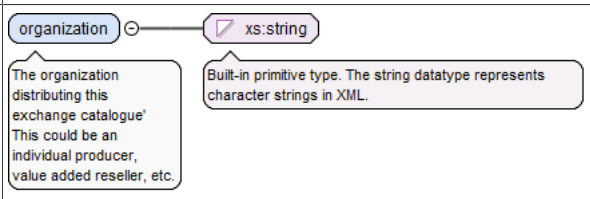
Schema(s)

Main schema S100_IC.xsd

Properties	attribute form default:	unqualified
	element form default:	unqualified
	version:	0.4

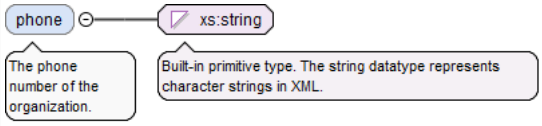
Element(s)

Element S100_CataloguePointofContact / organization

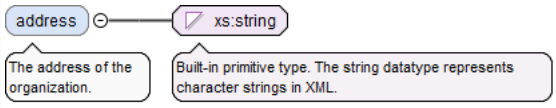
Annotations	The organization distributing this exchange catalogue' This could be an individual producer, value added reseller, etc.
Diagram	
Type	xs:string
Properties	content: simple minOccurs: 1

	maxOccurs: 1
Source	<xs:element name="organization" type="xs:string" minOccurs="1" maxOccurs="1"> <xs:annotation> <xs:documentation>The organization distributing this exchange catalogue' This could be an individual producer, value added reseller, etc.</xs:documentation> </xs:annotation> </xs:element>

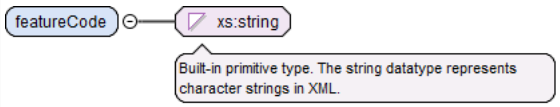
Element S100_CataloguePointofContact / phone

Annotations	The phone number of the organization.
Diagram	
Type	xs:string
Properties	content: simple minOccurs: 0 maxOccurs: 1
Source	<xs:element name="phone" type="xs:string" minOccurs="0" maxOccurs="1"> <xs:annotation> <xs:documentation>The phone number of the organization.</xs:documentation> </xs:annotation> </xs:element>

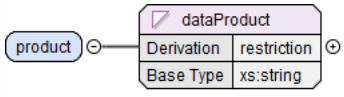
Element S100_CataloguePointofContact / address

Annotations	The address of the organization.
Diagram	
Type	xs:string
Properties	content: simple minOccurs: 0 maxOccurs: 1
Source	<xs:element name="address" type="xs:string" minOccurs="0" maxOccurs="1"> <xs:annotation> <xs:documentation>The address of the organization.</xs:documentation> </xs:annotation> </xs:element>

Element S100_IC_Feature / featureCode

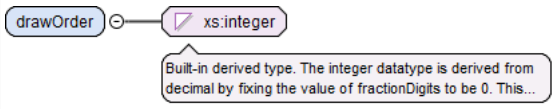
Diagram	
Type	xs:string
Properties	content: simple minOccurs: 1 maxOccurs: 1
Source	<xs:element name="featureCode" type="xs:string" minOccurs="1" maxOccurs="1"/>

Element S100_IC_Feature / product

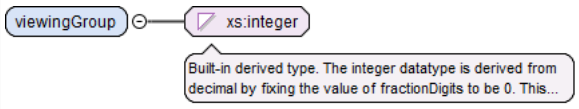
Diagram	

Type	dataProduct		
Properties	content:	simple	
	minOccurs:	1	
	maxOccurs:	1	
Facets	enumeration	S-101	
	enumeration	S-102	
	enumeration	S-111	
	enumeration	S-112	
	enumeration	S-122	
	enumeration	S-124	
	enumeration	S-411	
	enumeration	S-412	
	enumeration	HYBRID	Hybridized features created during interoperability processing
Source	<xs:element name="product" type="dataProduct" minOccurs="1" maxOccurs="1"/>		

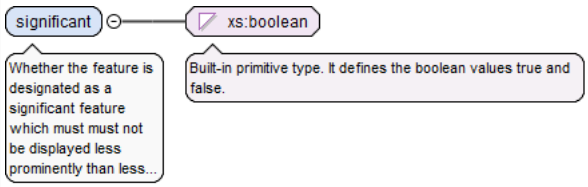
Element S100_IC_Feature / drawOrder

Diagram	
Type	xs:integer
Properties	content: simple
	minOccurs: 1
	maxOccurs: 1
Source	<xs:element name="drawOrder" type="xs:integer" minOccurs="1" maxOccurs="1"/>

Element S100_IC_Feature / viewingGroup

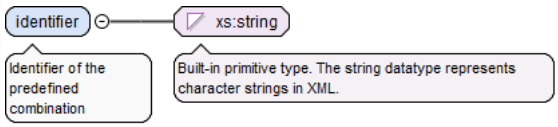
Diagram	
Type	xs:integer
Properties	content: simple
	minOccurs: 1
	maxOccurs: 1
Source	<xs:element name="viewingGroup" type="xs:integer" minOccurs="1" maxOccurs="1"/>

Element S100_IC_Feature / significant

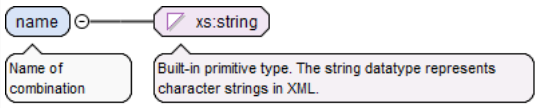
Annotations	Whether the feature is designated as a significant feature which must must not be displayed less prominently than less significant features in other overlying datasets. Remark: true=feature is designated as a significant feature
Diagram	
Type	xs:boolean
Properties	content: simple

	minOccurs: 1 maxOccurs: 1 default: false
Source	<xs:element name="significant" type="xs:boolean" default="false" minOccurs="1" maxOccurs="1"> <xs:annotation> <xs:documentation>Whether the feature is designated as a significant feature which must must not be displayed less prominently than less significant features in other overlying datasets. Remark: true=feature is designated as a significant feature</xs:documentation> </xs:annotation> </xs:element>

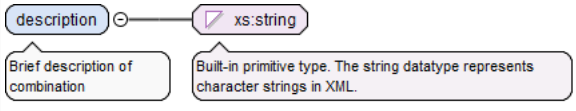
Element S100_IC_PredefinedCombination / identifier

Annotations	Identifier of the predefined combination
Diagram	
Type	xs:string
Properties	content: simple
Source	<xs:element name="identifier" type="xs:string"> <xs:annotation> <xs:documentation>Identifier of the predefined combination</xs:documentation> </xs:annotation> </xs:element>

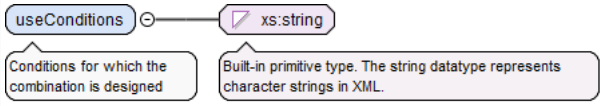
Element S100_IC_PredefinedCombination / name

Annotations	Name of combination
Diagram	
Type	xs:string
Properties	content: simple minOccurs: 1 maxOccurs: 1
Source	<xs:element name="name" type="xs:string" minOccurs="1" maxOccurs="1"> <xs:annotation> <xs:documentation>Name of combination</xs:documentation> </xs:annotation> </xs:element>

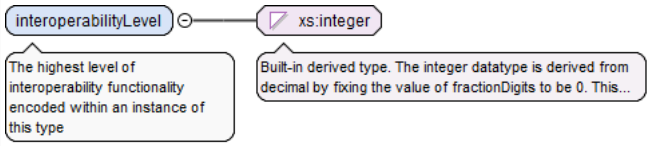
Element S100_IC_PredefinedCombination / description

Annotations	Brief description of combination
Diagram	
Type	xs:string
Properties	content: simple minOccurs: 1 maxOccurs: 1
Source	<xs:element name="description" type="xs:string" minOccurs="1" maxOccurs="1"> <xs:annotation> <xs:documentation>Brief description of combination</xs:documentation> </xs:annotation> </xs:element>

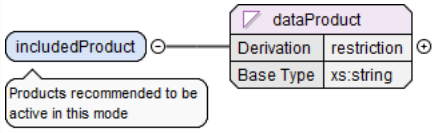
Element S100_IC_PredefinedCombination / useConditions

Annotations	Conditions for which the combination is designed
Diagram	
Type	xs:string
Properties	content: simple minOccurs: 1 maxOccurs: 1
Source	<xs:element name="useConditions" type="xs:string" minOccurs="1" maxOccurs="1"> <xs:annotation> <xs:documentation>Conditions for which the combination is designed</xs:documentation> </xs:annotation> </xs:element>

Element S100_IC_PredefinedCombination / interoperabilityLevel

Annotations	The highest level of interoperability functionality encoded within an instance of this type
Diagram	
Type	xs:integer
Properties	content: simple minOccurs: 1 maxOccurs: 1
Source	<xs:element name="interoperabilityLevel" type="xs:integer" minOccurs="1" maxOccurs="1"> <xs:annotation> <xs:documentation>The highest level of interoperability functionality encoded within an instance of this type</xs:documentation> </xs:annotation> </xs:element>

Element S100_IC_PredefinedCombination / includedProduct

Annotations	Products recommended to be active in this mode
Diagram	
Type	dataProduct
Properties	content: simple minOccurs: 2 maxOccurs: unbounded
Facets	enumeration S-101 enumeration S-102 enumeration S-111 enumeration S-112 enumeration S-122 enumeration S-124 enumeration S-411 enumeration S-412

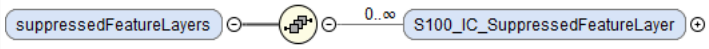
	enumeration	HYBRID	Hybridized features created during interoperability processing

Source

```
<xs:element name="includedProduct" type="dataProduct" minOccurs="2" maxOccurs="unbounded">
  <xs:annotation>
    <xs:documentation>Products recommended to be active in this mode</xs:documentation>
  </xs:annotation>
</xs:element>
```

Element S100_IC_PredefinedCombination / suppressedFeatureLayers

Diagram



Properties

content:	complex
minOccurs:	0
maxOccurs:	1

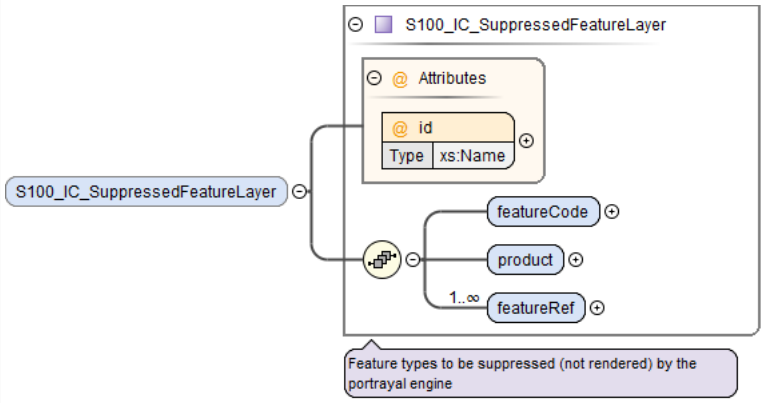
Children: S100_IC_SuppressedFeatureLayer

Source

```
<xs:element name="suppressedFeatureLayers" minOccurs="0" maxOccurs="1">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="S100_IC_SuppressedFeatureLayer" type="S100_IC_SuppressedFeatureLayer"
 minOccurs="0" maxOccurs="unbounded"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

Element S100_IC_PredefinedCombination / suppressedFeatureLayers / S100_IC_SuppressedFeatureLayer

Diagram



Type: S100_IC_SuppressedFeatureLayer

Properties

content:	complex
minOccurs:	0
maxOccurs:	unbounded

Children: featureCode, featureRef, product

Attributes

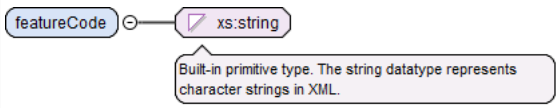
QName	Type	Use	
id	xs:Name	required	

Source

```
<xs:element name="S100_IC_SuppressedFeatureLayer" type="S100_IC_SuppressedFeatureLayer"
 minOccurs="0" maxOccurs="unbounded"/>
```

Element S100_IC_SuppressedFeatureLayer / featureCode

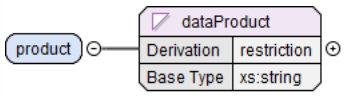
Diagram



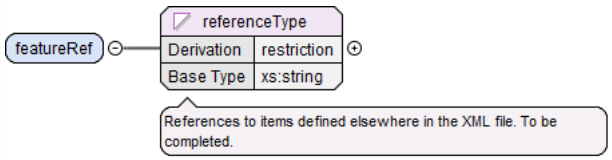
Type: xs:string

Properties	content:	simple
	minOccurs:	1
	maxOccurs:	1
Source	<xs:element name="featureCode" type="xs:string" minOccurs="1" maxOccurs="1"/>	

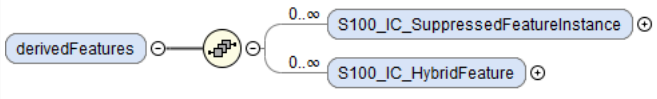
Element S100_IC_SuppressedFeatureLayer / product

Diagram		
Type	dataProduct	
Properties	content:	simple
	minOccurs:	1
	maxOccurs:	1
Facets	enumeration	S-101
	enumeration	S-102
	enumeration	S-111
	enumeration	S-112
	enumeration	S-122
	enumeration	S-124
	enumeration	S-411
	enumeration	S-412
	enumeration	HYBRID Hybridized features created during interoperability processing
Source	<xs:element name="product" type="dataProduct" minOccurs="1" maxOccurs="1"/>	

Element S100_IC_SuppressedFeatureLayer / featureRef

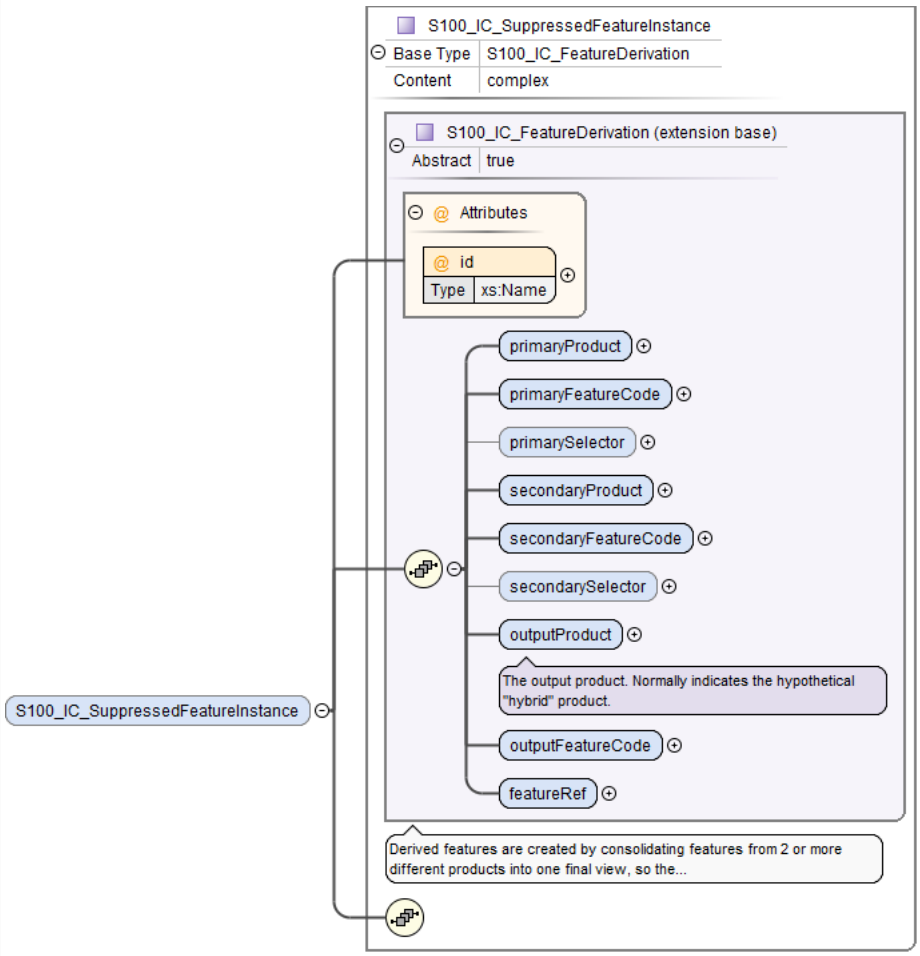
Diagram		
Type	referenceType	
Properties	content:	simple
	minOccurs:	1
	maxOccurs:	unbounded
Source	<xs:element name="featureRef" type="referenceType" minOccurs="1" maxOccurs="unbounded"/>	

Element S100_IC_PredefinedCombination / derivedFeatures

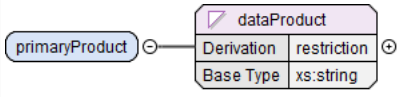
Diagram		
Properties	content:	complex
	minOccurs:	0
	maxOccurs:	1
Children	S100_IC_HybridFeature, S100_IC_SuppressedFeatureInstance	
Source	<xs:element name="derivedFeatures" minOccurs="0" maxOccurs="1"> <xs:complexType> <xs:sequence> <xs:element name="S100_IC_SuppressedFeatureInstance" type="S100_IC_SuppressedFeatureInstance" minOccurs="0" maxOccurs="unbounded"/>	

```
      <xs:element name="S100_IC_HybridFeature" type="S100_IC_HybridFeature" minOccurs="0"
 maxOccurs="unbounded"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

Element S100_IC_PredefinedCombination / derivedFeatures / S100_IC_SuppressedFeatureInstance

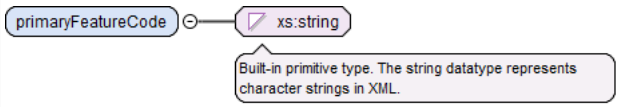
Diagram	
Type	S100_IC_SuppressedFeatureInstance
Type hierarchy	• S100_IC_FeatureDerivation • S100_IC_SuppressedFeatureInstance
Properties	content: complex minOccurs: 0 maxOccurs: unbounded
Children	featureRef, outputFeatureCode, outputProduct, primaryFeatureCode, primaryProduct, primarySelector, secondaryFeatureCode, secondaryProduct, secondarySelector
Attributes	**QName** / **Type** / **Use** **id** / xs:Name / required
Source	`<xs:element name="S100_IC_SuppressedFeatureInstance" type="S100_IC_SuppressedFeatureInstance" minOccurs="0" maxOccurs="unbounded"/>`

Element S100_IC_FeatureDerivation / primaryProduct

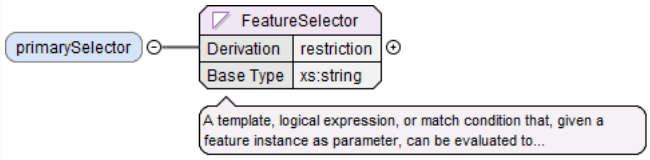
Diagram	

Type	dataProduct		
Properties	content:	simple	
	minOccurs:	1	
	maxOccurs:	1	
Facets	enumeration	S-101	
	enumeration	S-102	
	enumeration	S-111	
	enumeration	S-112	
	enumeration	S-122	
	enumeration	S-124	
	enumeration	S-411	
	enumeration	S-412	
	enumeration	HYBRID	Hybridized features created during interoperability processing
Source	<xs:element name="primaryProduct" type="dataProduct" minOccurs="1" maxOccurs="1"/>		

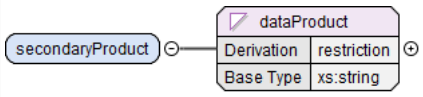
Element S100_IC_FeatureDerivation / primaryFeatureCode

Diagram	
Type	xs:string
Properties	content: simple
	minOccurs: 1
	maxOccurs: 1
Source	<xs:element name="primaryFeatureCode" type="xs:string" minOccurs="1" maxOccurs="1"/>

Element S100_IC_FeatureDerivation / primarySelector

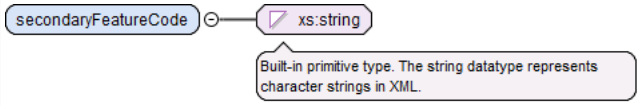
Diagram	
Type	FeatureSelector
Properties	content: simple
	minOccurs: 0
	maxOccurs: 1
Source	<xs:element name="primarySelector" type="FeatureSelector" minOccurs="0" maxOccurs="1"/>

Element S100_IC_FeatureDerivation / secondaryProduct

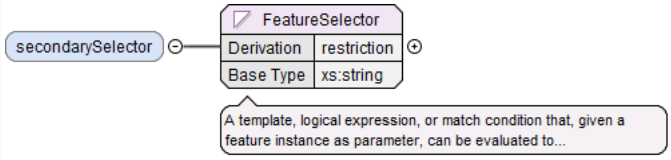
Diagram	
Type	dataProduct
Properties	content: simple
	minOccurs: 1
	maxOccurs: 1
Facets	enumeration S-101

	enumeration	S-102	
	enumeration	S-111	
	enumeration	S-112	
	enumeration	S-122	
	enumeration	S-124	
	enumeration	S-411	
	enumeration	S-412	
	enumeration	HYBRID	Hybridized features created during interoperability processing
Source	<xs:element name="secondaryProduct" type="dataProduct" minOccurs="1" maxOccurs="1"/>		

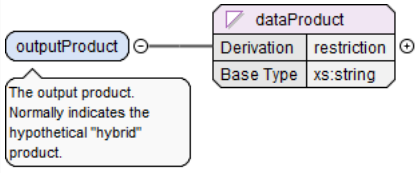
Element S100_IC_FeatureDerivation / secondaryFeatureCode

Diagram	
Type	xs:string
Properties	content: simple minOccurs: 1 maxOccurs: 1
Source	<xs:element name="secondaryFeatureCode" type="xs:string" minOccurs="1" maxOccurs="1"/>

Element S100_IC_FeatureDerivation / secondarySelector

Diagram	
Type	FeatureSelector
Properties	content: simple minOccurs: 0 maxOccurs: 1
Source	<xs:element name="secondarySelector" type="FeatureSelector" minOccurs="0" maxOccurs="1"/>

Element S100_IC_FeatureDerivation / outputProduct

Annotations	The output product. Normally indicates the hypothetical "hybrid" product.
Diagram	
Type	dataProduct
Properties	content: simple minOccurs: 1 maxOccurs: 1
Facets	enumeration S-101 enumeration S-102 enumeration S-111

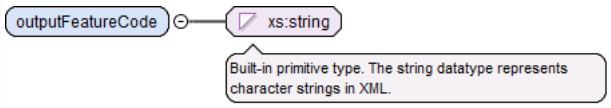
	enumeration	S-112	
	enumeration	S-122	
	enumeration	S-124	
	enumeration	S-411	
	enumeration	S-412	
	enumeration	HYBRID	Hybridized features created during interoperability processing

Source

```
<xs:element name="outputProduct" type="dataProduct" minOccurs="1" maxOccurs="1">
  <xs:annotation>
    <xs:documentation>The output product. Normally indicates the hypothetical "hybrid" product.</
xs:documentation>
  </xs:annotation>
</xs:element>
```

Element S100_IC_FeatureDerivation / outputFeatureCode

Diagram



Type: xs:string

Properties

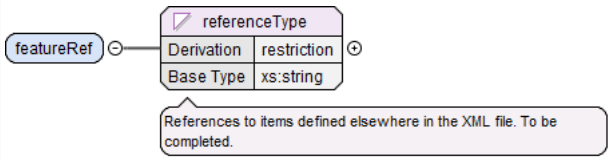
content:	simple
minOccurs:	1
maxOccurs:	1

Source

```
<xs:element name="outputFeatureCode" type="xs:string" minOccurs="1" maxOccurs="1"/>
```

Element S100_IC_FeatureDerivation / featureRef

Diagram



Type: referenceType

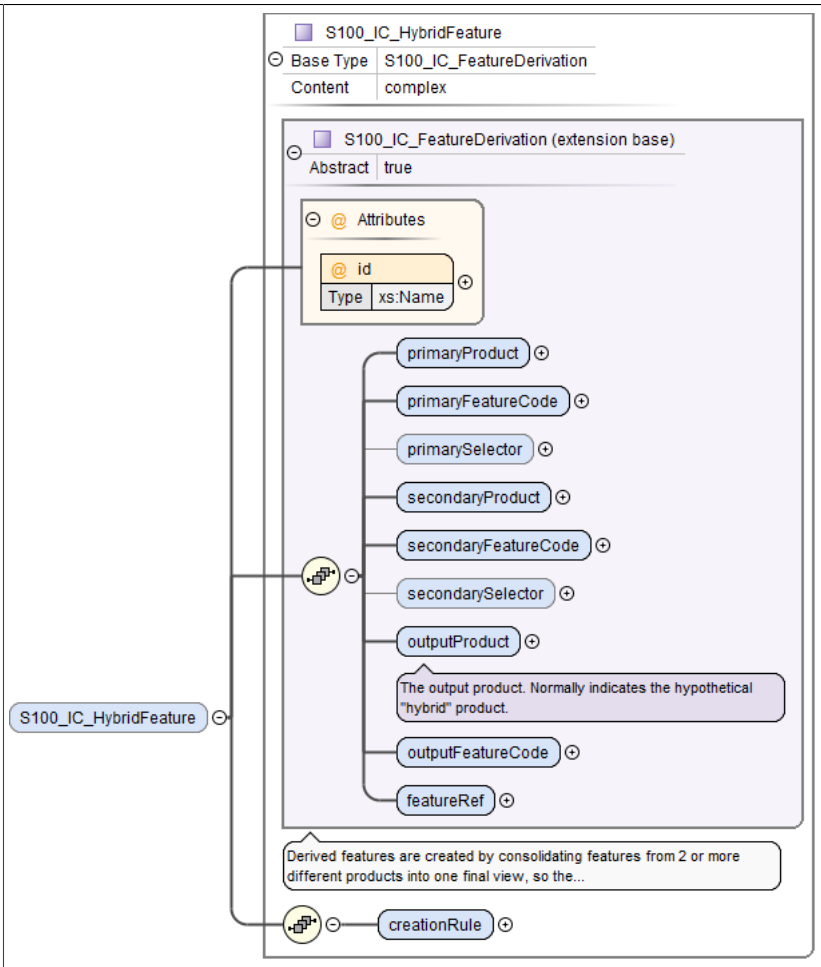
Properties

content:	simple
minOccurs:	1
maxOccurs:	1

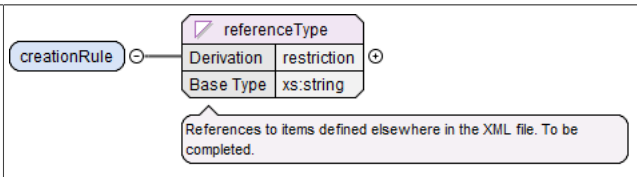
Source

```
<xs:element name="featureRef" type="referenceType" minOccurs="1" maxOccurs="1"/>
```

Element S100_IC_PredefinedCombination / derivedFeatures / S100_IC_HybridFeature

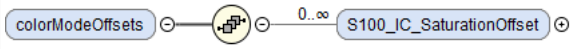
Diagram	
Type	S100_IC_HybridFeature
Type hierarchy	• S100_IC_FeatureDerivation • S100_IC_HybridFeature
Properties	content: `complex` minOccurs: `0` maxOccurs: `unbounded`
Children	creationRule, featureRef, outputFeatureCode, outputProduct, primaryFeatureCode, primaryProduct, primarySelector, secondaryFeatureCode, secondaryProduct, secondarySelector
Attributes	**QName** / **Type** / **Use** **id** / xs:Name / required
Source	`<xs:element name="S100_IC_HybridFeature" type="S100_IC_HybridFeature" minOccurs="0" maxOccurs="unbounded"/>`

Element S100_IC_HybridFeature / creationRule

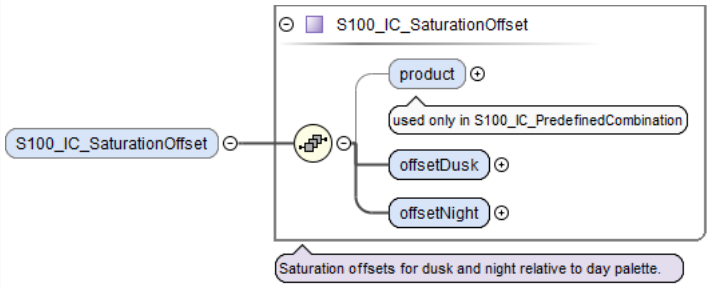
Diagram	
Type	referenceType
Properties	content: `simple`

	minOccurs:	1
	maxOccurs:	1
Source	<xs:element name="creationRule" type="referenceType" minOccurs="1" maxOccurs="1"/>	

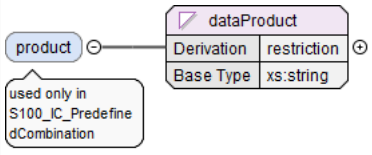
Element S100_IC_PredefinedCombination / colorModeOffsets

Diagram		
Properties	content:	complex
	minOccurs:	0
	maxOccurs:	1
Children	S100_IC_SaturationOffset	
Source	<xs:element name="colorModeOffsets" minOccurs="0" maxOccurs="1"> <xs:complexType> <xs:sequence> <xs:element name="S100_IC_SaturationOffset" type="S100_IC_SaturationOffset" minOccurs="0" maxOccurs="unbounded"/> </xs:sequence> </xs:complexType> </xs:element>	

Element S100_IC_PredefinedCombination / colorModeOffsets / S100_IC_SaturationOffset

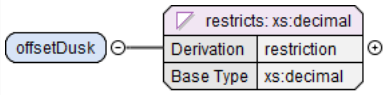
Diagram		
Type	S100_IC_SaturationOffset	
Properties	content:	complex
	minOccurs:	0
	maxOccurs:	unbounded
Children	offsetDusk, offsetNight, product	
Source	<xs:element name="S100_IC_SaturationOffset" type="S100_IC_SaturationOffset" minOccurs="0" maxOccurs="unbounded"/>	

Element S100_IC_SaturationOffset / product

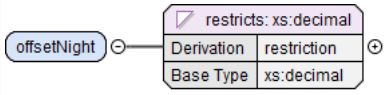
Annotations	used only in S100_IC_PredefinedCombination	
Diagram		
Type	dataProduct	
Properties	content:	simple
	minOccurs:	0
	maxOccurs:	1
Facets	enumeration	S-101

	enumeration	S-102	
	enumeration	S-111	
	enumeration	S-112	
	enumeration	S-122	
	enumeration	S-124	
	enumeration	S-411	
	enumeration	S-412	
	enumeration	HYBRID	Hybridized features created during interoperability processing
Source	<xs:element name="product" type="dataProduct" minOccurs="0" maxOccurs="1"> <xs:annotation> <xs:documentation>used only in S100_IC_PredefinedCombination</xs:documentation> </xs:annotation> </xs:element>		

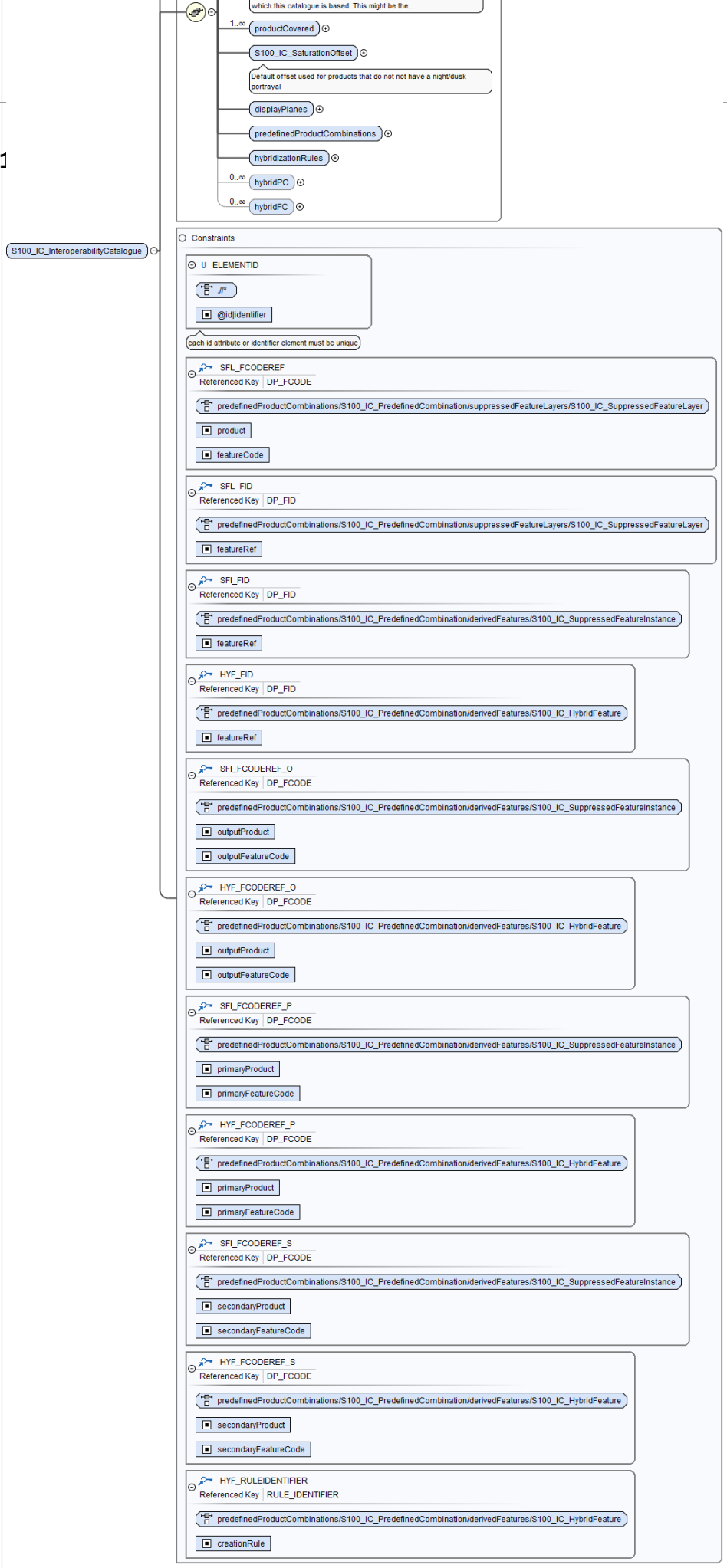
Element S100_IC_SaturationOffset / offsetDusk

Diagram		
Type	restriction of xs:decimal	
Properties	content:	simple
	minOccurs:	1
	maxOccurs:	1
Facets	maxInclusive	1.0
	minInclusive	0.0
Source	<xs:element name="offsetDusk" minOccurs="1" maxOccurs="1"> <xs:simpleType> <xs:restriction base="xs:decimal"> <xs:minInclusive value="0.0"/> <xs:maxInclusive value="1.0"/> </xs:restriction> </xs:simpleType> </xs:element>	

Element S100_IC_SaturationOffset / offsetNight

Diagram		
Type	restriction of xs:decimal	
Properties	content:	simple
	minOccurs:	1
	maxOccurs:	1
Facets	maxInclusive	1.0
	minInclusive	0.0
Source	<xs:element name="offsetNight" minOccurs="1" maxOccurs="1"> <xs:simpleType> <xs:restriction base="xs:decimal"> <xs:minInclusive value="0.0"/> <xs:maxInclusive value="1.0"/> </xs:restriction> </xs:simpleType> </xs:element>	

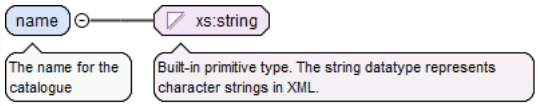
Element S1


which this catalogue is based. This might be the...
1..∞ productCovered
S100_IC_SaturationOffset
Default offset used for products that do not not have a night/dusk portrayal
displayPlanes
predefinedProductCombinations
hybridizationRules
0..∞ hybridPC
0..∞ hybridFC
S100_IC_InteroperabilityCatalogue
Constraints
U ELEMENTID
.//*
@id|identifier
each id attribute or identifier element must be unique
SFL_FCODEREF
Referenced Key DP_FCODE
predefinedProductCombinations/S100_IC_PredefinedCombination/suppressedFeatureLayers/S100_IC_SuppressedFeatureLayer
product
featureCode
SFL_FID
Referenced Key DP_FID
predefinedProductCombinations/S100_IC_PredefinedCombination/suppressedFeatureLayers/S100_IC_SuppressedFeatureLayer
featureRef
SFI_FID
Referenced Key DP_FID
predefinedProductCombinations/S100_IC_PredefinedCombination/derivedFeatures/S100_IC_SuppressedFeatureInstance
featureRef
HYF_FID
Referenced Key DP_FID
predefinedProductCombinations/S100_IC_PredefinedCombination/derivedFeatures/S100_IC_HybridFeature
featureRef
SFI_FCODEREF_O
Referenced Key DP_FCODE
predefinedProductCombinations/S100_IC_PredefinedCombination/derivedFeatures/S100_IC_SuppressedFeatureInstance
outputProduct
outputFeatureCode
HYF_FCODEREF_O
Referenced Key DP_FCODE
predefinedProductCombinations/S100_IC_PredefinedCombination/derivedFeatures/S100_IC_HybridFeature
outputProduct
outputFeatureCode
SFI_FCODEREF_P
Referenced Key DP_FCODE
predefinedProductCombinations/S100_IC_PredefinedCombination/derivedFeatures/S100_IC_SuppressedFeatureInstance
primaryProduct
primaryFeatureCode
HYF_FCODEREF_P
Referenced Key DP_FCODE
predefinedProductCombinations/S100_IC_PredefinedCombination/derivedFeatures/S100_IC_HybridFeature
primaryProduct
primaryFeatureCode
SFI_FCODEREF_S
Referenced Key DP_FCODE
predefinedProductCombinations/S100_IC_PredefinedCombination/derivedFeatures/S100_IC_SuppressedFeatureInstance
secondaryProduct
secondaryFeatureCode
HYF_FCODEREF_S
Referenced Key DP_FCODE
predefinedProductCombinations/S100_IC_PredefinedCombination/derivedFeatures/S100_IC_HybridFeature
secondaryProduct
secondaryFeatureCode
HYF_RULEIDENTIFIER
Referenced Key RULE_IDENTIFIER
predefinedProductCombinations/S100_IC_PredefinedCombination/derivedFeatures/S100_IC_HybridFeature
creationRule

Type	S100_IC_InteroperabilityCatalogue
Type hierarchy	• S100_Catalogue • S100_IC_InteroperabilityCatalogue
Properties	content: complex
Children	S100_IC_SaturationOffset, characterSet, comment, description, digitalSignatureReference, digitalSignatureValue, displayPlanes, fieldOfApplication, hybridFC, hybridPC, hybridizationRules, language, locale, name, predefinedProductCombinations, productCovered, requirementDescription, requirementType, scope, versionDate, versionNumber
Source	<xs:element name="S100_IC_InteroperabilityCatalogue" type="S100_IC_InteroperabilityCatalogue"> <xs:unique name="ELEMENTID"> <xs:annotation> <xs:documentation>each id attribute or identifier element must be unique</xs:documentation> </xs:annotation> <xs:selector xpath=".//*"/> <xs:field xpath="@id|identifier"/> </xs:unique> <xs:keyref refer="DP_FCODE" name="SFL_FCODEREF"> <xs:selector xpath="predefinedProductCombinations/S100_IC_PredefinedCombination/suppressedFeatureLayers/S100_IC_SuppressedFeatureLayer"/> <xs:field xpath="product"/> <xs:field xpath="featureCode"/> </xs:keyref> <xs:keyref refer="DP_FID" name="SFL_FID"> <xs:selector xpath="predefinedProductCombinations/S100_IC_PredefinedCombination/suppressedFeatureLayers/S100_IC_SuppressedFeatureLayer"/> <xs:field xpath="featureRef"/> </xs:keyref> <xs:keyref refer="DP_FID" name="SFI_FID"> <xs:selector xpath="predefinedProductCombinations/S100_IC_PredefinedCombination/derivedFeatures/S100_IC_SuppressedFeatureInstance"/> <xs:field xpath="featureRef"/> </xs:keyref> <xs:keyref refer="DP_FID" name="HYF_FID"> <xs:selector xpath="predefinedProductCombinations/S100_IC_PredefinedCombination/derivedFeatures/S100_IC_HybridFeature"/> <xs:field xpath="featureRef"/> </xs:keyref> <xs:keyref refer="DP_FCODE" name="SFI_FCODEREF_O"> <xs:selector xpath="predefinedProductCombinations/S100_IC_PredefinedCombination/derivedFeatures/S100_IC_SuppressedFeatureInstance"/> <xs:field xpath="outputProduct"/> <xs:field xpath="outputFeatureCode"/> </xs:keyref> <xs:keyref refer="DP_FCODE" name="HYF_FCODEREF_O"> <xs:selector xpath="predefinedProductCombinations/S100_IC_PredefinedCombination/derivedFeatures/S100_IC_HybridFeature"/> <xs:field xpath="outputProduct"/> <xs:field xpath="outputFeatureCode"/> </xs:keyref> <xs:keyref refer="DP_FCODE" name="SFI_FCODEREF_P"> <xs:selector xpath="predefinedProductCombinations/S100_IC_PredefinedCombination/derivedFeatures/S100_IC_SuppressedFeatureInstance"/> <xs:field xpath="primaryProduct"/> <xs:field xpath="primaryFeatureCode"/> </xs:keyref> <xs:keyref refer="DP_FCODE" name="HYF_FCODEREF_P"> <xs:selector xpath="predefinedProductCombinations/S100_IC_PredefinedCombination/derivedFeatures/S100_IC_HybridFeature"/> <xs:field xpath="primaryProduct"/> <xs:field xpath="primaryFeatureCode"/> </xs:keyref> <xs:keyref refer="DP_FCODE" name="SFI_FCODEREF_S"> <xs:selector xpath="predefinedProductCombinations/S100_IC_PredefinedCombination/derivedFeatures/S100_IC_SuppressedFeatureInstance"/> <xs:field xpath="secondaryProduct"/> <xs:field xpath="secondaryFeatureCode"/> </xs:keyref> <xs:keyref refer="DP_FCODE" name="HYF_FCODEREF_S"> <xs:selector xpath="predefinedProductCombinations/S100_IC_PredefinedCombination/derivedFeatures/S100_IC_HybridFeature"/> <xs:field xpath="secondaryProduct"/> <xs:field xpath="secondaryFeatureCode"/> </xs:keyref> <xs:keyref refer="RULE_IDENTIFIER" name="HYF_RULEIDENTIFIER"> <xs:selector xpath="predefinedProductCombinations/S100_IC_PredefinedCombination/derivedFeatures/S100_IC_HybridFeature"/> <xs:field xpath="creationRule"/> </xs:keyref>

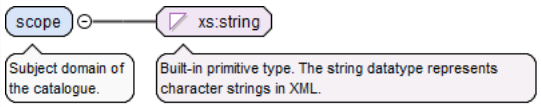
```
</xs:element>
```

Element S100_Catalogue / name

Annotations	The name for the catalogue
Diagram	
Type	xs:string
Properties	content: simple minOccurs: 1 maxOccurs: 1

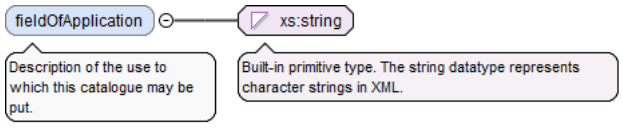
Source	`<xs:element name="name" type="xs:string" minOccurs="1" maxOccurs="1">`
	`  <xs:annotation>`
	`  <xs:documentation>The name for the catalogue</xs:documentation>`
	`  </xs:annotation>`
	`</xs:element>`

Element S100_Catalogue / scope

Annotations	Subject domain of the catalogue.
Diagram	
Type	xs:string
Properties	content: simple minOccurs: 1 maxOccurs: unbounded

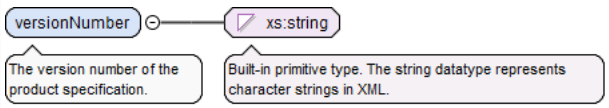
Source	`<xs:element name="scope" type="xs:string" minOccurs="1" maxOccurs="unbounded">`
	`  <xs:annotation>`
	`  <xs:documentation>Subject domain of the catalogue.</xs:documentation>`
	`  </xs:annotation>`
	`</xs:element>`

Element S100_Catalogue / fieldOfApplication

Annotations	Description of the use to which this catalogue may be put.
Diagram	
Type	xs:string
Properties	content: simple minOccurs: 0 maxOccurs: 1

Source	`<xs:element name="fieldOfApplication" type="xs:string" minOccurs="0" maxOccurs="1">`
	`  <xs:annotation>`
	`  <xs:documentation>Description of the use to which this catalogue may be put.</xs:documentation>`
	`  </xs:annotation>`
	`</xs:element>`

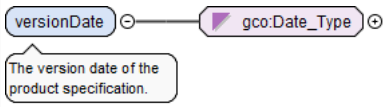
Element S100_Catalogue / versionNumber

Annotations	The version number of the product specification.
Diagram	

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

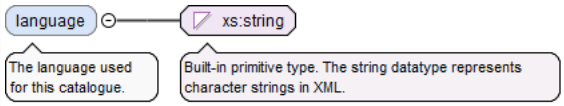
Source	`<xs:element name="versionNumber" type="xs:string" minOccurs="1" maxOccurs="1">`
	`  <xs:annotation>`
	`  <xs:documentation>The version number of the product specification.</xs:documentation>`
	`  </xs:annotation>`
	`</xs:element>`

Element S100_Catalogue / versionDate

Annotations	The version date of the product specification.
Diagram	
Type	gco:Date_Type
Properties	content: simple minOccurs: 1 maxOccurs: 1

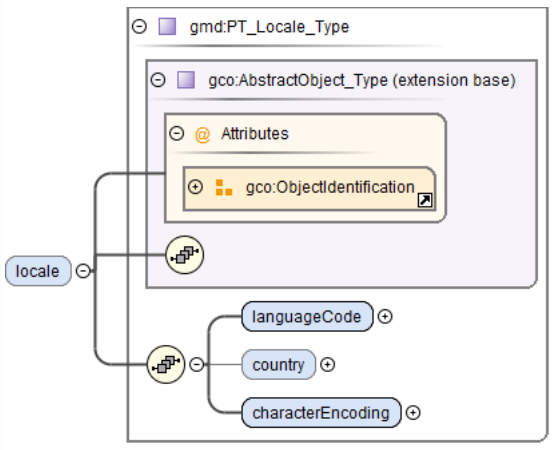
Source	`<xs:element name="versionDate" type="gco:Date_Type" minOccurs="1" maxOccurs="1">`
	`  <xs:annotation>`
	`  <xs:documentation>The version date of the product specification.</xs:documentation>`
	`  </xs:annotation>`
	`</xs:element>`

Element S100_Catalogue / language

Annotations	The language used for this catalogue.
Diagram	
Type	xs:string
Properties	content: simple minOccurs: 0 maxOccurs: 1

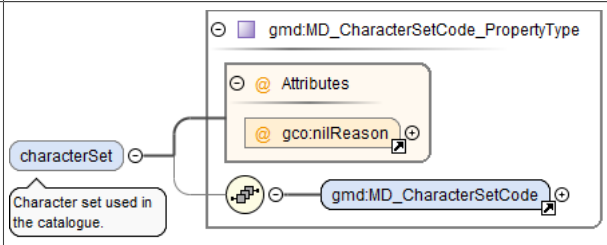
Source	`<xs:element name="language" type="xs:string" minOccurs="0" maxOccurs="1">`
	`  <xs:annotation>`
	`  <xs:documentation>The language used for this catalogue.</xs:documentation>`
	`  </xs:annotation>`
	`</xs:element>`

Element S100_Catalogue / locale

Diagram	

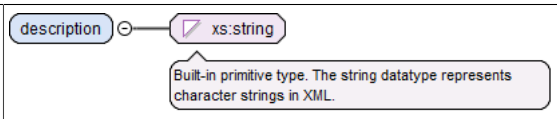
Type	gmd:PT_Locale_Type
Type hierarchy	• gco:AbstractObject_Type • gmd:PT_Locale_Type
Properties	content: complex minOccurs: 0 maxOccurs: 1
Children	gmd:characterEncoding, gmd:country, gmd:languageCode
Attributes	**QName** / **Type** / **Use** **id** / xs:ID / optional **uuid** / xs:string / optional
Source	`<xs:element name="locale" type="gmd:PT_Locale_Type" minOccurs="0" maxOccurs="1"/>`

Element S100_Catalogue / characterSet

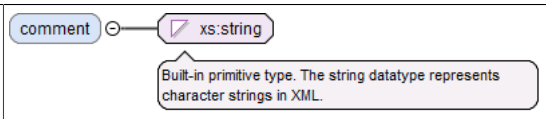
Annotations	Character set used in the catalogue.
Diagram	
Type	gmd:MD_CharacterSetCode_PropertyType
Properties	content: complex minOccurs: 0 maxOccurs: 1
Children	gmd:MD_CharacterSetCode
Attributes	**QName** / **Type** / **Use** **gco:nilReason** / gml:NilReasonType / optional

Source	`<xs:element name="characterSet" type="gmd:MD_CharacterSetCode_PropertyType" minOccurs="0" maxOccurs="1">`
	`  <xs:annotation>`
	`  <xs:documentation>Character set used in the catalogue.</xs:documentation>`
	`  </xs:annotation>`
	`</xs:element>`

Element S100_IC_InteroperabilityCatalogue / description

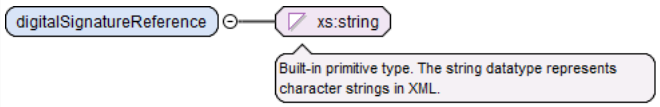
Diagram	
Type	xs:string
Properties	content: simple minOccurs: 1 maxOccurs: 1
Source	`<xs:element name="description" type="xs:string" minOccurs="1" maxOccurs="1"/>`

Element S100_IC_InteroperabilityCatalogue / comment

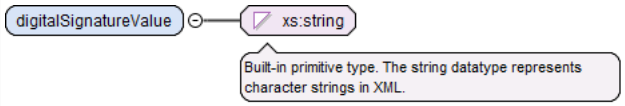
Diagram	
Type	xs:string

Properties	content:	simple
	minOccurs:	0
	maxOccurs:	1
Source	<xs:element name="comment" type="xs:string" minOccurs="0" maxOccurs="1"/>	

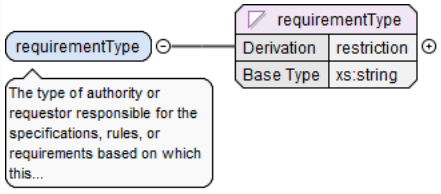
Element S100_IC_InteroperabilityCatalogue / digitalSignatureReference

Diagram		
Type	xs:string	
Properties	content:	simple
	minOccurs:	1
	maxOccurs:	1
Source	<xs:element name="digitalSignatureReference" type="xs:string" minOccurs="1" maxOccurs="1"/>	

Element S100_IC_InteroperabilityCatalogue / digitalSignatureValue

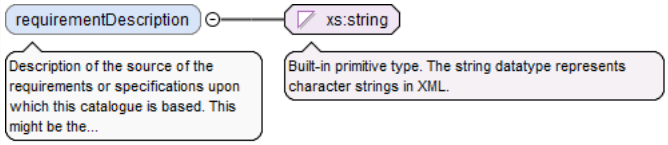
Diagram		
Type	xs:string	
Properties	content:	simple
	minOccurs:	1
	maxOccurs:	1
Source	<xs:element name="digitalSignatureValue" type="xs:string" minOccurs="1" maxOccurs="1"/>	

Element S100_IC_InteroperabilityCatalogue / requirementType

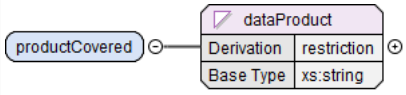
Annotations	The type of authority or requestor responsible for the specifications, rules, or requirements based on which this catalogue was prepared.		
Diagram			
Type	requirementType		
Properties	content:	simple	
	minOccurs:	1	
	maxOccurs:	1	
Facets	enumeration	IHO	Original IHO interoperability catalogue
	enumeration	OEM	Prepared according to requirements specified by OEM or systems integrator
	enumeration	national	Prepared according to requirements specified by a national government, group of national governments (e.g., the European Union), or governmental agency such as a national shipping authority or the USCG.
	enumeration	local	Prepared according to requirements specified by a sub-national governmental authority such as a state, province, or county.
	enumeration	port	Prepared according to requirements specified by a harbormaster's office or port authority

	enumeration	company	Prepared according to requirements specified by the owner, charterer, or operator
	enumeration	master	Prepared according to requirements specified by the vessel's Master
	enumeration	pilot	Prepared according to requirements specified by a pilot
	enumeration	other	Other source
Source	<xs:element name="requirementType" type="requirementType" minOccurs="1" maxOccurs="1"> <xs:annotation> <xs:documentation>The type of authority or requestor responsible for the specifications, rules, or requirements based on which this catalogue was prepared.</xs:documentation> </xs:annotation> </xs:element>		

Element S100_IC_InteroperabilityCatalogue / requirementDescription

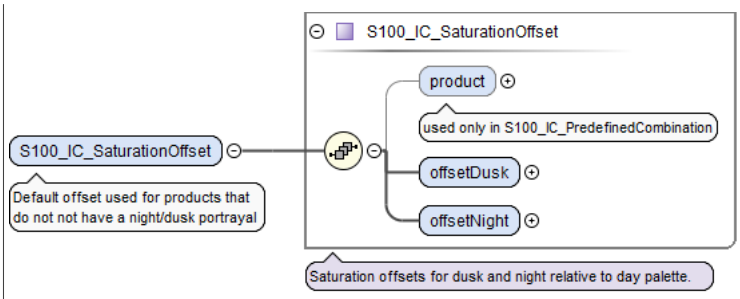
Annotations	Description of the source of the requirements or specifications upon which this catalogue is based. This might be the name of the country, company, OEM, port, pilot, etc.
Diagram	
Type	xs:string
Properties	content: simple minOccurs: 0 maxOccurs: 1
Source	<xs:element name="requirementDescription" type="xs:string" minOccurs="0" maxOccurs="1"> <xs:annotation> <xs:documentation>Description of the source of the requirements or specifications upon which this catalogue is based. This might be the name of the country, company, OEM, port, pilot, etc.</xs:documentation> </xs:annotation> </xs:element>

Element S100_IC_InteroperabilityCatalogue / productCovered

Diagram			
Type	dataProduct		
Properties	content: simple minOccurs: 1 maxOccurs: unbounded		
Facets	enumeration	S-101	
	enumeration	S-102	
	enumeration	S-111	
	enumeration	S-112	
	enumeration	S-122	
	enumeration	S-124	
	enumeration	S-411	
	enumeration	S-412	
	enumeration	HYBRID	Hybridized features created during interoperability processing
Source	<xs:element name="productCovered" type="dataProduct" minOccurs="1" maxOccurs="unbounded"/>		

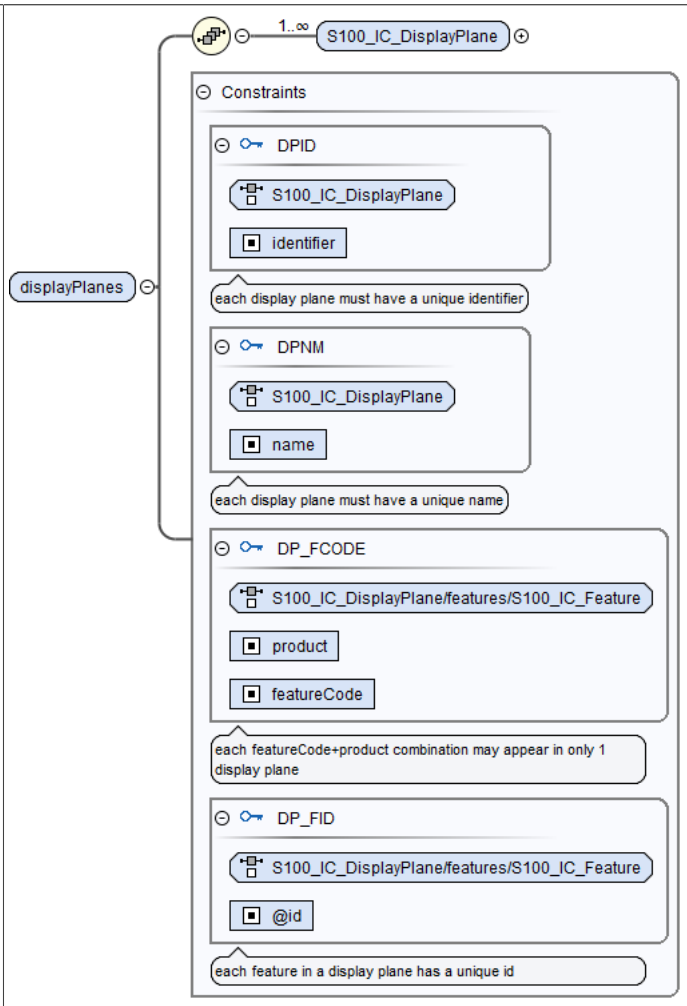
Element S100_IC_InteroperabilityCatalogue / S100_IC_SaturationOffset

Annotations	Default offset used for products that do not not have a night/dusk portrayal

Diagram	
Type	S100_IC_SaturationOffset
Properties	content: complex
Children	offsetDusk, offsetNight, product

Source	`<xs:element name="S100_IC_SaturationOffset" type="S100_IC_SaturationOffset">`
	`  <xs:annotation>`
	`  <xs:documentation>Default offset used for products that do not not have a night/dusk portrayal</xs:documentation>`
	`  </xs:annotation>`
	`</xs:element>`

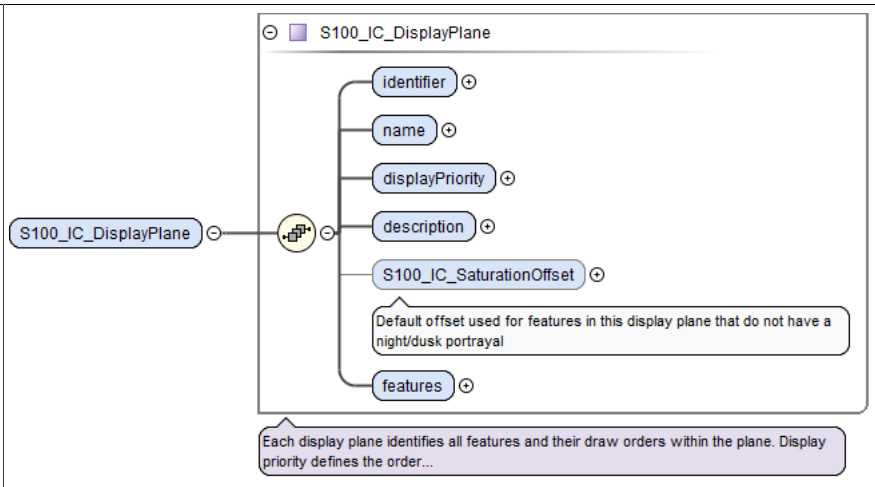
Element S100_IC_InteroperabilityCatalogue / displayPlanes

Diagram	
Properties	content: complex
Children	S100_IC_DisplayPlane

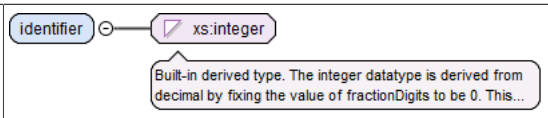
Source	`<xs:element name="displayPlanes">`
	`  <xs:complexType>`
	`  <xs:sequence>`
	`  <xs:element name="S100_IC_DisplayPlane" type="S100_IC_DisplayPlane" minOccurs="1" maxOccurs="unbounded"/>`

```
    </xs:sequence>
  </xs:complexType>
  <xs:key name="DPID">
    <xs:annotation>
      <xs:documentation>each display plane must have a unique identifier</xs:documentation>
    </xs:annotation>
    <xs:selector xpath="S100_IC_DisplayPlane"/>
    <xs:field xpath="identifier"/>
  </xs:key>
  <xs:key name="DPNM">
    <xs:annotation>
      <xs:documentation>each display plane must have a unique name</xs:documentation>
    </xs:annotation>
    <xs:selector xpath="S100_IC_DisplayPlane"/>
    <xs:field xpath="name"/>
  </xs:key>
  <xs:key name="DP_FCODE">
    <xs:annotation>
      <xs:documentation>each featureCode+product combination may appear in only 1 display plane</
xs:documentation>
    </xs:annotation>
    <xs:selector xpath="S100_IC_DisplayPlane/features/S100_IC_Feature"/>
    <xs:field xpath="product"/>
    <xs:field xpath="featureCode"/>
  </xs:key>
  <xs:key name="DP_FID">
    <xs:annotation>
      <xs:documentation>each feature in a display plane has a unique id</xs:documentation>
    </xs:annotation>
    <xs:selector xpath="S100_IC_DisplayPlane/features/S100_IC_Feature"/>
    <xs:field xpath="@id"/>
  </xs:key>
</xs:element>
```

Element S100_IC_InteroperabilityCatalogue / displayPlanes / S100_IC_DisplayPlane

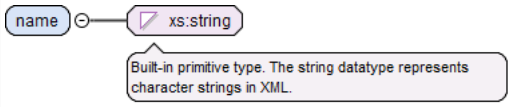
Diagram	
Type	S100_IC_DisplayPlane
Properties	content: complex minOccurs: 1 maxOccurs: unbounded
Children	S100_IC_SaturationOffset, description, displayPriority, features, identifier, name
Source	`<xs:element name="S100_IC_DisplayPlane" type="S100_IC_DisplayPlane" minOccurs="1" maxOccurs="unbounded"/>`

Element S100_IC_DisplayPlane / identifier

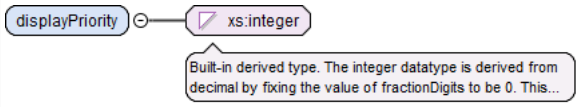
Diagram	
Type	xs:integer

Properties	content:	simple
	minOccurs:	1
	maxOccurs:	1
Source	<xs:element name="identifier" type="xs:integer" minOccurs="1" maxOccurs="1"/>	

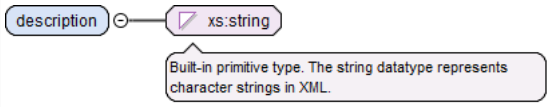
Element S100_IC_DisplayPlane / name

Diagram	
Type	xs:string
Properties	content: simple minOccurs: 1 maxOccurs: 1
Source	<xs:element name="name" type="xs:string" minOccurs="1" maxOccurs="1"/>

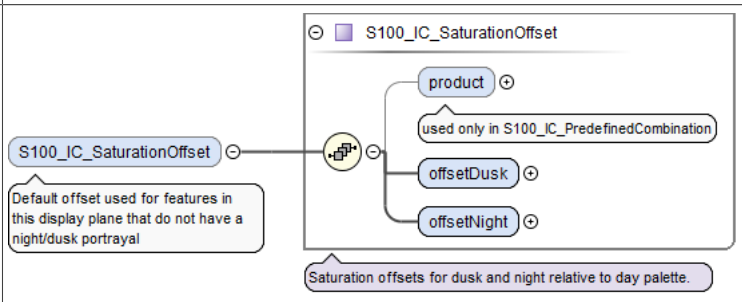
Element S100_IC_DisplayPlane / displayPriority

Diagram	
Type	xs:integer
Properties	content: simple minOccurs: 1 maxOccurs: 1
Source	<xs:element name="displayPriority" type="xs:integer" minOccurs="1" maxOccurs="1"/>

Element S100_IC_DisplayPlane / description

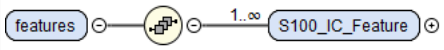
Diagram	
Type	xs:string
Properties	content: simple minOccurs: 1 maxOccurs: 1
Source	<xs:element name="description" type="xs:string" minOccurs="1" maxOccurs="1"/>

Element S100_IC_DisplayPlane / S100_IC_SaturationOffset

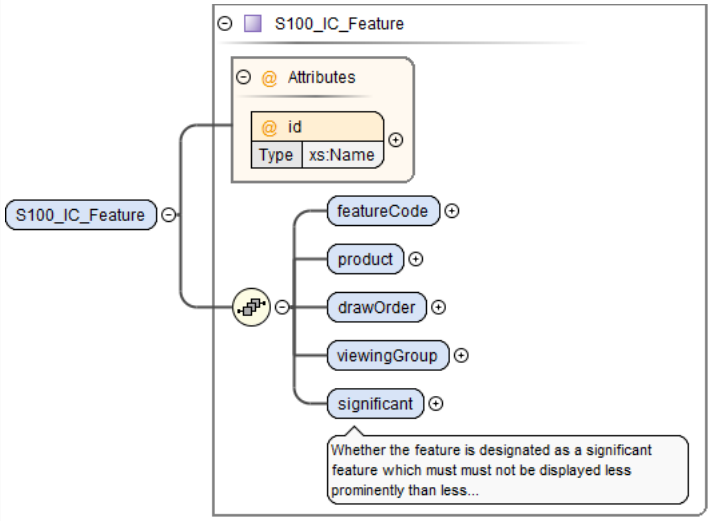
Annotations	Default offset used for features in this display plane that do not have a night/dusk portrayal
Diagram	

Type	S100_IC_SaturationOffset
Properties	content: complex minOccurs: 0 maxOccurs: 1
Children	offsetDusk, offsetNight, product
Source	<xs:element name="S100_IC_SaturationOffset" type="S100_IC_SaturationOffset" minOccurs="0" maxOccurs="1"> <xs:annotation> <xs:documentation>Default offset used for features in this display plane that do not have a night/dusk portrayal</xs:documentation> </xs:annotation> </xs:element>

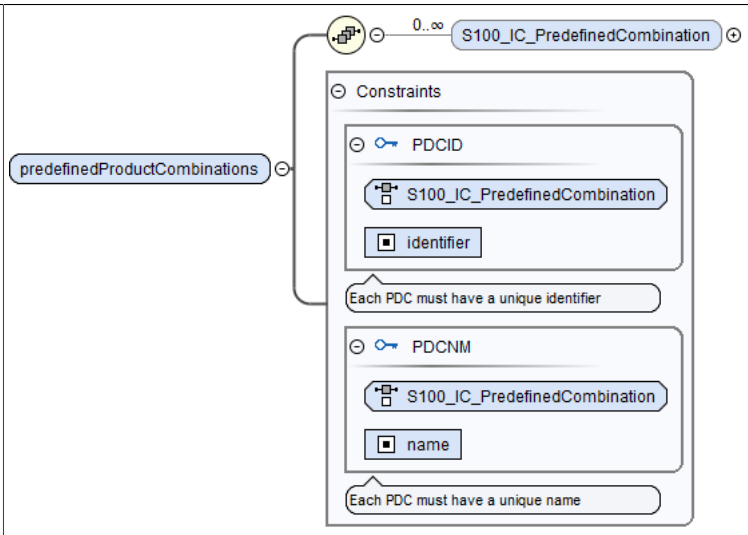
Element S100_IC_DisplayPlane / features

Diagram	
Properties	content: complex
Children	S100_IC_Feature
Source	<xs:element name="features"> <xs:complexType> <xs:sequence> <xs:element name="S100_IC_Feature" type="S100_IC_Feature" minOccurs="1" maxOccurs="unbounded"/> > </xs:sequence> </xs:complexType> </xs:element>

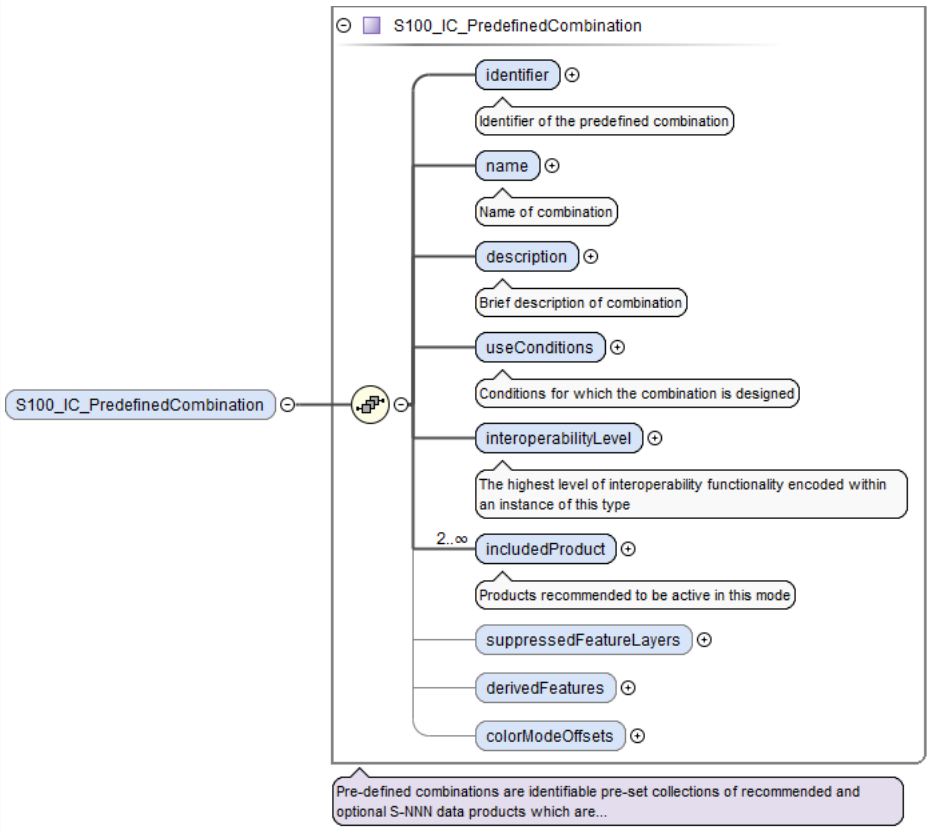
Element S100_IC_DisplayPlane / features / S100_IC_Feature

Diagram	
Type	S100_IC_Feature
Properties	content: complex minOccurs: 1 maxOccurs: unbounded
Children	drawOrder, featureCode, product, significant, viewingGroup
Attributes	**QName** / **Type** / **Use** **id** / xs:Name / required
Source	<xs:element name="S100_IC_Feature" type="S100_IC_Feature" minOccurs="1" maxOccurs="unbounded"/>

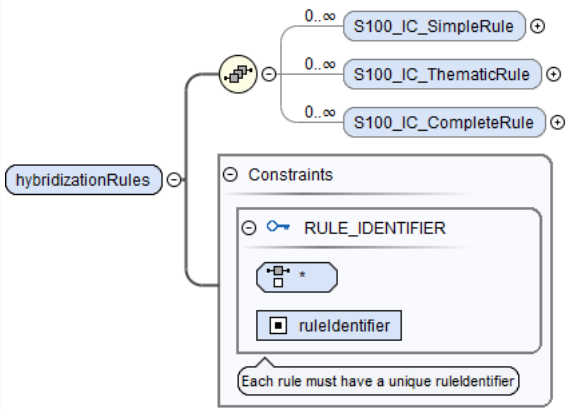
Element S100_IC_InteroperabilityCatalogue / predefinedProductCombinations

Diagram	
Properties	content: complex
Children	S100_IC_PredefinedCombination
Source	<xs:element name="predefinedProductCombinations"> <xs:complexType> <xs:sequence> <xs:element name="S100_IC_PredefinedCombination" type="S100_IC_PredefinedCombination" minOccurs="0" maxOccurs="unbounded"/> </xs:sequence> </xs:complexType> <xs:key name="PDCID"> <xs:annotation> <xs:documentation>Each PDC must have a unique identifier</xs:documentation> </xs:annotation> <xs:selector xpath="S100_IC_PredefinedCombination"/> <xs:field xpath="identifier"/> </xs:key> <xs:key name="PDCNM"> <xs:annotation> <xs:documentation>Each PDC must have a unique name</xs:documentation> </xs:annotation> <xs:selector xpath="S100_IC_PredefinedCombination"/> <xs:field xpath="name"/> </xs:key> </xs:element>

Element S100_IC_InteroperabilityCatalogue / predefinedProductCombinations / S100_IC_PredefinedCombination

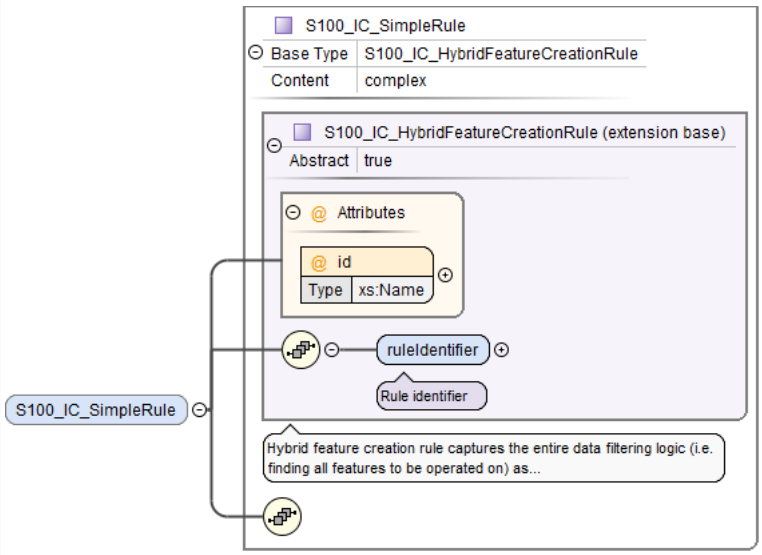
Diagram	
Type	S100_IC_PredefinedCombination
Properties	content: complex minOccurs: 0 maxOccurs: unbounded
Children	colorModeOffsets, derivedFeatures, description, identifier, includedProduct, interoperabilityLevel, name, suppressedFeatureLayers, useConditions
Source	`<xs:element name="S100_IC_PredefinedCombination" type="S100_IC_PredefinedCombination" minOccurs="0" maxOccurs="unbounded"/>`

Element S100_IC_InteroperabilityCatalogue / hybridizationRules

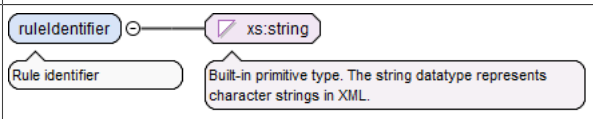
Diagram	
Properties	content: complex
Children	S100_IC_CompleteRule, S100_IC_SimpleRule, S100_IC_ThematicRule
Source	`<xs:element name="hybridizationRules">` `  <xs:complexType>`

```
    <xs:sequence>
      <xs:element name="S100_IC_SimpleRule" type="S100_IC_SimpleRule" minOccurs="0"
 maxOccurs="unbounded"/>
      <xs:element name="S100_IC_ThematicRule" type="S100_IC_ThematicRule" minOccurs="0"
 maxOccurs="unbounded"/>
      <xs:element name="S100_IC_CompleteRule" type="S100_IC_CompleteRule" minOccurs="0"
 maxOccurs="unbounded"/>
    </xs:sequence>
  </xs:complexType>
  <xs:key name="RULE_IDENTIFIER">
    <xs:annotation>
      <xs:documentation>Each rule must have a unique ruleIdentifier</xs:documentation>
    </xs:annotation>
    <xs:selector xpath="*"/>
    <xs:field xpath="ruleIdentifier"/>
  </xs:key>
</xs:element>
```

Element S100_IC_InteroperabilityCatalogue / hybridizationRules / S100_IC_SimpleRule

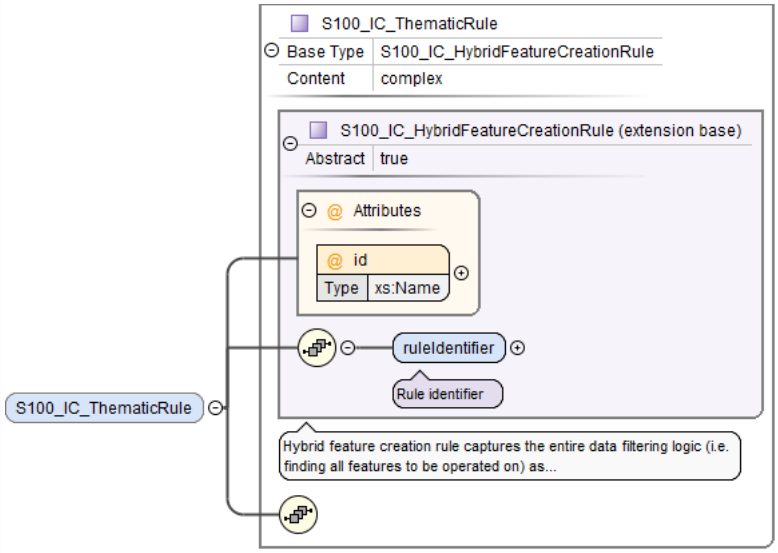
Diagram	
Type	S100_IC_SimpleRule
Type hierarchy	• S100_IC_HybridFeatureCreationRule • S100_IC_SimpleRule
Properties	content: complex minOccurs: 0 maxOccurs: unbounded
Children	ruleIdentifier
Attributes	**QName** | **Type** | **Use** **id** | xs:Name | required
Source	`<xs:element name="S100_IC_SimpleRule" type="S100_IC_SimpleRule" minOccurs="0" maxOccurs="unbounded"/>`

Element S100_IC_HybridFeatureCreationRule / ruleIdentifier

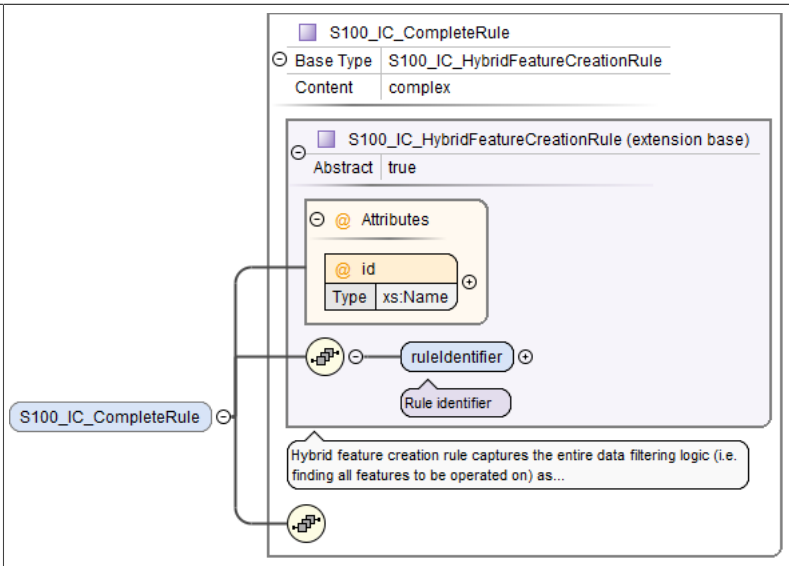
Annotations	Rule identifier
Diagram	
Type	xs:string
Properties	content: simple minOccurs: 1

	maxOccurs: 1
Source	<xs:element name="ruleIdentifier" type="xs:string" minOccurs="1" maxOccurs="1"> <xs:annotation> <xs:documentation>Rule identifier</xs:documentation> </xs:annotation> </xs:element>

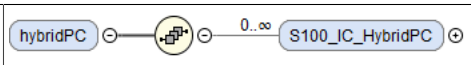
Element S100_IC_InteroperabilityCatalogue / hybridizationRules / S100_IC_ThematicRule

Diagram	
Type	S100_IC_ThematicRule
Type hierarchy	• S100_IC_HybridFeatureCreationRule • S100_IC_ThematicRule
Properties	content: complex minOccurs: 0 maxOccurs: unbounded
Children	ruleIdentifier
Attributes	**QName** / **Type** / **Use** **id** / xs:Name / required
Source	<xs:element name="S100_IC_ThematicRule" type="S100_IC_ThematicRule" minOccurs="0" maxOccurs="unbounded"/>

Element S100_IC_InteroperabilityCatalogue / hybridizationRules / S100_IC_CompleteRule

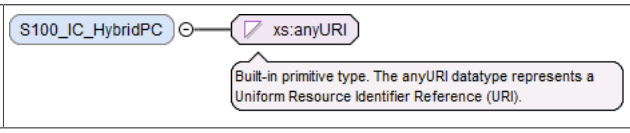
Diagram	
Type	S100_IC_CompleteRule
Type hierarchy	• S100_IC_HybridFeatureCreationRule • S100_IC_CompleteRule
Properties	content: complex minOccurs: 0 maxOccurs: unbounded
Children	ruleIdentifier
Attributes	**QName** / **Type** / **Use** **id** / xs:Name / required
Source	`<xs:element name="S100_IC_CompleteRule" type="S100_IC_CompleteRule" minOccurs="0" maxOccurs="unbounded"/>`

Element S100_IC_InteroperabilityCatalogue / hybridPC

Diagram	
Properties	content: complex minOccurs: 0 maxOccurs: unbounded
Children	S100_IC_HybridPC

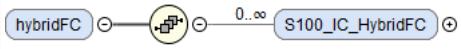
Source	`<xs:element name="hybridPC" minOccurs="0" maxOccurs="unbounded">`
	`  <xs:complexType>`
	`  <xs:annotation>`
	`  <xs:documentation>Reference to the hybrid portrayals catalogue</xs:documentation>`
	`  </xs:annotation>`
	`  <xs:sequence>`
	`  <xs:element name="S100_IC_HybridPC" type="xs:anyURI" minOccurs="0" maxOccurs="unbounded"/>`
	`  </xs:sequence>`
	`  </xs:complexType>`
	`</xs:element>`

Element S100_IC_InteroperabilityCatalogue / hybridPC / S100_IC_HybridPC

Diagram	

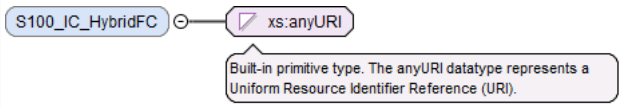
Type	xs:anyURI
Properties	content: simple minOccurs: 0 maxOccurs: unbounded
Source	`<xs:element name="S100_IC_HybridPC" type="xs:anyURI" minOccurs="0" maxOccurs="unbounded"/>`

Element S100_IC_InteroperabilityCatalogue / hybridFC

Diagram	
Properties	content: complex minOccurs: 0 maxOccurs: unbounded
Children	S100_IC_HybridFC

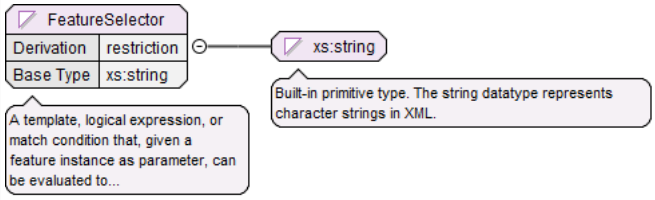
Source	`<xs:element name="hybridFC" minOccurs="0" maxOccurs="unbounded">`
	`  <xs:complexType>`
	`  <xs:annotation>`
	`  <xs:documentation>Reference to the hybrid features catalogue</xs:documentation>`
	`  </xs:annotation>`
	`  <xs:sequence>`
	`  <xs:element name="S100_IC_HybridFC" type="xs:anyURI" minOccurs="0" maxOccurs="unbounded"/>`
	`  </xs:sequence>`
	`  </xs:complexType>`
	`</xs:element>`

Element S100_IC_InteroperabilityCatalogue / hybridFC / S100_IC_HybridFC

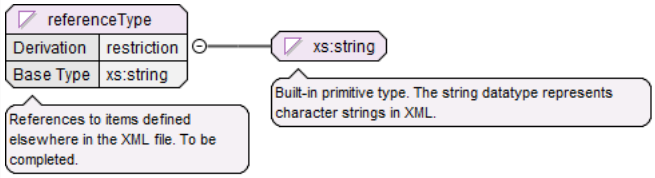
Diagram	
Type	xs:anyURI
Properties	content: simple minOccurs: 0 maxOccurs: unbounded
Source	`<xs:element name="S100_IC_HybridFC" type="xs:anyURI" minOccurs="0" maxOccurs="unbounded"/>`

Simple Type(s)

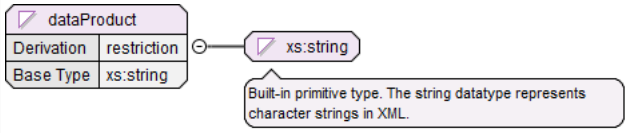
Simple Type FeatureSelector

Annotations	A template, logical expression, or match condition that, given a feature instance as parameter, can be evaluated to produce a TRUE/FALSE result. Format TBD. Allowed forms depend on the interoperability level, e.g., only level 4 expressions can use complex spatial queries. Examples: "CATICE=5"; SQL select expression; XSLT match condition.
Diagram	
Type	xs:string
Source	`<xs:simpleType name="FeatureSelector">` `  <xs:annotation>` ` <xs:documentation>A template, logical expression, or match condition that, given a feature instance as parameter, can be evaluated to produce a TRUE/FALSE result. Format TBD. Allowed forms depend on the interoperability level, e.g., only level 4 expressions can use complex spatial queries. Examples: "CATICE=5"; SQL select expression; XSLT match condition.</xs:documentation>` ` </xs:annotation>` ` <xs:restriction base="xs:string"/>` `</xs:simpleType>`

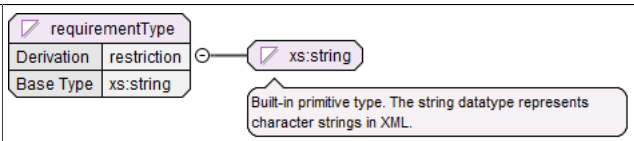
Simple Type `referenceType`

Annotations	References to items defined elsewhere in the XML file. To be completed.
Diagram	
Type	xs:string
Source	<xs:simpleType name="referenceType"> <xs:annotation> <xs:documentation>References to items defined elsewhere in the XML file. To be completed.</xs:documentation> </xs:annotation> <xs:restriction base="xs:string"/> </xs:simpleType>

Simple Type `dataProduct`

Diagram	
Type	restriction of xs:string
Facets	enumeration S-101 enumeration S-102 enumeration S-111 enumeration S-112 enumeration S-122 enumeration S-124 enumeration S-411 enumeration S-412 enumeration HYBRID — Hybridized features created during interoperability processing
Source	<xs:simpleType name="dataProduct"> <xs:restriction base="xs:string"> <xs:enumeration value="S-101"/> <xs:enumeration value="S-102"/> <xs:enumeration value="S-111"/> <xs:enumeration value="S-112"/> <xs:enumeration value="S-122"/> <xs:enumeration value="S-124"/> <xs:enumeration value="S-411"/> <xs:enumeration value="S-412"/> <xs:enumeration value="HYBRID"> <xs:annotation> <xs:documentation>Hybridized features created during interoperability processing</xs:documentation> </xs:annotation> </xs:enumeration> </xs:restriction> </xs:simpleType>

Simple Type `requirementType`

Diagram	
Type	restriction of xs:string
Facets	enumeration IHO — Original IHO interoperability catalogue

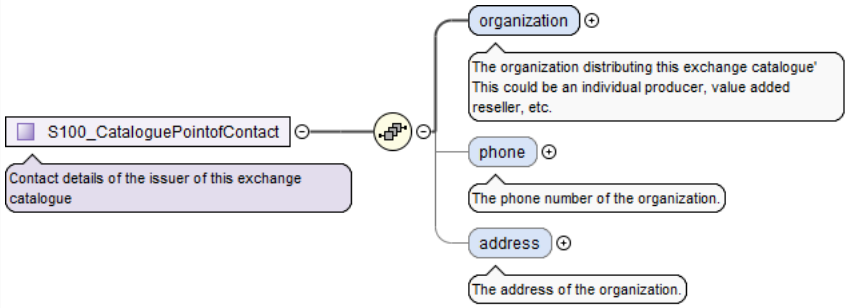
	enumeration	OEM	Prepared according to requirements specified by OEM or systems integrator
	enumeration	national	Prepared according to requirements specified by a national government, group of national governments (e.g., the European Union), or governmental agency such as a national shipping authority or the USCG.
	enumeration	local	Prepared according to requirements specified by a sub-national governmental authority such as a state, province, or county.
	enumeration	port	Prepared according to requirements specified by a harbormaster's office or port authority
	enumeration	company	Prepared according to requirements specified by the owner, charterer, or operator
	enumeration	master	Prepared according to requirements specified by the vessel's Master
	enumeration	pilot	Prepared according to requirements specified by a pilot
	enumeration	other	Other source

Source

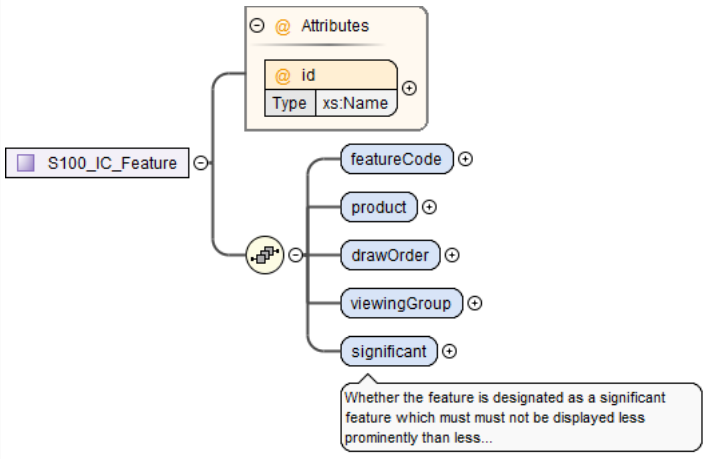
```
<xs:simpleType name="requirementType">
  <xs:restriction base="xs:string">
    <xs:enumeration value="IHO">
      <xs:annotation>
        <xs:documentation>Original IHO interoperability catalogue</xs:documentation>
      </xs:annotation>
    </xs:enumeration>
    <xs:enumeration value="OEM">
      <xs:annotation>
        <xs:documentation>Prepared according to requirements specified by OEM or systems
 integrator</xs:documentation>
      </xs:annotation>
    </xs:enumeration>
    <xs:enumeration value="national">
      <xs:annotation>
        <xs:documentation>Prepared according to requirements specified by a national government,
 group of national governments (e.g., the European Union), or governmental agency such as a national
 shipping authority or the USCG.</xs:documentation>
      </xs:annotation>
    </xs:enumeration>
    <xs:enumeration value="local">
      <xs:annotation>
        <xs:documentation>Prepared according to requirements specified by a sub-national
 governmental authority such as a state, province, or county.</xs:documentation>
      </xs:annotation>
    </xs:enumeration>
    <xs:enumeration value="port">
      <xs:annotation>
        <xs:documentation>Prepared according to requirements specified by a harbormaster's office or
 port authority</xs:documentation>
      </xs:annotation>
    </xs:enumeration>
    <xs:enumeration value="company">
      <xs:annotation>
        <xs:documentation>Prepared according to requirements specified by the owner, charterer, or
 operator</xs:documentation>
      </xs:annotation>
    </xs:enumeration>
    <xs:enumeration value="master">
      <xs:annotation>
        <xs:documentation>Prepared according to requirements specified by the vessel's Master</
xs:documentation>
      </xs:annotation>
    </xs:enumeration>
    <xs:enumeration value="pilot">
      <xs:annotation>
        <xs:documentation>Prepared according to requirements specified by a pilot</xs:documentation>
      </xs:annotation>
    </xs:enumeration>
    <xs:enumeration value="other">
      <xs:annotation>
        <xs:documentation>Other source</xs:documentation>
      </xs:annotation>
    </xs:enumeration>
  </xs:restriction>
</xs:simpleType>
```

Complex Type(s)

Complex Type `S100_CataloguePointofContact`

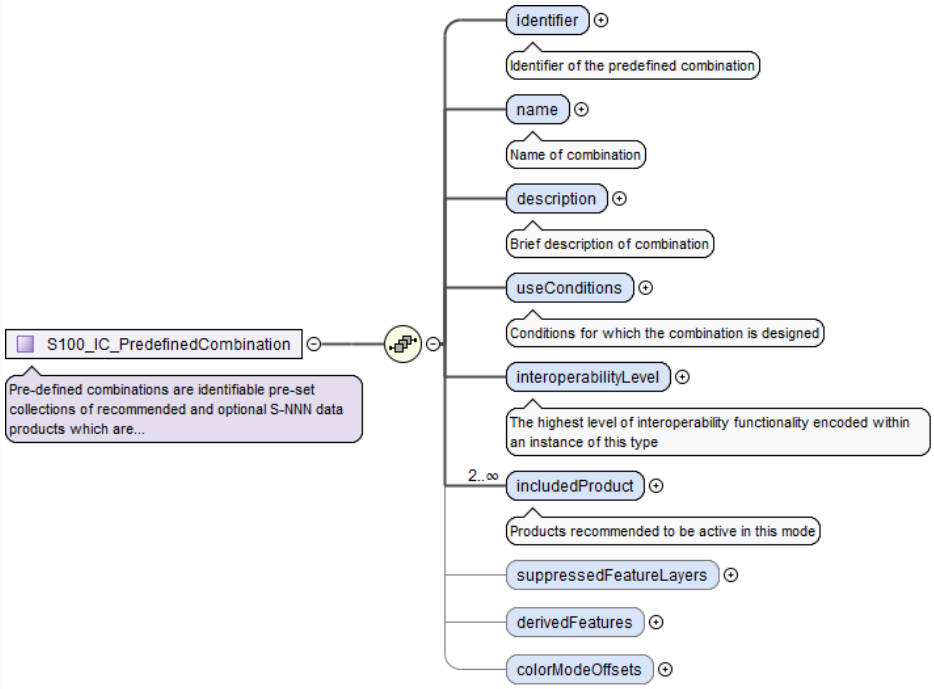
Annotations	Contact details of the issuer of this exchange catalogue
Diagram	
Children	address, organization, phone
Source	<xs:complexType name="S100_CataloguePointofContact"> <xs:annotation> <xs:documentation>Contact details of the issuer of this exchange catalogue</xs:documentation> </xs:annotation> <xs:sequence> <xs:element name="organization" type="xs:string" minOccurs="1" maxOccurs="1"> <xs:annotation> <xs:documentation>The organization distributing this exchange catalogue' This could be an individual producer, value added reseller, etc.</xs:documentation> </xs:annotation> </xs:element> <xs:element name="phone" type="xs:string" minOccurs="0" maxOccurs="1"> <xs:annotation> <xs:documentation>The phone number of the organization.</xs:documentation> </xs:annotation> </xs:element> <xs:element name="address" type="xs:string" minOccurs="0" maxOccurs="1"> <xs:annotation> <xs:documentation>The address of the organization.</xs:documentation> </xs:annotation> </xs:element> </xs:sequence> </xs:complexType>

Complex Type `S100_IC_Feature`

Diagram	
Children	drawOrder, featureCode, product, significant, viewingGroup
Attributes	**QName** | **Type** | **Use** **id** | xs:Name | required
Source	<xs:complexType name="S100_IC_Feature"> <xs:sequence> <xs:element name="featureCode" type="xs:string" minOccurs="1" maxOccurs="1"/> <xs:element name="product" type="dataProduct" minOccurs="1" maxOccurs="1"/>

```
    <xs:element name="drawOrder" type="xs:integer" minOccurs="1" maxOccurs="1"/>
    <xs:element name="viewingGroup" type="xs:integer" minOccurs="1" maxOccurs="1"/>
    <xs:element name="significant" type="xs:boolean" default="false" minOccurs="1" maxOccurs="1">
      <xs:annotation>
        <xs:documentation>Whether the feature is designated as a significant feature which must
 must not be displayed less prominently than less significant features in other overlying datasets.
 Remark: true=feature is designated as a significant feature</xs:documentation>
      </xs:annotation>
    </xs:element>
  </xs:sequence>
  <xs:attribute name="id" type="xs:Name" use="required"/>
</xs:complexType>
```

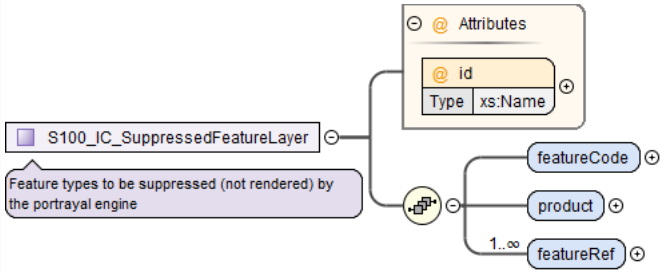
Complex Type `S100_IC_PredefinedCombination`

Annotations	Pre-defined combinations are identifiable pre-set collections of recommended and optional S-NNN data products which are expected to be loaded by the user under specific conditions or for specified tasks. Each pre-defined combination is basically a package of data products, display priorities, context parameters, user settings, portrayal catalogues, etc. An ECDIS or other system can allow the user to initiate the loading of multiple data products and activate multiple parameter settings as a single action, by selecting one of a list of pre-defined combinations, instead of loading and unloading individual data products.
Diagram	
Children	colorModeOffsets, derivedFeatures, description, identifier, includedProduct, interoperabilityLevel, name, suppressedFeatureLayers, useConditions
Source	

```
<xs:complexType name="S100_IC_PredefinedCombination">
  <xs:annotation>
    <xs:documentation>Pre-defined combinations are identifiable pre-set collections of recommended
 and optional S-NNN data products which are expected to be loaded by the user under specific
 conditions or for specified tasks. Each pre-defined combination is basically a package of data
 products, display priorities, context parameters, user settings, portrayal catalogues, etc. An
 ECDIS or other system can allow the user to initiate the loading of multiple data products and
 activate multiple parameter settings as a single action, by selecting one of a list of pre-defined
 combinations, instead of loading and unloading individual data products.</xs:documentation>
  </xs:annotation>
  <xs:sequence>
    <xs:element name="identifier" type="xs:string">
      <xs:annotation>
        <xs:documentation>Identifier of the predefined combination</xs:documentation>
      </xs:annotation>
    </xs:element>
    <xs:element name="name" type="xs:string" minOccurs="1" maxOccurs="1">
      <xs:annotation>
        <xs:documentation>Name of combination</xs:documentation>
      </xs:annotation>
    </xs:element>
    <xs:element name="description" type="xs:string" minOccurs="1" maxOccurs="1">
      <xs:annotation>
        <xs:documentation>Brief description of combination</xs:documentation>
      </xs:annotation>
```

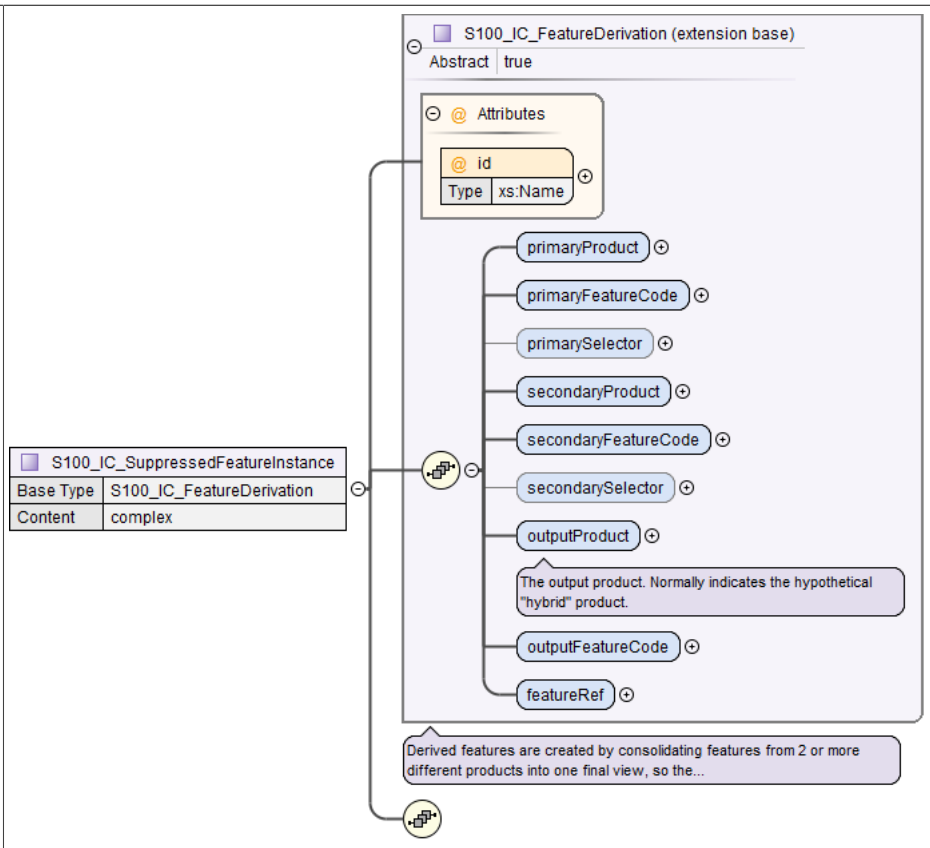
```
    </xs:element>
    <xs:element name="useConditions" type="xs:string" minOccurs="1" maxOccurs="1">
      <xs:annotation>
        <xs:documentation>Conditions for which the combination is designed</xs:documentation>
      </xs:annotation>
    </xs:element>
    <xs:element name="interoperabilityLevel" type="xs:integer" minOccurs="1" maxOccurs="1">
      <xs:annotation>
        <xs:documentation>The highest level of interoperability functionality encoded within an
 instance of this type</xs:documentation>
      </xs:annotation>
    </xs:element>
    <xs:element name="includedProduct" type="dataProduct" minOccurs="2" maxOccurs="unbounded">
      <xs:annotation>
        <xs:documentation>Products recommended to be active in this mode</xs:documentation>
      </xs:annotation>
    </xs:element>
    <xs:element name="suppressedFeatureLayers" minOccurs="0" maxOccurs="1">
      <xs:complexType>
        <xs:sequence>
          <xs:element name="S100_IC_SuppressedFeatureLayer" type="S100_IC_SuppressedFeatureLayer"
 minOccurs="0" maxOccurs="unbounded"/>
        </xs:sequence>
      </xs:complexType>
    </xs:element>
    <xs:element name="derivedFeatures" minOccurs="0" maxOccurs="1">
      <xs:complexType>
        <xs:sequence>
          <xs:element name="S100_IC_SuppressedFeatureInstance"
 type="S100_IC_SuppressedFeatureInstance" minOccurs="0" maxOccurs="unbounded"/>
          <xs:element name="S100_IC_HybridFeature" type="S100_IC_HybridFeature" minOccurs="0"
 maxOccurs="unbounded"/>
        </xs:sequence>
      </xs:complexType>
    </xs:element>
    <xs:element name="colorModeOffsets" minOccurs="0" maxOccurs="1">
      <xs:complexType>
        <xs:sequence>
          <xs:element name="S100_IC_SaturationOffset" type="S100_IC_SaturationOffset" minOccurs="0"
 maxOccurs="unbounded"/>
        </xs:sequence>
      </xs:complexType>
    </xs:element>
  </xs:sequence>
  <!--<xs:attribute name="identifier" type="xs:Name" use="required"/>-->
</xs:complexType>
```

Complex Type `S100_IC_SuppressedFeatureLayer`

Annotations	Feature types to be suppressed (not rendered) by the portrayal engine
Diagram	
Children	featureCode, featureRef, product
Attributes	**QName** | **Type** | **Use** **id** | xs:Name | required

Source	`<xs:complexType name="S100_IC_SuppressedFeatureLayer">`
	`  <xs:annotation>`
	`  <xs:documentation>Feature types to be suppressed (not rendered) by the portrayal engine</xs:documentation>`
	`  </xs:annotation>`
	`  <xs:sequence>`
	`  <xs:element name="featureCode" type="xs:string" minOccurs="1" maxOccurs="1"/>`
	`  <xs:element name="product" type="dataProduct" minOccurs="1" maxOccurs="1"/>`
	`  <xs:element name="featureRef" type="referenceType" minOccurs="1" maxOccurs="unbounded"/>`
	`  </xs:sequence>`
	`  <xs:attribute name="id" type="xs:Name" use="required"/>`
	`</xs:complexType>`

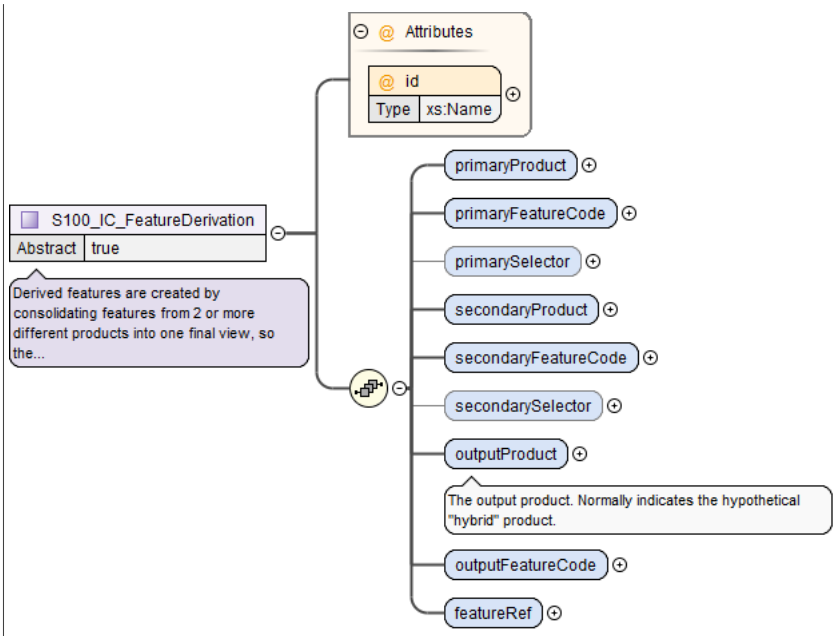
Complex Type S100_IC_SuppressedFeatureInstance

Diagram	
Type	extension of S100_IC_FeatureDerivation
Type hierarchy	• S100_IC_FeatureDerivation • S100_IC_SuppressedFeatureInstance
Children	featureRef, outputFeatureCode, outputProduct, primaryFeatureCode, primaryProduct, primarySelector, secondaryFeatureCode, secondaryProduct, secondarySelector
Attributes	**QName** | **Type** | **Use** **id** | xs:Name | required

Source	`<xs:complexType name="S100_IC_SuppressedFeatureInstance">`
	`  <xs:complexContent>`
	`  <xs:extension base="S100_IC_FeatureDerivation">`
	`  <xs:sequence/>`
	`  </xs:extension>`
	`  </xs:complexContent>`
	`</xs:complexType>`

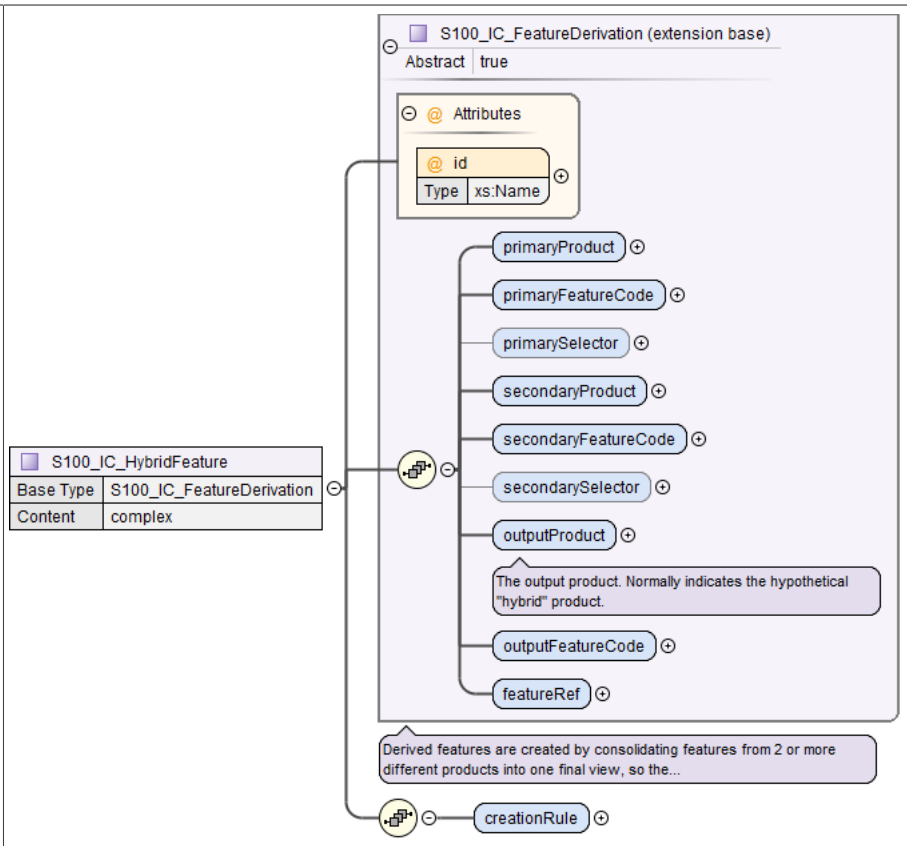
Complex Type S100_IC_FeatureDerivation

Annotations	Derived features are created by consolidating features from 2 or more different products into one final view, so the changes can include geometry, attribution and/or portrayal (depending on the interoperability level). Individual primary and secondary inputs are suppressed from being rendered and only the resulting derived feature is added to the data stack. The resulting derived feature does not need to have any hybrid characteristics i.e. one restricted area replaced with another restricted area will use regular PC/FC of the primary product. However if the result feature needs to be supported by any custom FC or PC elements they must be defined under hybrid FC and hybrid PC accordingly. A rule for creating the feature must be described in the rules section.

Diagram	
Properties	abstract: `true`
Children	featureRef, outputFeatureCode, outputProduct, primaryFeatureCode, primaryProduct, primarySelector, secondaryFeatureCode, secondaryProduct, secondarySelector
Attributes	**QName** / **Type** / **Use** **id** / xs:Name / required
Source	see below

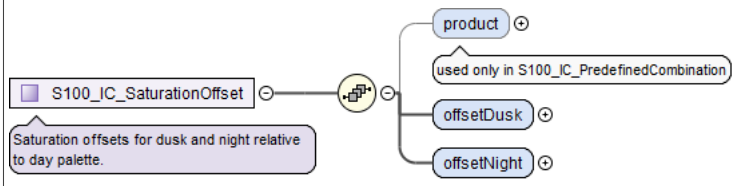
```
<xs:complexType name="S100_IC_FeatureDerivation" abstract="true">
  <xs:annotation>
    <xs:documentation>Derived features are created by consolidating features from 2 or more
 different products into one final view, so the changes can include geometry, attribution and/or
 portrayal (depending on the interoperability level). Individual primary and secondary inputs are
 suppressed from being rendered and only the resulting derived feature is added to the data stack.
 The resulting derived feature does not need to have any hybrid characteristics i.e. one restricted
 area replaced with another restricted area will use regular PC/FC of the primary product. However
 if the result feature needs to be supported by any custom FC or PC elements they must be defined
 under hybrid FC and hybrid PC accordingly. A rule for creating the feature must be described in the
 rules section.</xs:documentation>
  </xs:annotation>
  <xs:sequence>
    <xs:element name="primaryProduct" type="dataProduct" minOccurs="1" maxOccurs="1"/>
    <xs:element name="primaryFeatureCode" type="xs:string" minOccurs="1" maxOccurs="1"/>
    <xs:element name="primarySelector" type="FeatureSelector" minOccurs="0" maxOccurs="1"/>
    <xs:element name="secondaryProduct" type="dataProduct" minOccurs="1" maxOccurs="1"/>
    <xs:element name="secondaryFeatureCode" type="xs:string" minOccurs="1" maxOccurs="1"/>
    <xs:element name="secondarySelector" type="FeatureSelector" minOccurs="0" maxOccurs="1"/>
    <xs:element name="outputProduct" type="dataProduct" minOccurs="1" maxOccurs="1">
      <xs:annotation>
        <xs:documentation>The output product. Normally indicates the hypothetical "hybrid"
 product.</xs:documentation>
      </xs:annotation>
    </xs:element>
    <xs:element name="outputFeatureCode" type="xs:string" minOccurs="1" maxOccurs="1"/>
    <xs:element name="featureRef" type="referenceType" minOccurs="1" maxOccurs="1"/>
  </xs:sequence>
  <xs:attribute name="id" type="xs:Name" use="required"/>
</xs:complexType>
```

Complex Type S100_IC_HybridFeature

Diagram	
Type	extension of S100_IC_FeatureDerivation
Type hierarchy	• S100_IC_FeatureDerivation • S100_IC_HybridFeature
Children	creationRule, featureRef, outputFeatureCode, outputProduct, primaryFeatureCode, primaryProduct, primarySelector, secondaryFeatureCode, secondaryProduct, secondarySelector
Attributes	**QName** | **Type** | **Use** **id** | xs:Name | required

Source	`<xs:complexType name="S100_IC_HybridFeature">`
	`  <xs:complexContent>`
	`  <xs:extension base="S100_IC_FeatureDerivation">`
	`  <xs:sequence>`
	`  <xs:element name="creationRule" type="referenceType" minOccurs="1" maxOccurs="1"/>`
	`  </xs:sequence>`
	`  </xs:extension>`
	`  </xs:complexContent>`
	`</xs:complexType>`

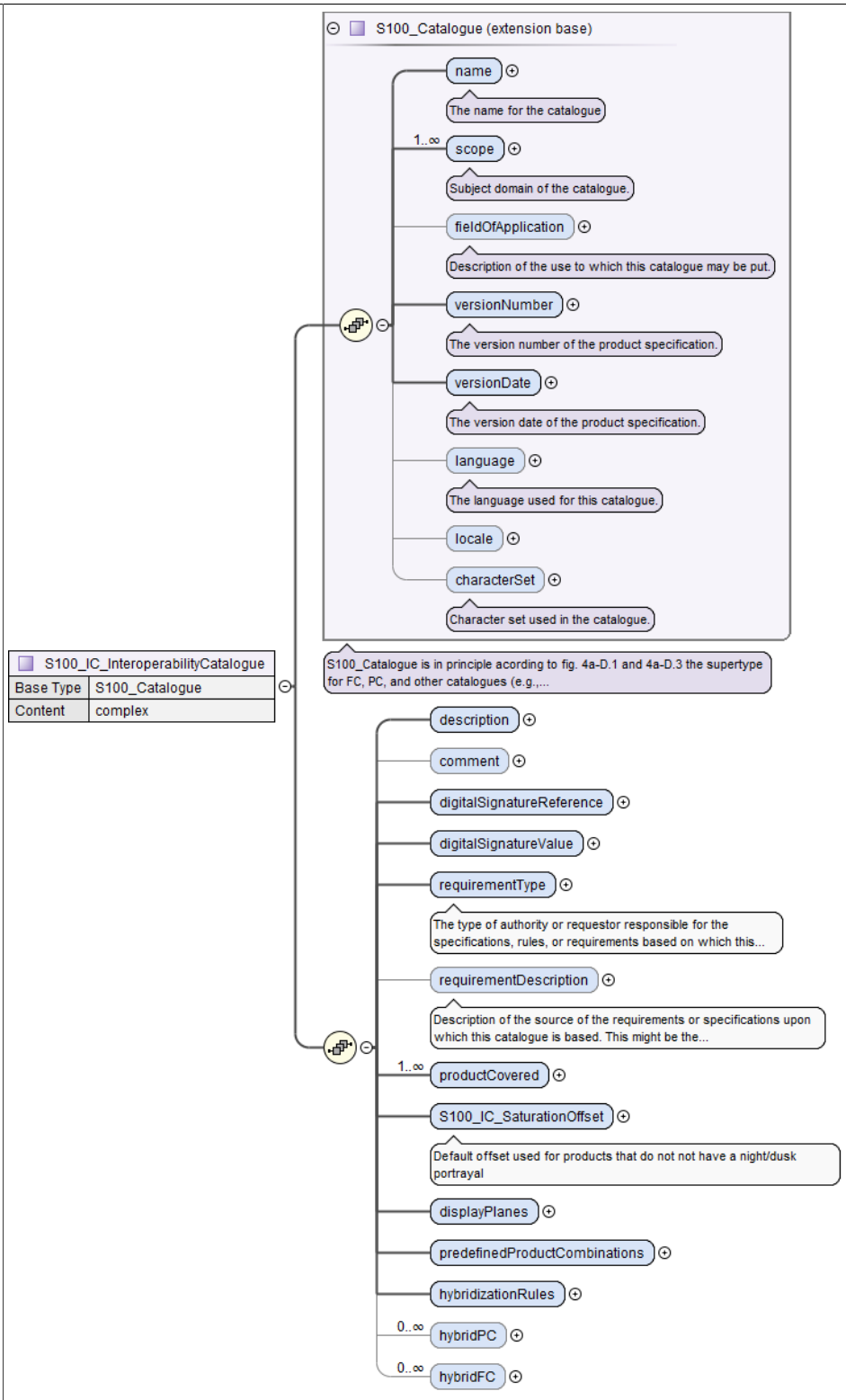
Complex Type S100_IC_SaturationOffset

Annotations	Saturation offsets for dusk and night relative to day palette.
Diagram	
Children	offsetDusk, offsetNight, product

Source	`<xs:complexType name="S100_IC_SaturationOffset">`
	`  <xs:annotation>`
	`  <xs:documentation>Saturation offsets for dusk and night relative to day palette.</`
	`xs:documentation>`
	`  </xs:annotation>`

```
  <xs:sequence>
    <xs:element name="product" type="dataProduct" minOccurs="0" maxOccurs="1">
      <xs:annotation>
        <xs:documentation>used only in S100_IC_PredefinedCombination</xs:documentation>
      </xs:annotation>
    </xs:element>
    <xs:element name="offsetDusk" minOccurs="1" maxOccurs="1">
      <xs:simpleType>
        <xs:restriction base="xs:decimal">
          <xs:minInclusive value="0.0"/>
          <xs:maxInclusive value="1.0"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element name="offsetNight" minOccurs="1" maxOccurs="1">
      <xs:simpleType>
        <xs:restriction base="xs:decimal">
          <xs:minInclusive value="0.0"/>
          <xs:maxInclusive value="1.0"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
  </xs:sequence>
</xs:complexType>
```

Complex Type `S100_IC_InteroperabilityCatalogue`

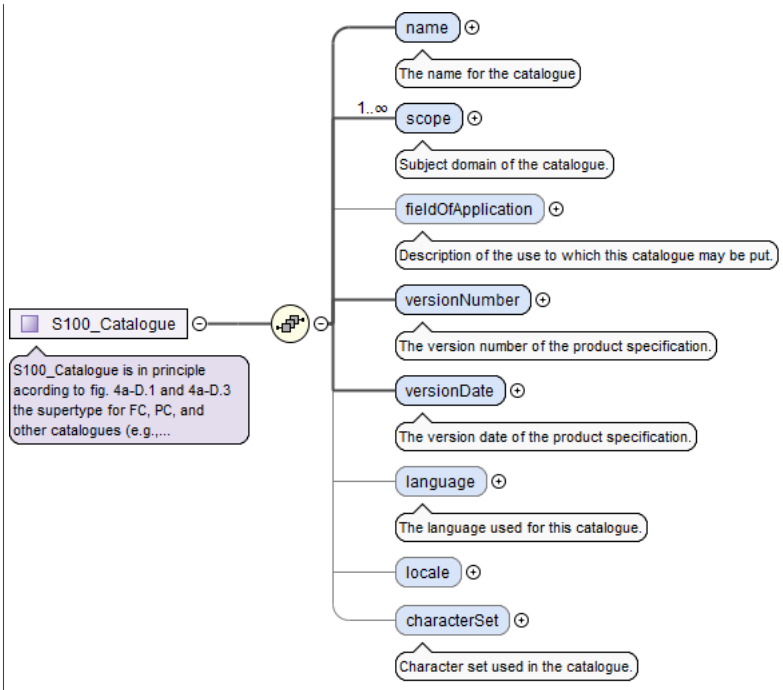
Diagram	
Type	extension of S100_Catalogue
Type hierarchy	• S100_Catalogue • S100_IC_InteroperabilityCatalogue
Children	S100_IC_SaturationOffset, characterSet, comment, description, digitalSignatureReference, digitalSignatureValue, displayPlanes, fieldOfApplication, hybridFC, hybridPC, hybridizationRules, language, locale, name, predefinedProductCombinations, productCovered, requirementDescription, requirementType, scope, versionDate, versionNumber
Source	`<xs:complexType name="S100_IC_InteroperabilityCatalogue">`

```
 <xs:complexContent>
   <xs:extension base="S100_Catalogue">
     <xs:sequence>
       <xs:element name="description" type="xs:string" minOccurs="1" maxOccurs="1"/>
       <xs:element name="comment" type="xs:string" minOccurs="0" maxOccurs="1"/>
       <xs:element name="digitalSignatureReference" type="xs:string" minOccurs="1" maxOccurs="1"/>
       <xs:element name="digitalSignatureValue" type="xs:string" minOccurs="1" maxOccurs="1"/>
       <xs:element name="requirementType" type="requirementType" minOccurs="1" maxOccurs="1">
         <xs:annotation>
           <xs:documentation>The type of authority or requestor responsible for the specifications,
rules, or requirements based on which this catalogue was prepared.</xs:documentation>
         </xs:annotation>
       </xs:element>
       <xs:element name="requirementDescription" type="xs:string" minOccurs="0" maxOccurs="1">
         <xs:annotation>
           <xs:documentation>Description of the source of the requirements or specifications upon
which this catalogue is based. This might be the name of the country, company, OEM, port, pilot,
etc.</xs:documentation>
         </xs:annotation>
       </xs:element>
       <xs:element name="productCovered" type="dataProduct" minOccurs="1" maxOccurs="unbounded"/>
       <xs:element name="S100_IC_SaturationOffset" type="S100_IC_SaturationOffset">
         <xs:annotation>
           <xs:documentation>Default offset used for products that do not not have a night/dusk
portrayal</xs:documentation>
         </xs:annotation>
       </xs:element>
       <xs:element name="displayPlanes">
         <xs:complexType>
           <xs:sequence>
             <xs:element name="S100_IC_DisplayPlane" type="S100_IC_DisplayPlane" minOccurs="1"
maxOccurs="unbounded"/>
           </xs:sequence>
         </xs:complexType>
         <xs:key name="DPID">
           <xs:annotation>
             <xs:documentation>each display plane must have a unique identifier</xs:documentation>
           </xs:annotation>
           <xs:selector xpath="S100_IC_DisplayPlane"/>
           <xs:field xpath="identifier"/>
         </xs:key>
         <xs:key name="DPNM">
           <xs:annotation>
             <xs:documentation>each display plane must have a unique name</xs:documentation>
           </xs:annotation>
           <xs:selector xpath="S100_IC_DisplayPlane"/>
           <xs:field xpath="name"/>
         </xs:key>
         <xs:key name="DP_FCODE">
           <xs:annotation>
             <xs:documentation>each featureCode+product combination may appear in only 1 display
plane</xs:documentation>
           </xs:annotation>
           <xs:selector xpath="S100_IC_DisplayPlane/features/S100_IC_Feature"/>
           <xs:field xpath="product"/>
           <xs:field xpath="featureCode"/>
         </xs:key>
         <xs:key name="DP_FID">
           <xs:annotation>
             <xs:documentation>each feature in a display plane has a unique id</xs:documentation>
           </xs:annotation>
           <xs:selector xpath="S100_IC_DisplayPlane/features/S100_IC_Feature"/>
           <xs:field xpath="@id"/>
         </xs:key>
       </xs:element>
       <xs:element name="predefinedProductCombinations">
         <xs:complexType>
           <xs:sequence>
             <xs:element name="S100_IC_PredefinedCombination" type="S100_IC_PredefinedCombination"
minOccurs="0" maxOccurs="unbounded"/>
           </xs:sequence>
         </xs:complexType>
         <xs:key name="PDCID">
           <xs:annotation>
             <xs:documentation>Each PDC must have a unique identifier</xs:documentation>
           </xs:annotation>
           <xs:selector xpath="S100_IC_PredefinedCombination"/>
           <xs:field xpath="identifier"/>
         </xs:key>
         <xs:key name="PDCNM">
           <xs:annotation>
             <xs:documentation>Each PDC must have a unique name</xs:documentation>
           </xs:annotation>
```

```
            <xs:selector xpath="S100_IC_PredefinedCombination"/>
            <xs:field xpath="name"/>
          </xs:key>
        </xs:element>
        <xs:element name="hybridizationRules">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="S100_IC_SimpleRule" type="S100_IC_SimpleRule" minOccurs="0"
 maxOccurs="unbounded"/>
              <xs:element name="S100_IC_ThematicRule" type="S100_IC_ThematicRule" minOccurs="0"
 maxOccurs="unbounded"/>
              <xs:element name="S100_IC_CompleteRule" type="S100_IC_CompleteRule" minOccurs="0"
 maxOccurs="unbounded"/>
            </xs:sequence>
          </xs:complexType>
          <xs:key name="RULE_IDENTIFIER">
            <xs:annotation>
              <xs:documentation>Each rule must have a unique ruleIdentifier</xs:documentation>
            </xs:annotation>
            <xs:selector xpath="*"/>
            <xs:field xpath="ruleIdentifier"/>
          </xs:key>
        </xs:element>
        <xs:element name="hybridPC" minOccurs="0" maxOccurs="unbounded">
          <xs:complexType>
            <xs:annotation>
              <xs:documentation>Reference to the hybrid portrayals catalogue</xs:documentation>
            </xs:annotation>
            <xs:sequence>
              <xs:element name="S100_IC_HybridPC" type="xs:anyURI" minOccurs="0"
 maxOccurs="unbounded"/>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
        <xs:element name="hybridFC" minOccurs="0" maxOccurs="unbounded">
          <xs:complexType>
            <xs:annotation>
              <xs:documentation>Reference to the hybrid features catalogue</xs:documentation>
            </xs:annotation>
            <xs:sequence>
              <xs:element name="S100_IC_HybridFC" type="xs:anyURI" minOccurs="0"
 maxOccurs="unbounded"/>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

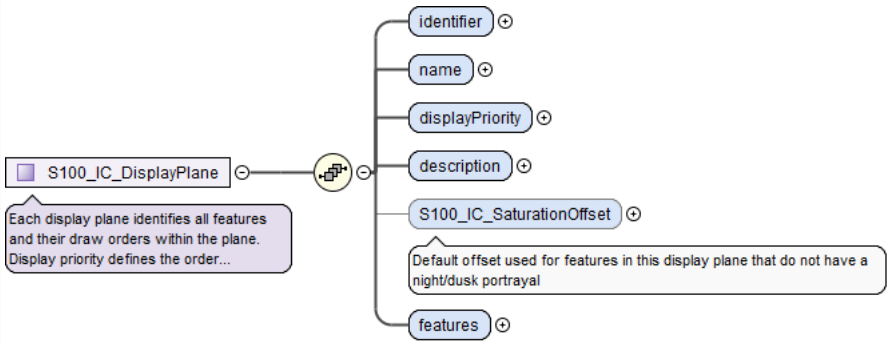
Complex Type `S100_Catalogue`

Annotations	S100_Catalogue is in principle acording to fig. 4a-D.1 and 4a-D.3 the supertype for FC, PC, and other catalogues (e.g., CRS Catalogue) and does not play a role in the Exchange Catalogue.

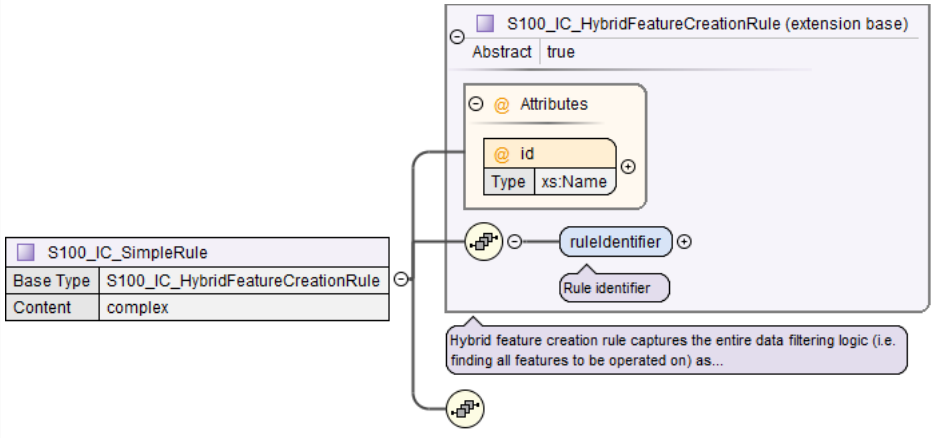
Diagram	
Children	characterSet, fieldOfApplication, language, locale, name, scope, versionDate, versionNumber

Source	<pre><xs:complexType name="S100_Catalogue">
	  <xs:annotation>
	    <xs:documentation>S100_Catalogue is in principle acording to fig. 4a-D.1 and 4a-D.3 the
	supertype for FC, PC, and other catalogues (e.g., CRS Catalogue) and does not play a role in the
	Exchange Catalogue.</xs:documentation>
	  </xs:annotation>
	  <xs:sequence>
	    <xs:element name="name" type="xs:string" minOccurs="1" maxOccurs="1">
	      <xs:annotation>
	        <xs:documentation>The name for the catalogue</xs:documentation>
	      </xs:annotation>
	    </xs:element>
	    <xs:element name="scope" type="xs:string" minOccurs="1" maxOccurs="unbounded">
	      <xs:annotation>
	        <xs:documentation>Subject domain of the catalogue.</xs:documentation>
	      </xs:annotation>
	    </xs:element>
	    <xs:element name="fieldOfApplication" type="xs:string" minOccurs="0" maxOccurs="1">
	      <xs:annotation>
	        <xs:documentation>Description of the use to which this catalogue may be put.</
	xs:documentation>
	      </xs:annotation>
	    </xs:element>
	    <xs:element name="versionNumber" type="xs:string" minOccurs="1" maxOccurs="1">
	      <xs:annotation>
	        <xs:documentation>The version number of the product specification.</xs:documentation>
	      </xs:annotation>
	    </xs:element>
	    <xs:element name="versionDate" type="gco:Date_Type" minOccurs="1" maxOccurs="1">
	      <xs:annotation>
	        <xs:documentation>The version date of the product specification.</xs:documentation>
	      </xs:annotation>
	    </xs:element>
	    <xs:element name="language" type="xs:string" minOccurs="0" maxOccurs="1">
	      <xs:annotation>
	        <xs:documentation>The language used for this catalogue.</xs:documentation>
	      </xs:annotation>
	    </xs:element>
	    <xs:element name="locale" type="gmd:PT_Locale_Type" minOccurs="0" maxOccurs="1"/>
	    <xs:element name="characterSet" type="gmd:MD_CharacterSetCode_PropertyType" minOccurs="0"
	maxOccurs="1">
	      <xs:annotation>
	        <xs:documentation>Character set used in the catalogue.</xs:documentation>
	      </xs:annotation>
	    </xs:element>
	  </xs:sequence>
	</xs:complexType></pre>

Complex Type S100_IC_DisplayPlane

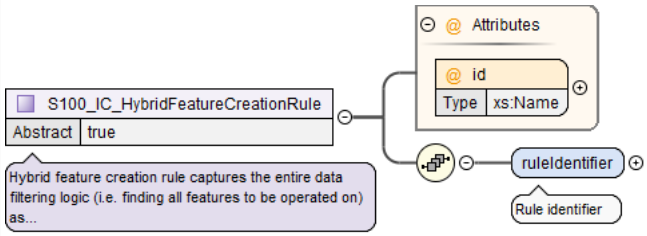
Annotations	Each display plane identifies all features and their draw orders within the plane. Display priority defines the order in which display planes are rendered.
Diagram	
Children	S100_IC_SaturationOffset, description, displayPriority, features, identifier, name
Source	<xs:complexType name="S100_IC_DisplayPlane"> <xs:annotation> <xs:documentation>Each display plane identifies all features and their draw orders within the plane. Display priority defines the order in which display planes are rendered.</xs:documentation> </xs:annotation> <xs:sequence> <xs:element name="identifier" type="xs:integer" minOccurs="1" maxOccurs="1"/> <xs:element name="name" type="xs:string" minOccurs="1" maxOccurs="1"/> <xs:element name="displayPriority" type="xs:integer" minOccurs="1" maxOccurs="1"/> <xs:element name="description" type="xs:string" minOccurs="1" maxOccurs="1"/> <xs:element name="S100_IC_SaturationOffset" type="S100_IC_SaturationOffset" minOccurs="0" maxOccurs="1"> <xs:annotation> <xs:documentation>Default offset used for features in this display plane that do not have a night/dusk portrayal</xs:documentation> </xs:annotation> </xs:element> <xs:element name="features"> <xs:complexType> <xs:sequence> <xs:element name="S100_IC_Feature" type="S100_IC_Feature" minOccurs="1" maxOccurs="unbounded"/> </xs:sequence> </xs:complexType> </xs:element> </xs:sequence> </xs:complexType>

Complex Type S100_IC_SimpleRule

Diagram	
Type	extension of S100_IC_HybridFeatureCreationRule
Type hierarchy	• S100_IC_HybridFeatureCreationRule • S100_IC_SimpleRule
Children	ruleIdentifier

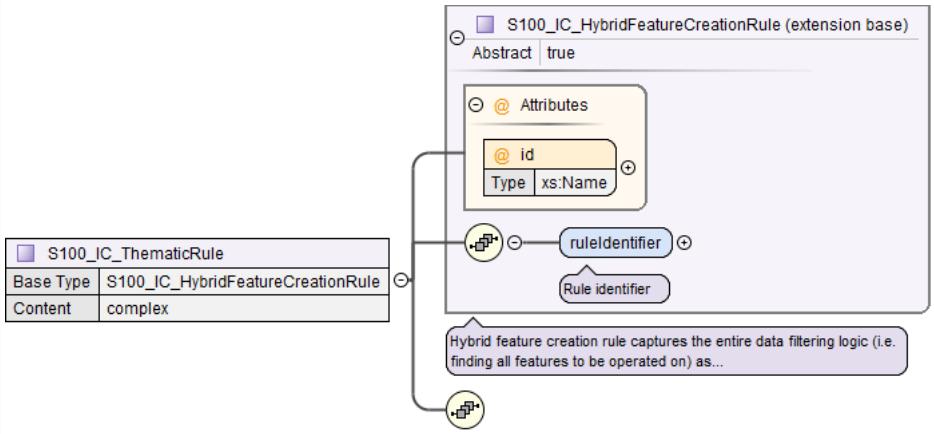
Attributes	**QName**	**Type**	**Use**	
	id	xs:Name	required	
Source	<xs:complexType name="S100_IC_SimpleRule"> <xs:complexContent> <xs:extension base="S100_IC_HybridFeatureCreationRule"> <xs:sequence/> </xs:extension> </xs:complexContent> </xs:complexType>			

Complex Type S100_IC_HybridFeatureCreationRule

Annotations	Hybrid feature creation rule captures the entire data filtering logic (i.e. finding all features to be operated on) as well as the entire processing logic. This functionality needs to be worked out but OGC Filter seems to be the ideal option for defining data filtering logic. Overall, the output from execution of HybridFeatureCreationRule is a set of hybrid features for which predefined FC, PC and DP definitions already exist so such feature will be suitable for passing to the portrayal engine for processing just like any other S100 features.
Diagram	
Properties	abstract: true
Children	ruleIdentifier

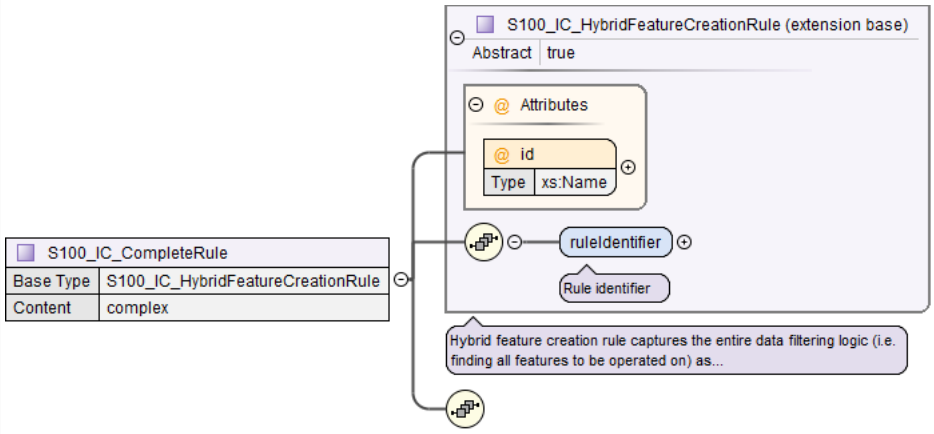
Attributes	**QName**	**Type**	**Use**	
	id	xs:Name	required	
Source	<xs:complexType name="S100_IC_HybridFeatureCreationRule" abstract="true"> <xs:annotation> <xs:documentation>Hybrid feature creation rule captures the entire data filtering logic (i.e. finding all features to be operated on) as well as the entire processing logic. This functionality needs to be worked out but OGC Filter seems to be the ideal option for defining data filtering logic. Overall, the output from execution of HybridFeatureCreationRule is a set of hybrid features for which predefined FC, PC and DP definitions already exist so such feature will be suitable for passing to the portrayal engine for processing just like any other S100 features.</xs:documentation> </xs:annotation> <xs:sequence> <xs:element name="ruleIdentifier" type="xs:string" minOccurs="1" maxOccurs="1"> <xs:annotation> <xs:documentation>Rule identifier</xs:documentation> </xs:annotation> </xs:element> </xs:sequence> <xs:attribute name="id" type="xs:Name" use="required"/> </xs:complexType>			

Complex Type S100_IC_ThematicRule

Diagram	
Type	extension of S100_IC_HybridFeatureCreationRule
Type hierarchy	• S100_IC_HybridFeatureCreationRule • S100_IC_ThematicRule
Children	ruleIdentifier
Attributes	**QName** | **Type** | **Use** **id** | xs:Name | required

Source	`<xs:complexType name="S100_IC_ThematicRule">`
	`  <xs:complexContent>`
	`  <xs:extension base="S100_IC_HybridFeatureCreationRule">`
	`  <xs:sequence/>`
	`  </xs:extension>`
	`  </xs:complexContent>`
	`</xs:complexType>`

Complex Type S100_IC_CompleteRule

Diagram	
Type	extension of S100_IC_HybridFeatureCreationRule
Type hierarchy	• S100_IC_HybridFeatureCreationRule • S100_IC_CompleteRule
Children	ruleIdentifier
Attributes	**QName** | **Type** | **Use** **id** | xs:Name | required

Source	`<xs:complexType name="S100_IC_CompleteRule">`
	`  <xs:complexContent>`
	`  <xs:extension base="S100_IC_HybridFeatureCreationRule">`
	`  <xs:sequence/>`
	`  </xs:extension>`
	`  </xs:complexContent>`

	`</xs:complexType>`

Attribute(s)

Attribute `S100_IC_Feature / @id`

Type	xs:Name
Properties	use: required
Source	`<xs:attribute name="id" type="xs:Name" use="required"/>`

Attribute `S100_IC_SuppressedFeatureLayer / @id`

Type	xs:Name
Properties	use: required
Source	`<xs:attribute name="id" type="xs:Name" use="required"/>`

Attribute `S100_IC_FeatureDerivation / @id`

Type	xs:Name
Properties	use: required
Source	`<xs:attribute name="id" type="xs:Name" use="required"/>`

Attribute `S100_IC_HybridFeatureCreationRule / @id`

Type	xs:Name
Properties	use: required
Source	`<xs:attribute name="id" type="xs:Name" use="required"/>`