Model Report

S-121 Maritime Limits and Boundaries

Version 1.0 • Proposed

Date/Time Generated: 01/12/2016 2:11:37 PM

Author: crossover

EA Repository : C:\users\crossover\Desktop\My Mac Desktop\S121Work\S121 Project Team Meeting_NewYork\Model\MLB ISO TC211 2013-02-05 + IHO 01Dec16.eap

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Version 1.0 Phase 1.0 Proposed
CHS created on 13/02/2015. Last modified 01/12/2016

1.1 Examples

Package in package 'S-121 Maritime Limits and Boundaries'

Examples
Version 1.0 Phase 1.0 Proposed
crossover created on 27/11/2016. Last modified 27/11/2016

1.1.1Example1:TS define by a Zone

Package in package 'Examples'

Example1:TS define by a Zone
Version 1.0 Phase 1.0 Proposed
crossover created on 26/11/2016. Last modified 01/12/2016

1.1.1.1 Example1: TS define by a Zone diagram

Object diagram in package 'Example1:TS define by a Zone'

Example1: TS define by a Zone
Version 1.0
crossover created on 26/11/2016. Last modified 01/12/2016

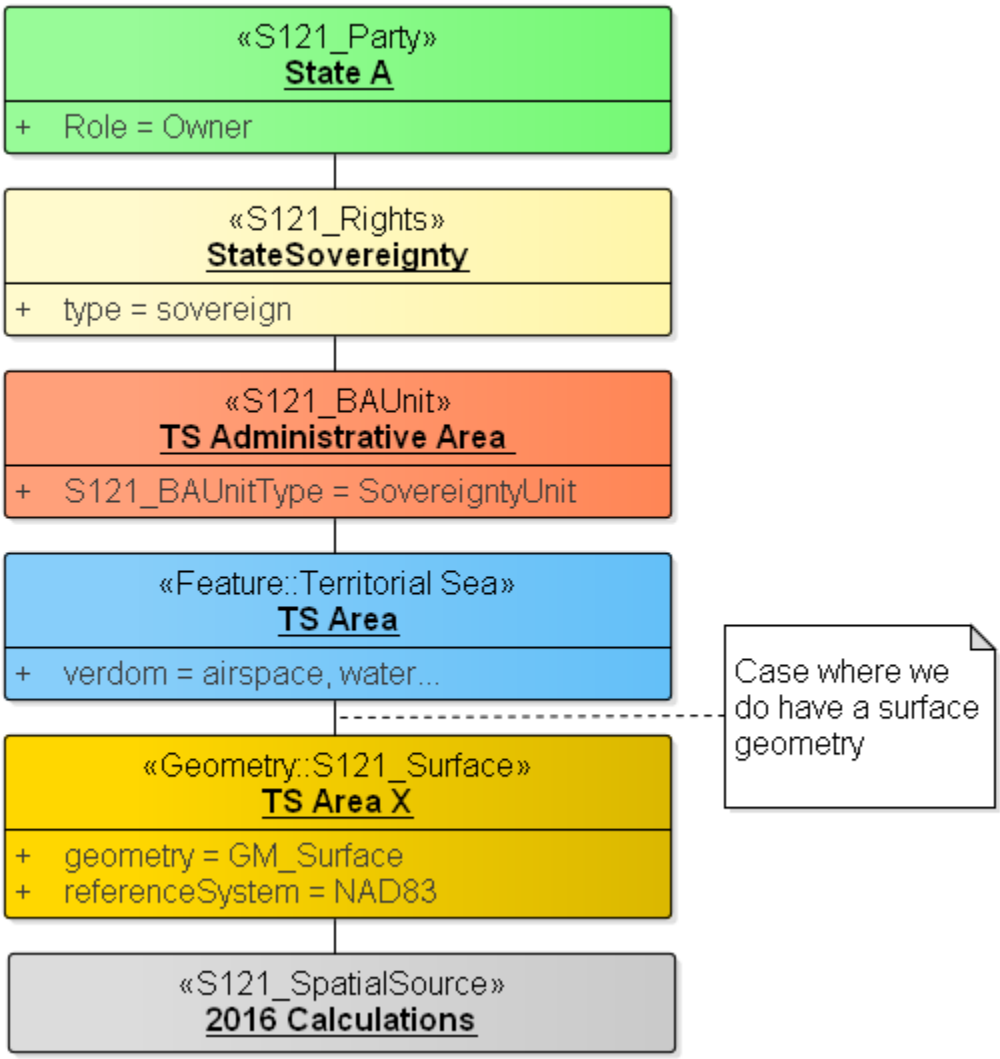

Figure 1: Example1: TS define by a Zone

1.1.2Example2: Conceptual TS defined by its Outer Limit

Package in package 'Examples'

Example2: Conceptual TS defined by its Outer Limit
Version 1.0 Phase 1.0 Proposed
crossover created on 26/11/2016. Last modified 01/12/2016

1.1.2.1 Example2:Conceptual TS defined by its Outer Limit diagram

Object diagram in package 'Example2: Conceptual TS defined by its Outer Limit'

Example2:Conceptual TS defined by its Outer Limit
Version 1.0
crossover created on 26/11/2016. Last modified 01/12/2016

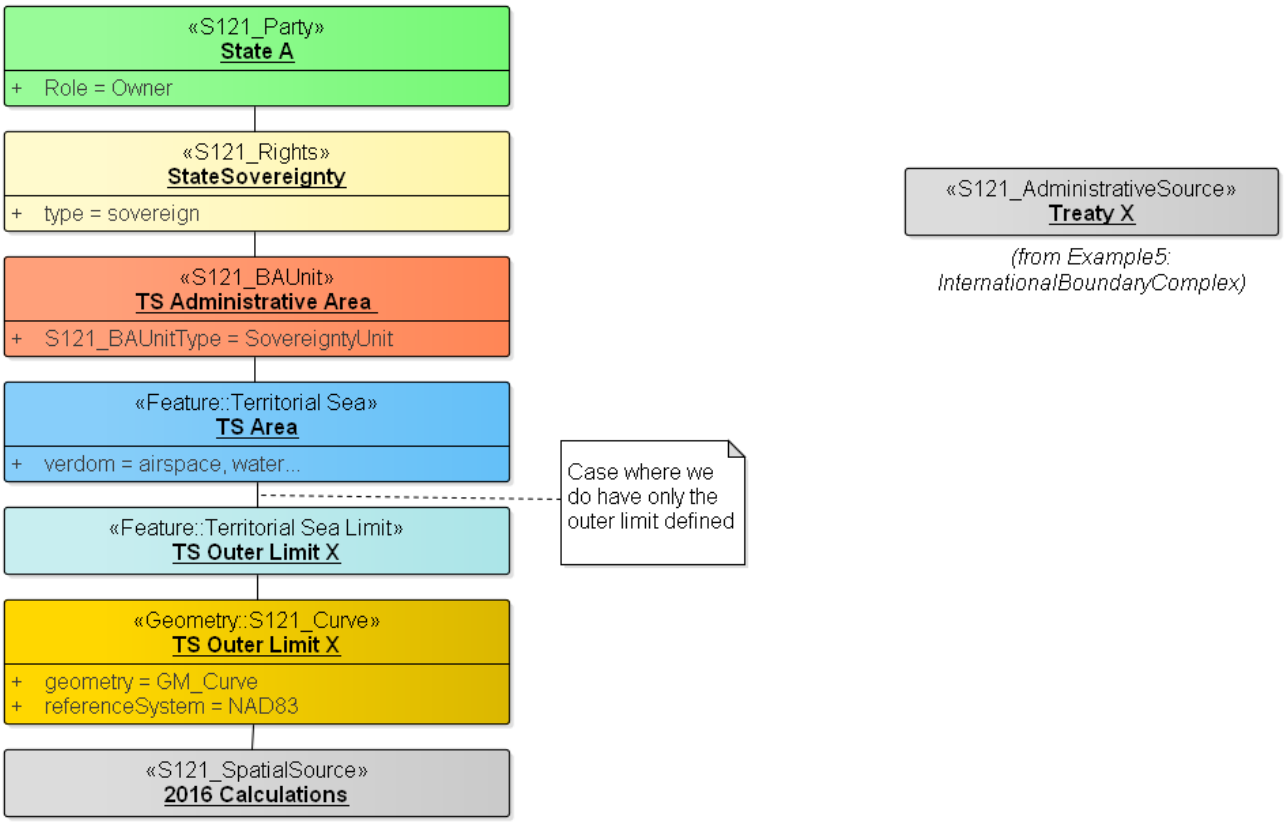

Figure 2: Example2:Conceptual TS defined by its Outer Limit

1.1.3Example3:Conceptual TS defined a point Island

Package in package 'Examples'

Example3:Conceptual TS defined a point Island
Version 1.0 Phase 1.0 Proposed
crossover created on 26/11/2016. Last modified 01/12/2016

1.1.3.1 Example3: Conceptual TS defined a point Island diagram

Object diagram in package 'Example3:Conceptual TS defined a point Island'

Example3: Conceptual TS defined a point Island
Version 1.0
crossover created on 26/11/2016. Last modified 01/12/2016

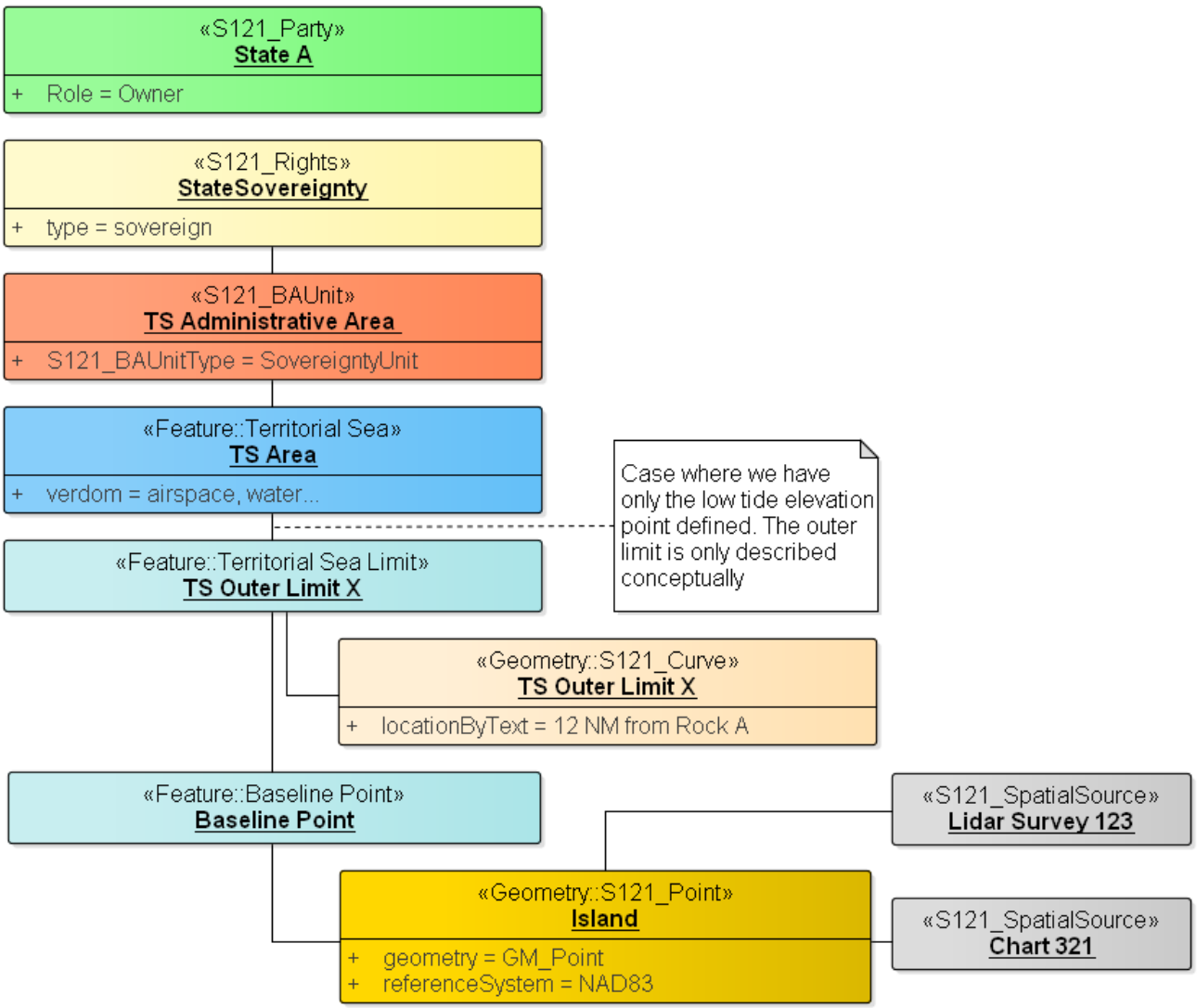

Figure 3: Example3: Conceptual TS defined a point Island

1.1.4Example4:TSL segment and Treaty source

Package in package 'Examples'

Example4:TSL segment and Treaty source
Version 1.0 Phase 1.0 Proposed
crossover created on 27/11/2016. Last modified 01/12/2016

1.1.4.1 Example4: TSL segment and Treaty source diagram

Object diagram in package 'Example4:TSL segment and Treaty source'

Example4: TSL segment and Treaty source
Version 1.0
crossover created on 27/11/2016. Last modified 01/12/2016

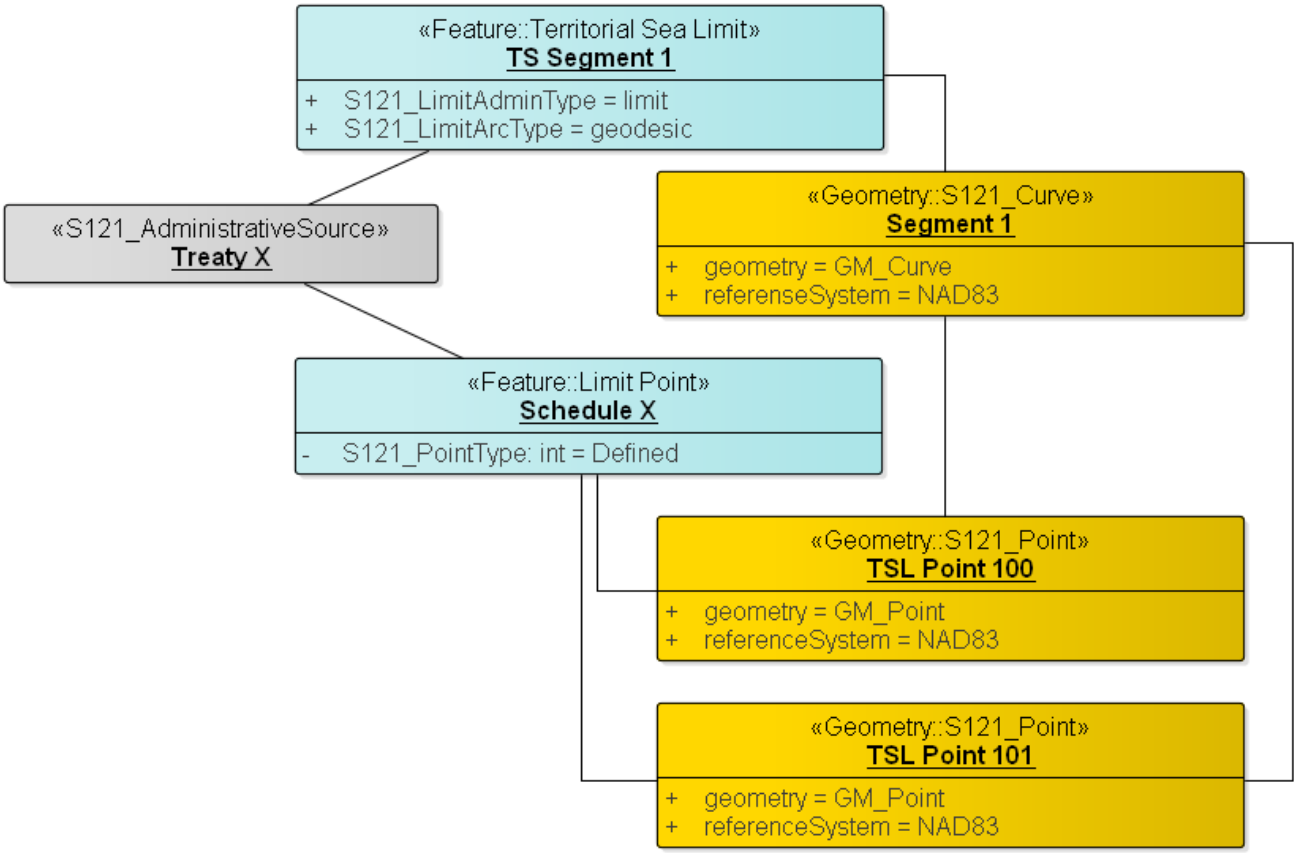

Figure 4: Example4: TSL segment and Treaty source

1.1.5Example5:InternationalBoundaryComplex

Package in package 'Examples'

Example5:InternationalBoundaryComplex
Version 1.0 Phase 1.0 Proposed
crossover created on 27/11/2016. Last modified 01/12/2016

1.1.5.1 Example5: InternationalBoundaryComplex diagram

Object diagram in package 'Example5:InternationalBoundaryComplex'

Example5: InternationalBoundaryComplex
Version 1.0
crossover created on 27/11/2016. Last modified 01/12/2016

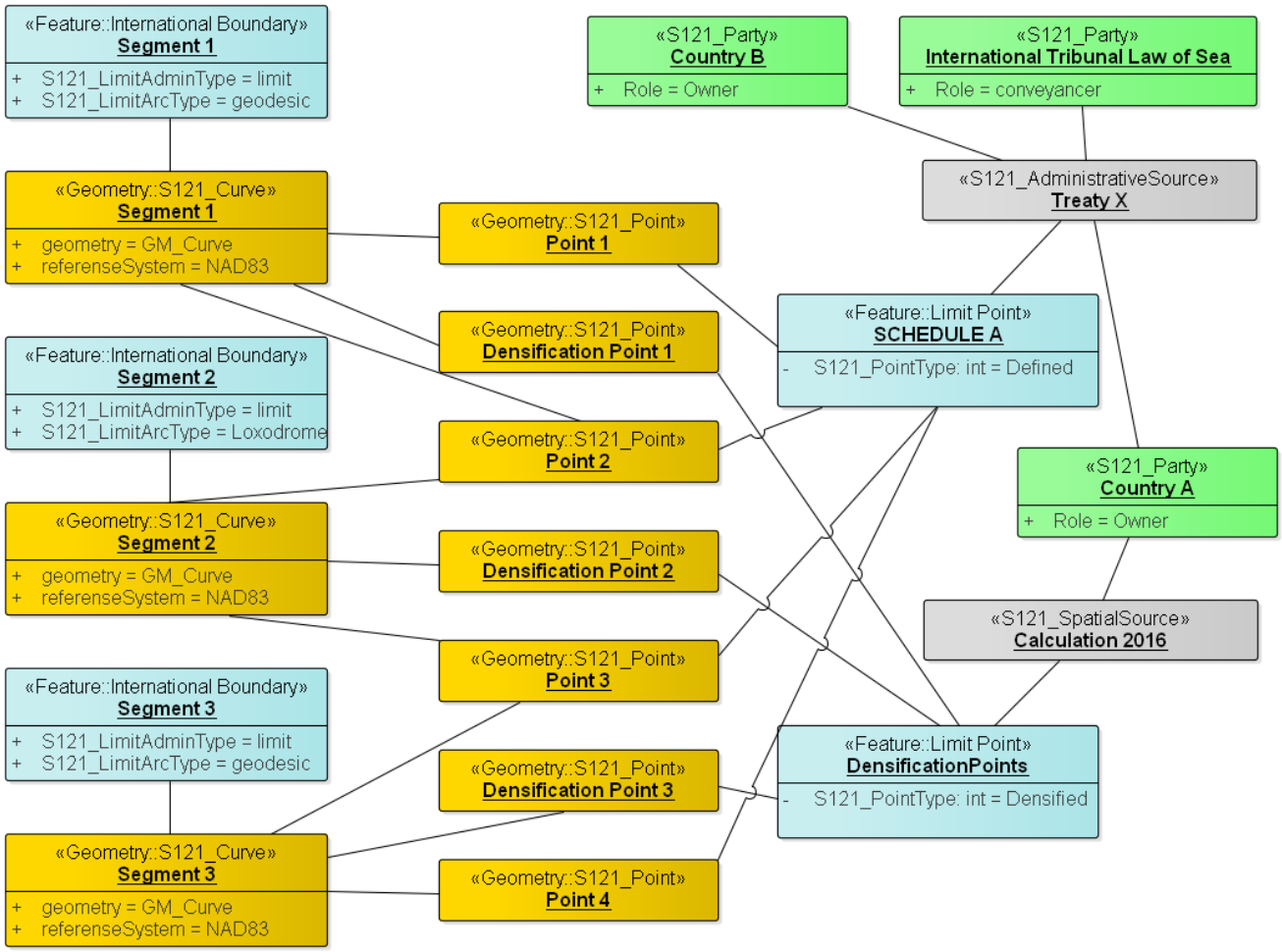

Figure 5: Example5: InternationalBoundaryComplex

1.1.6Example6:Conceptual TSL defined by 2 Points

Package in package 'Examples'

Example6:Conceptual TSL defined by 2 Points
Version 1.0 Phase 1.0 Proposed
crossover created on 27/11/2016. Last modified 01/12/2016

1.1.6.1 Example 6: Conceptual TSL defined by 2 Points diagram

Object diagram in package 'Example6:Conceptual TSL defined by 2 Points'

Example 6: Conceptual TSL defined by 2 Points
Version 1.0
crossover created on 27/11/2016. Last modified 01/12/2016

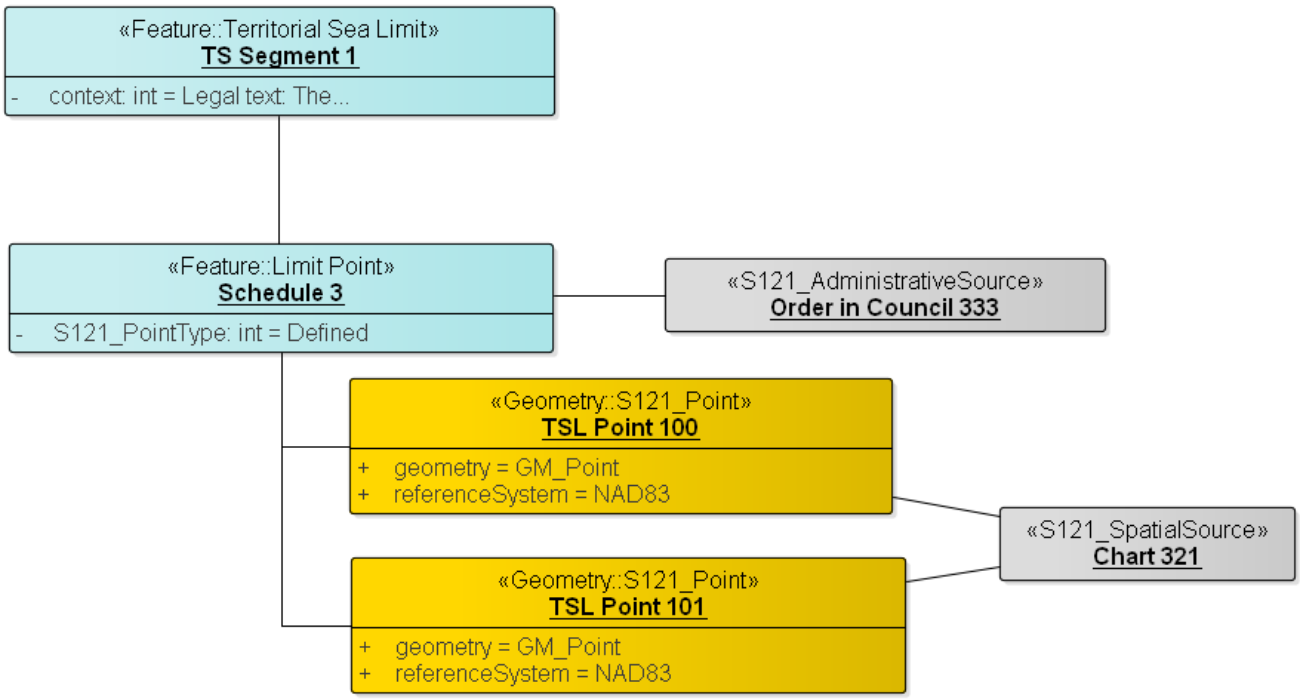

Figure 6: Example 6: Conceptual TSL defined by 2 Points

1.1.7Example7:Conceptual TSL defined by Text

Package in package 'Examples'

Example7:Conceptual TSL defined by Text
Version 1.0 Phase 1.0 Proposed
crossover created on 27/11/2016. Last modified 01/12/2016

1.1.7.1 Example7: Conceptual TSL defined by Text diagram

Object diagram in package 'Example7:Conceptual TSL defined by Text'

Example7: Conceptual TSL defined by Text
Version 1.0
crossover created on 27/11/2016. Last modified 01/12/2016

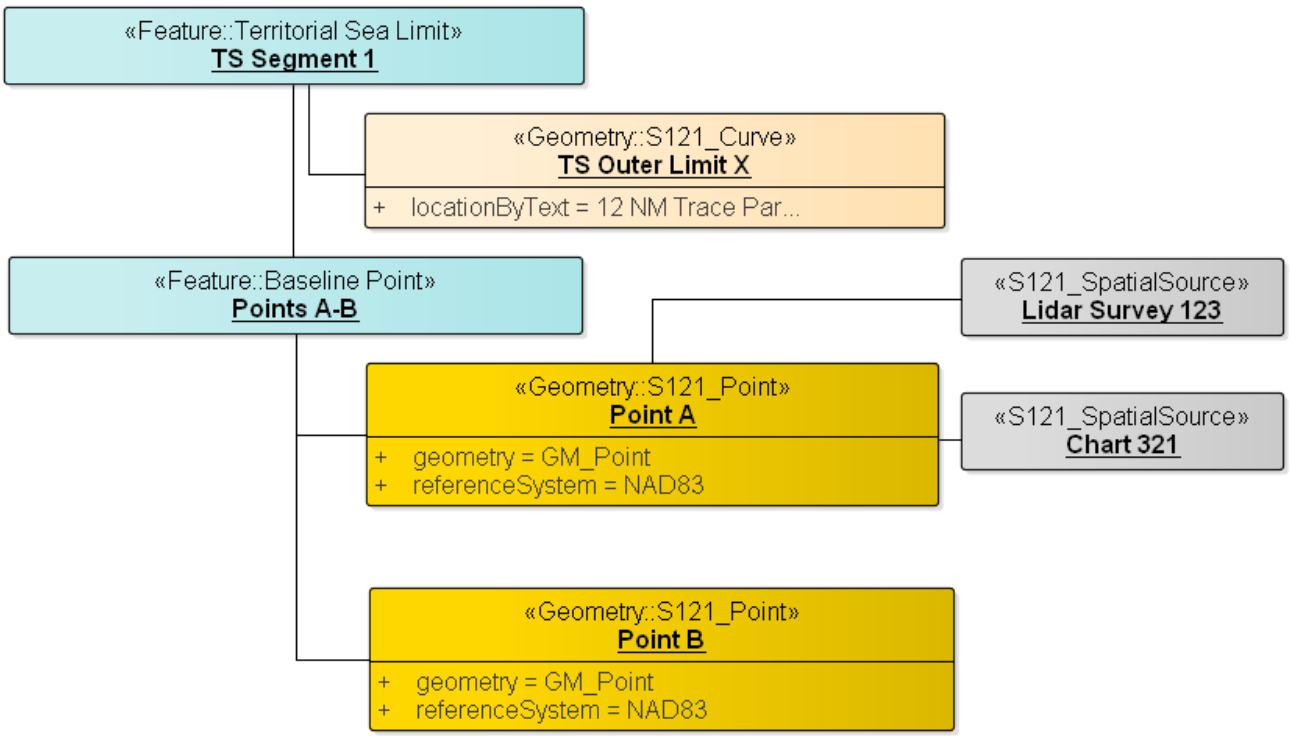

Figure 7: Example7: Conceptual TSL defined by Text

1.2 S121_Register

Package in package 'S-121 Maritime Limits and Boundaries'

S121_Register
Version 1.0 Phase 1.0 Proposed
CDO'Brien created on 15/09/2015. Last modified 27/11/2016

1.2.1Fig 09 S100 Register Model diagram

Class diagram in package 'S121_Register'

S100 Part 2-7.1 Figure 2-4

Fig 09 S100 Register Model
Version 2.0
TSMAD created on 27/03/2015. Last modified 17/09/2015

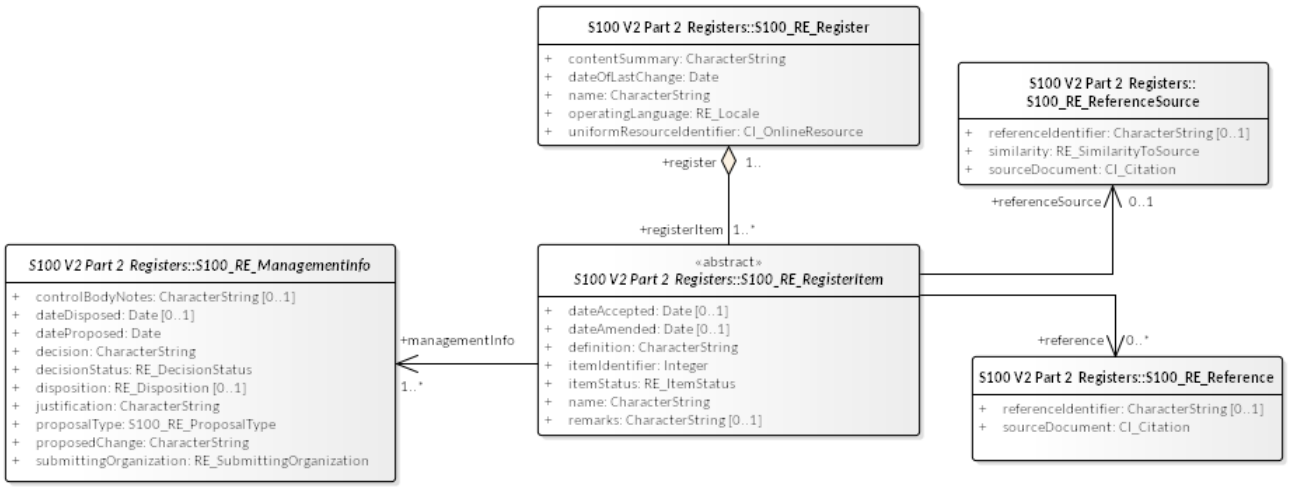

Figure 8: Fig 09 S100 Register Model

1.2.2S100_RE_ManagementInfo

Class in package 'S100 V2 Part 2 Registers'

The class S100_RE_ManagementInfo specifies the management record of a register item.

S100_RE_ManagementInfo amalgamates the implementation of the ISO 19135 classes: RE_DecisionStatus, S100_RE_ProposalType, S100_RE_SubmittingOrganization, RE_ItemStatus and S100_RE_Disposition.

S100_RE_ManagementInfo
Version 1.0 Phase 2.0 Proposed
IHO TSMAD created on 18/12/2014. Last modified 17/09/2015

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S100_RE_ManagementInfo to RE_ProposalManagementInformation
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

INCOMING STRUCTURAL RELATIONSHIPS

Realization from S121_RE_ManagementInfo to S100_RE_ManagementInfo

[Direction is 'Source -> Destination'.]

Realization from S121_RE_ManagementInfo to S100_RE_ManagementInfo

[Direction is 'Source -> Destination'.]

CONNECTORS

Dependency «trace» Source -> Destination
From: S100_RE_ManagementInfo : Class, Public
To: S100_RE_ManagementInfo : Class, Public

ATTRIBUTES

controlBodyNotes : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

supplementary management information

[Is static False. Containment is Not Specified.]

dateDisposed : Date Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Date the proposal was adjudicated

[Is static False. Containment is Not Specified.]

dateProposed : Date Public

Date the proposal was made.

[Is static False. Containment is Not Specified.]

decision : CharacterString Public

decision comments

[Is static False. Containment is Not Specified.]

decisionStatus : RE_DecisionStatus Public

The current status of a proposal

[Is static False. Containment is Not Specified.]

disposition : RE_Disposition Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Provides values for describing the disposition of a proposal to add or modify a register item.

[Is static False. Containment is Not Specified.]

justification : CharacterString Public

Primary reason for the proposal including how it is proposed to be used

[Is static False. Containment is Not Specified.]

ATTRIBUTES

proposalType : S100_RE_ProposalType Public

The type of the proposal.

[Is static False. Containment is Not Specified.]

proposedChange : CharacterString Public

The text of the proposed change

[Is static False. Containment is Not Specified.]

submittingOrganization : RE_SubmittingOrganization Public

The proposal's sponsor.

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination)

Sets of information describing the management of the item in the register

Source: Public (Class) S100_RE_RegisterItem «abstract»

Target: Public managementInfo (Class) S100_RE_ManagementInfo
Cardinality: [1..*]

Association (direction: Source -> Destination)

Source: Public (Class) S100_CD_RegisterItem

Target: Public managementInfo (Class) S100_RE_ManagementInfo
Cardinality: [1..*]

1.2.3S100_RE_Reference

Class in package 'S100 V2 Part 2 Registers'

The class S100_RE_Reference specifies information about the source and/or lineage of a specific register item derived from an external document or register.

S100_RE_Reference implements ISO 19135 RE_Reference

S100_RE_Reference
Version 1.0 Phase 2.0 Proposed
IHO TSMAD created on 18/12/2014. Last modified 15/09/2015

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S100_RE_Reference to RE_Reference

[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

INCOMING STRUCTURAL RELATIONSHIPS

Realization from S121_FCD_Reference to S100_RE_Reference

[Direction is 'Source -> Destination'.]

Realization from S121_RE_Reference to S100_RE_Reference

[Direction is 'Source -> Destination'.]

CONNECTORS

Dependency «trace» Source -> Destination
From: S100_RE_Reference : Class, Public
To: S100_RE_Reference : Class, Public

ATTRIBUTES

referenceIdentifier : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

An identifier of the place in the source document that is referenced

[Is static False. Containment is Not Specified.]

sourceDocument : CI_Citation Public

The source document.

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination)

Source: Public (Class) S100_CD_RegisterItem

Target: Public reference (Class)
S100_RE_Reference
Cardinality: [0..*]

Association (direction: Source -> Destination)

Reference to other relevant standards or documents

Source: Public (Class) S100_RE_RegisterItem «abstract»

Target: Public reference (Class)
S100_RE_Reference
Cardinality: [0..*]

1.2.4S100_RE_ReferenceSource

Class in package 'S100 V2 Part 2 Registers'

The class S100_RE_ReferenceSource specifies information about the source of a register item specifications taken from an external document or register.

S100_RE_ReferenceSource implements ISO 19135 RE_ReferenceSource

S100_RE_ReferenceSource
Version 1.0 Phase 2.0 Proposed
IHO TSMAD created on 18/12/2014. Last modified 15/09/2015

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S100_RE_ReferenceSource to RE_ReferenceSource
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from S121_FC_ReferenceSource to S100_RE_ReferenceSource
[Direction is 'Source -> Destination'.]

Realization from S121_RE_ReferenceSource to S100_RE_ReferenceSource
[Direction is 'Source -> Destination'.]

CONNECTORS

Dependency «trace» Source -> Destination
From: S100_RE_ReferenceSource : Class, Public
To: S100_RE_ReferenceSource : Class, Public

ATTRIBUTES

referenceIdentifier : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

An identifier of the place in the source document that is referenced
[Is static False. Containment is Not Specified.]

similarity : RE_SimilarityToSource Public

Indicates how the definition is related to the source document
[Is static False. Containment is Not Specified.]

sourceDocument : CI_Citation Public

The source document.
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination)

The source information the item definition was taken from.

Source: Public (Class) S100_RE_RegisterItem «abstract»

Target: Public referenceSource (Class) S100_RE_ReferenceSource
Cardinality: [0..1]

Association (direction: Source -> Destination)

ASSOCIATIONS	
Source: Public (Class) S100_CD_RegisterItem	Target: Public referenceSource (Class) S100_RE_ReferenceSource Cardinality: [0..1]

1.2.5S100_RE_Register

Class in package 'S100 V2 Part 2 Registers'

The class S100_RE_Register specifies information about the register itself.

S100_RE_Register implements ISO 19135 RE_Register

S100_RE_Register
Version 2.0 Phase 2.0 Proposed
IHO TSMAD created on 18/12/2014. Last modified 16/09/2015

CONSTRAINTS

Invariant. count(self.version +self.dateOfLastChange) >= 1
[Proposed, Weight is 0.]

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S100_RE_Register to RE_Register
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from S121_FCD_Register to S100_RE_Register
[Direction is 'Source -> Destination'.]

Aggregation from «abstract» S100_RE_RegisterItem to S100_RE_Register
The items of the register
[Direction is 'Source -> Destination'.]

Realization from S121_RE_Register to S100_RE_Register
[Direction is 'Source -> Destination'.]

Aggregation from S100_CD_RegisterItem to S100_RE_Register
[Direction is 'Source -> Destination'.]

CONNECTORS

Dependency «trace» Source -> Destination
From: S100_RE_Register : Class, Public
To: S100_RE_Register : Class, Public

ATTRIBUTES

ATTRIBUTES

contentSummary : CharacterString Public

Summary of the content

[Is static False. Containment is Not Specified.]

dateOfLastChange : Date Public

The date when the last change was made to this register

[Is static False. Containment is Not Specified.]

name : CharacterString Public

The name of the register, unique within the register

[Is static False. Containment is Not Specified.]

operatingLanguage : RE_Locale Public

The language used in this register

[Is static False. Containment is Not Specified.]

uniformResourceIdentifier : CI_OnlineResource Public

The link to the interface of the register in the Internet

[Is static False. Containment is Not Specified.]

1.2.6S100_RE_RegisterItem

Class «abstract» in package 'S100 V2 Part 2 Registers'

The class S100_RE_RegisterItem carries the characteristics that are common to all types of registered items. Domain specific extensions may be added in the appropriate part of S-100 e.g. Part 3a – Feature Concept Dictionary.

S100_RE_RegisterItem implements ISO 19135 RE_RegisterItem

S100_RE_RegisterItem
Version 1.0 Phase 2.0 Proposed
IHO TSMAD created on 18/12/2014. Last modified 17/09/2015

OUTGOING STRUCTURAL RELATIONSHIPS

Aggregation from «abstract» S100_RE_RegisterItem to S100_RE_Register
The items of the register

[Direction is 'Source -> Destination'.]

Realization from «abstract» S100_RE_RegisterItem to RE_RegisterItem

[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from S100_CD_RegisterItem to «abstract» S100_RE_RegisterItem

[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from «abstract» S121_RE_RegisterItem to «abstract» S100_RE_RegisterItem
[Direction is 'Source -> Destination'.]

Realization from S121_RE_RegisterItem to «abstract» S100_RE_RegisterItem
[Direction is 'Source -> Destination'.]

CONNECTORS

Dependency «trace» Source -> Destination
From: S100_RE_RegisterItem : Class, Public
To: S100_RE_RegisterItem : Class, Public

ATTRIBUTES

dateAccepted : Date Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

The date a registered item became valid
[Is static False. Containment is Not Specified.]

dateAmended : Date Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

The date a registered item is clarified, superseded or retired
[Is static False. Containment is Not Specified.]

definition : CharacterString Public

A precise statement of the nature, properties, scope, or essential qualities of the concept as realized by the item.
[Is static False. Containment is Not Specified.]

itemIdentifier : Integer Public

Each item has its own unique identifier in a register
[Is static False. Containment is Not Specified.]

itemStatus : RE_ItemStatus Public

The state in which a registered item exists
[Is static False. Containment is Not Specified.]

name : CharacterString Public

Succinct expression of the item concept it denotes
[Is static False. Containment is Not Specified.]

remarks : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Supplementary information
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination)

Sets of information describing the management of the item in the register

Source: Public (Class) S100_RE_RegisterItem «abstract»

Target: Public managementInfo (Class) S100_RE_ManagementInfo
Cardinality: [1..*]

Association (direction: Source -> Destination)

The source information the item definition was taken from.

Source: Public (Class) S100_RE_RegisterItem «abstract»

Target: Public referenceSource (Class) S100_RE_ReferenceSource
Cardinality: [0..1]

Association (direction: Unspecified) Modification

Source: Public predecessor (Class) S100_RE_RegisterItem «abstract»
Cardinality: [0..*]

Target: Public successor (Class) S100_RE_RegisterItem «abstract»
Cardinality: [0..*]

Association (direction: Source -> Destination)

Reference to other relevant standards or documents

Source: Public (Class) S100_RE_RegisterItem «abstract»

Target: Public reference (Class) S100_RE_Reference
Cardinality: [0..*]

Association (direction: Unspecified) Modification

Source: Public predecessor (Class) S100_RE_RegisterItem «abstract»
Cardinality: [0..*]

Target: Public successor (Class) S100_RE_RegisterItem «abstract»
Cardinality: [0..*]

1.2.7Fig 10 S121 Register Model diagram

Class diagram in package 'S121_Register'

Fig 10 S121 Register Model
Version 1.0
CDO'Brien created on 16/09/2015. Last modified 27/11/2016

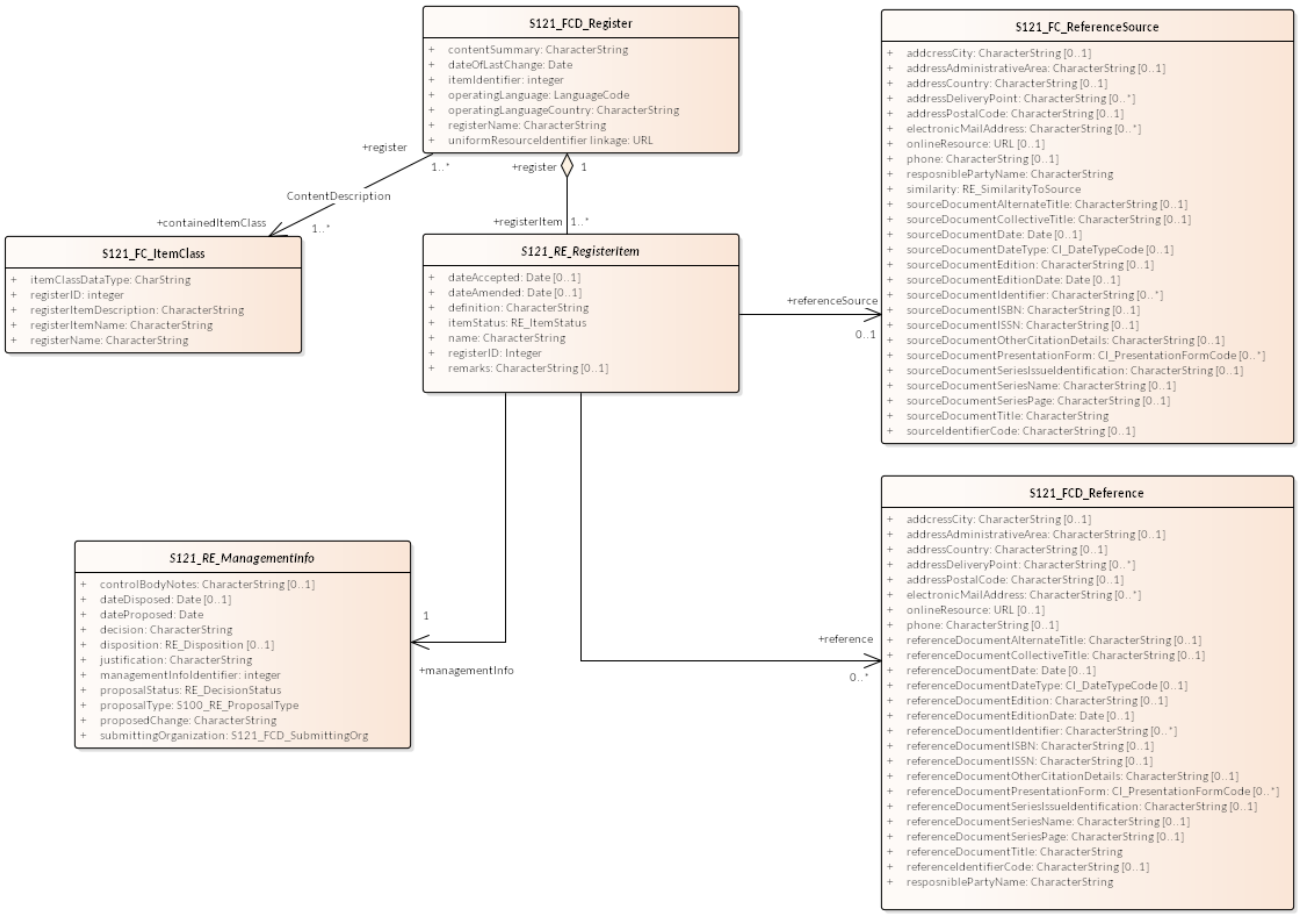

Figure 9: Fig 10 S121 Register Model

1.2.8Fig 11 Register Model RE_Register diagram

Class diagram in package 'S121_Register'

Fig 11 Register Model RE_Register
Version 1.0
CDO'Brien created on 26/03/2015. Last modified 20/10/2015

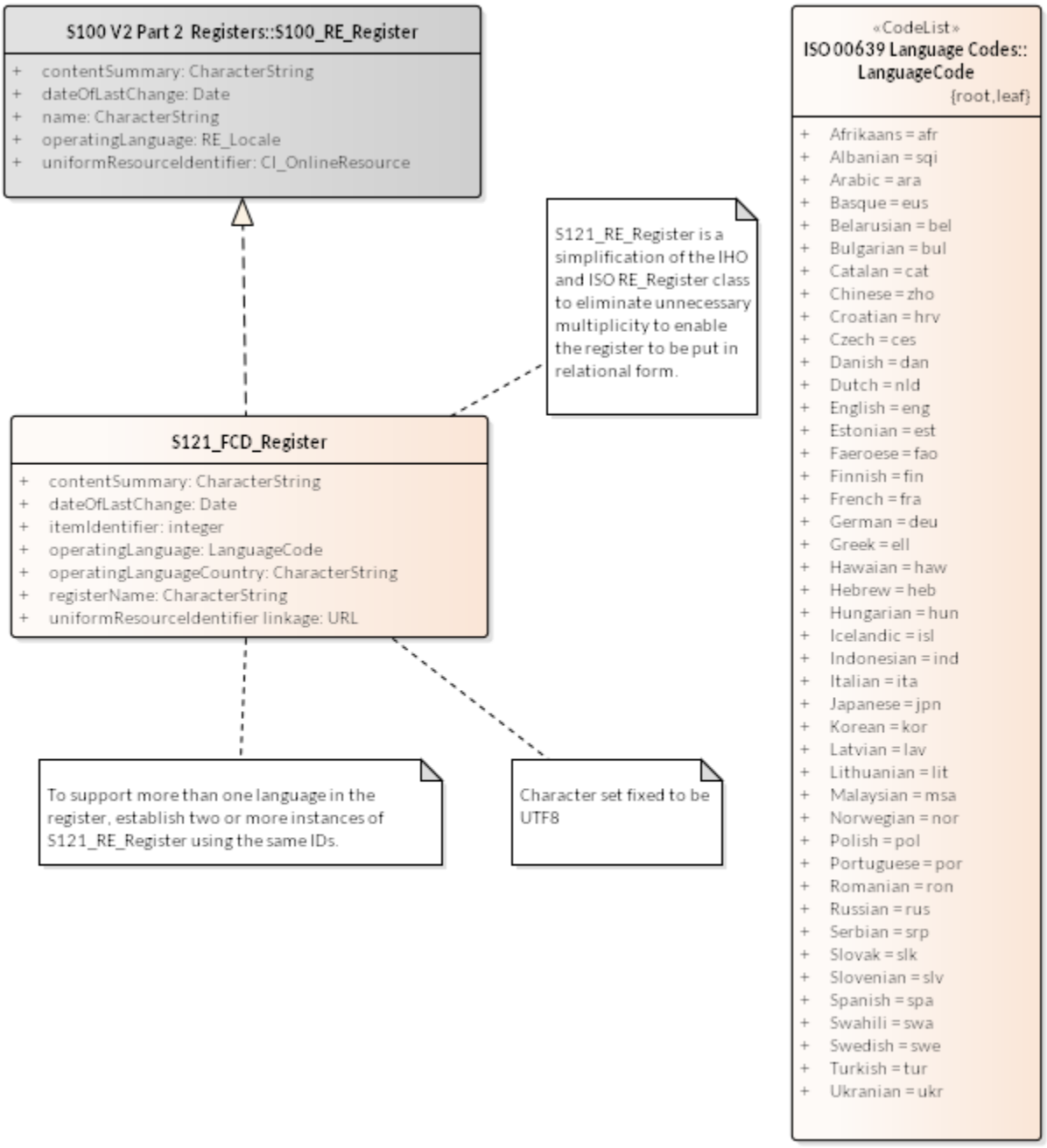

Figure 10: Fig 11 Register Model RE_Register

1.2.9LanguageCode

Class «CodeList» in package 'ISO 00639 Language Codes'

<UsedBy>
<NameSpace>ISO 19135 Procedures for registration</NameSpace>
<Class>RE_Locale</Class>
<Attribute>language</Attribute>
<Type>LanguageCode</Type>
<UsedBy>

LanguageCode
Version Phase Proposed
created on 10/04/2008. Last modified 26/03/2015

ATTRIBUTES

Afrikaans : <undefined> Public = afr
[Is static False. Containment is Not Specified.]

Albanian : <undefined> Public = sqi
[Is static False. Containment is Not Specified.]

Arabic : <undefined> Public = ara
[Is static False. Containment is Not Specified.]

Basque : <undefined> Public = eus
Alias: baq
[Is static False. Containment is Not Specified.]

Belarusian : <undefined> Public = bel
[Is static False. Containment is Not Specified.]

Bulgarian : <undefined> Public = bul
[Is static False. Containment is Not Specified.]

Catalan : <undefined> Public = cat
[Is static False. Containment is Not Specified.]

Chinese : <undefined> Public = zho
Alias: chi
[Is static False. Containment is Not Specified.]

Croatian : <undefined> Public = hrv
[Is static False. Containment is Not Specified.]

Czech : <undefined> Public = ces
Alias: cze
[Is static False. Containment is Not Specified.]

Danish : <undefined> Public = dan
[Is static False. Containment is Not Specified.]

Dutch : <undefined> Public = nld
Alias: dut
[Is static False. Containment is Not Specified.]

English : <undefined> Public = eng
[Is static False. Containment is Not Specified.]

Estonian : <undefined> Public = est
[Is static False. Containment is Not Specified.]

Faeroese : <undefined> Public = fao

ATTRIBUTES

[Is static False. Containment is Not Specified.]

Finnish : <undefined> Public = fin

[Is static False. Containment is Not Specified.]

French : <undefined> Public = fra
Alias: fre

[Is static False. Containment is Not Specified.]

German : <undefined> Public = deu
Alias: ger

[Is static False. Containment is Not Specified.]

Greek : <undefined> Public = ell
Alias: gre

[Is static False. Containment is Not Specified.]

Hawaian : <undefined> Public = haw

[Is static False. Containment is Not Specified.]

Hebrew : <undefined> Public = heb

[Is static False. Containment is Not Specified.]

Hungarian : <undefined> Public = hun

[Is static False. Containment is Not Specified.]

Icelandic : <undefined> Public = isl
Alias: ice

[Is static False. Containment is Not Specified.]

Indonesian : <undefined> Public = ind

[Is static False. Containment is Not Specified.]

Italian : <undefined> Public = ita

[Is static False. Containment is Not Specified.]

Japanese : <undefined> Public = jpn

[Is static False. Containment is Not Specified.]

Korean : <undefined> Public = kor

[Is static False. Containment is Not Specified.]

Latvian : <undefined> Public = lav

[Is static False. Containment is Not Specified.]

Lithuanian : <undefined> Public = lit

[Is static False. Containment is Not Specified.]

ATTRIBUTES

Malaysian : <undefined> Public = msa
Alias: may
[Is static False. Containment is Not Specified.]

Norwegian : <undefined> Public = nor
[Is static False. Containment is Not Specified.]

Polish : <undefined> Public = pol
[Is static False. Containment is Not Specified.]

Portuguese : <undefined> Public = por
[Is static False. Containment is Not Specified.]

Romanian : <undefined> Public = ron
Alias: rum
[Is static False. Containment is Not Specified.]

Russian : <undefined> Public = rus
[Is static False. Containment is Not Specified.]

Serbian : <undefined> Public = srp
[Is static False. Containment is Not Specified.]

Slovak : <undefined> Public = slk
Alias: slo
[Is static False. Containment is Not Specified.]

Slovenian : <undefined> Public = slv
[Is static False. Containment is Not Specified.]

Spanish : <undefined> Public = spa
[Is static False. Containment is Not Specified.]

Swahili : <undefined> Public = swa
[Is static False. Containment is Not Specified.]

Swedish : <undefined> Public = swe
[Is static False. Containment is Not Specified.]

Turkish : <undefined> Public = tur
[Is static False. Containment is Not Specified.]

Ukranian : <undefined> Public = ukr
[Is static False. Containment is Not Specified.]

1.2.10 S100_RE_Register

Class in package 'S100 V2 Part 2 Registers'

The class S100_RE_Register specifies information about the register itself.

S100_RE_Register implements ISO 19135 RE_Register

S100_RE_Register
Version 2.0 Phase 2.0 Proposed
IHO TSMAD created on 18/12/2014. Last modified 16/09/2015

CONSTRAINTS

Invariant. count(self.version +self.dateOfLastChange) >= 1

[Proposed, Weight is 0.]

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S100_RE_Register to RE_Register

[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from S121_FCD_Register to S100_RE_Register

[Direction is 'Source -> Destination'.]

Aggregation from «abstract» S100_RE_RegisterItem to S100_RE_Register
The items of the register

[Direction is 'Source -> Destination'.]

Realization from S121_RE_Register to S100_RE_Register

[Direction is 'Source -> Destination'.]

Aggregation from S100_CD_RegisterItem to S100_RE_Register

[Direction is 'Source -> Destination'.]

CONNECTORS

Dependency «trace» Source -> Destination
From: S100_RE_Register : Class, Public
To: S100_RE_Register : Class, Public

ATTRIBUTES

contentSummary : CharacterString Public

Summary of the content

[Is static False. Containment is Not Specified.]

dateOfLastChange : Date Public

The date when the last change was made to this register

[Is static False. Containment is Not Specified.]

ATTRIBUTES
name : CharacterString Public The name of the register, unique within the register [Is static False. Containment is Not Specified.]
operatingLanguage : RE_Locale Public The language used in this register [Is static False. Containment is Not Specified.]
uniformResourceIdentifier : CI_OnlineResource Public The link to the interface of the register in the Internet [Is static False. Containment is Not Specified.]

1.2.11 Fig 12 Register Model RE_RegisterItem diagram

Class diagram in package 'S121_Register'

Fig 12 Register Model RE_RegisterItem
Version 1.0
CDO'Brien created on 26/03/2015. Last modified 20/10/2015

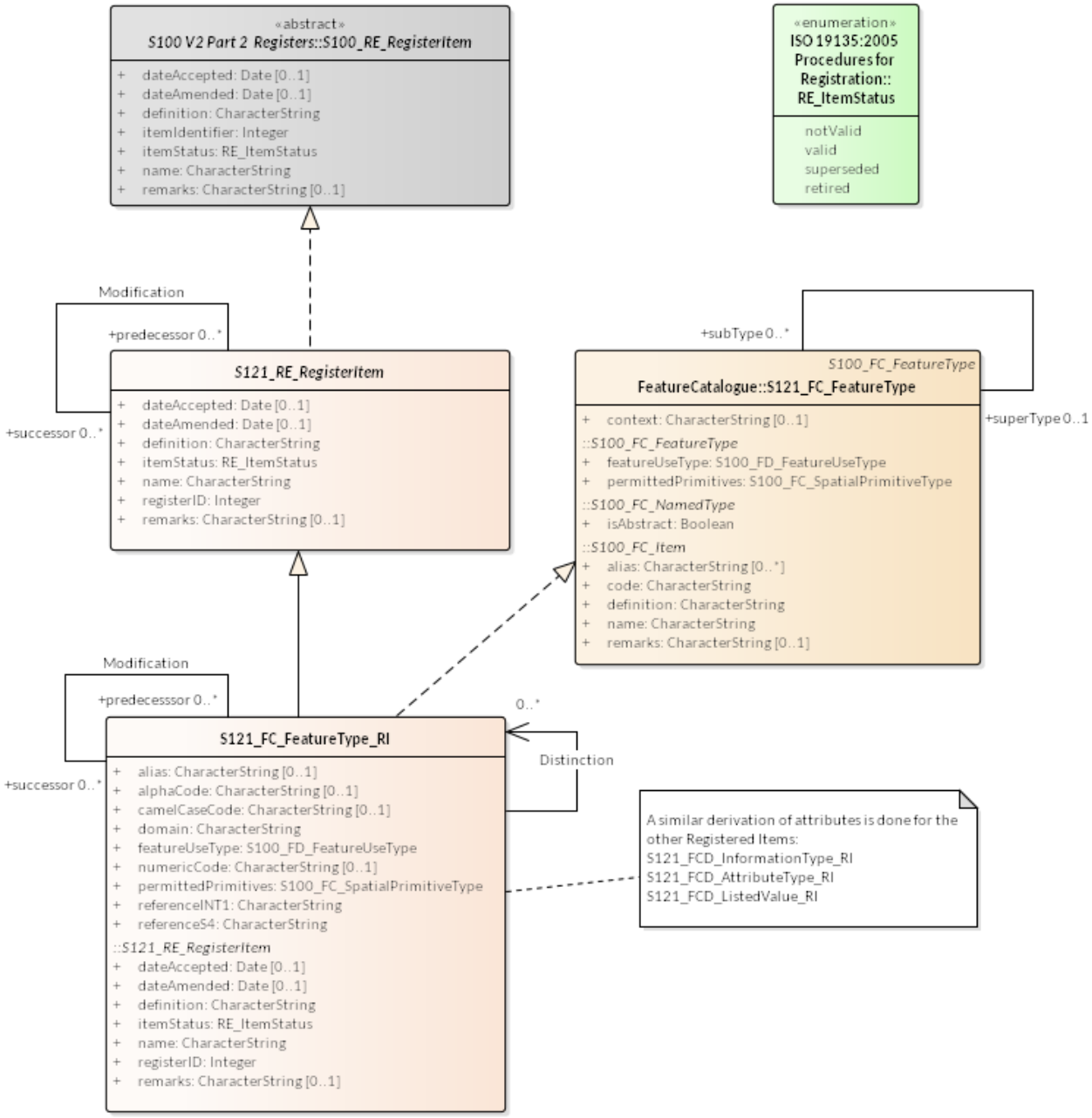

Figure 11: Fig 12 Register Model RE_RegisterItem

1.2.12 RE_ItemStatus

Enumeration «enumeration» in package 'ISO 19135:2005 Procedures for Registration'

<UsedBy>
<NameSpace>ISO 19135 Procedures for registration</NameSpace>
<Class>RE_RegisterItem</Class>
<Attribute>status</Attribute>
<Type>RE_ItemStatus</Type>
<UsedBy>

RE_ItemStatus
Version Phase Approved
ISO TC211 created on 10/04/2008. Last modified 17/09/2015

ATTRIBUTES

ATTRIBUTES

notValid : <undefined> Public

The item has been entered into the register, but the control body has not accepted the proposal to add it.

[Is static False. Containment is Not Specified.]

valid : <undefined> Public

The item has been accepted, is recommended for use, and has not been superseded or retired.

[Is static False. Containment is Not Specified.]

superseded : <undefined> Public

The item has been superseded by one or more items and is no longer recommended for use.

[Is static False. Containment is Not Specified.]

retired : <undefined> Public

A decision has been made that the item is no longer recommended for use. It has not been superseded by another item.

[Is static False. Containment is Not Specified.]

1.2.13 S100_RE_RegisterItem

Class «abstract» in package 'S100 V2 Part 2 Registers'

The class S100_RE_RegisterItem carries the characteristics that are common to all types of registered items. Domain specific extensions may be added in the appropriate part of S-100 e.g. Part 3a – Feature Concept Dictionary.

S100_RE_RegisterItem implements ISO 19135 RE_RegisterItem

S100_RE_RegisterItem
Version 1.0 Phase 2.0 Proposed
IHO TSMAD created on 18/12/2014. Last modified 17/09/2015

OUTGOING STRUCTURAL RELATIONSHIPS

Aggregation from «abstract» S100_RE_RegisterItem to S100_RE_Register
The items of the register

[Direction is 'Source -> Destination'.]

Realization from «abstract» S100_RE_RegisterItem to RE_RegisterItem

[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from S100_CD_RegisterItem to «abstract» S100_RE_RegisterItem

[Direction is 'Source -> Destination'.]

Realization from «abstract» S121_RE_RegisterItem to «abstract» S100_RE_RegisterItem

[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from S121_RE_RegisterItem to «abstract» S100_RE_RegisterItem

[Direction is 'Source -> Destination'.]

CONNECTORS

Dependency «trace» Source -> Destination
From: S100_RE_RegisterItem : Class, Public
To: S100_RE_RegisterItem : Class, Public

ATTRIBUTES

dateAccepted : Date Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

The date a registered item became valid

[Is static False. Containment is Not Specified.]

dateAmended : Date Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

The date a registered item is clarified, superseded or retired

[Is static False. Containment is Not Specified.]

definition : CharacterString Public

A precise statement of the nature, properties, scope, or essential qualities of the concept as realized by the item.

[Is static False. Containment is Not Specified.]

itemIdentifier : Integer Public

Each item has its own unique identifier in a register

[Is static False. Containment is Not Specified.]

itemStatus : RE_ItemStatus Public

The state in which a registered item exists

[Is static False. Containment is Not Specified.]

name : CharacterString Public

Succinct expression of the item concept it denotes

[Is static False. Containment is Not Specified.]

remarks : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Supplementary information

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

ASSOCIATIONS

Association (direction: Source -> Destination)

Sets of information describing the management of the item in the register

Source: Public (Class) S100_RE_RegisterItem «abstract»

Target: Public managementInfo (Class) S100_RE_ManagementInfo
Cardinality: [1..*]

Association (direction: Source -> Destination)

The source information the item definition was taken from.

Source: Public (Class) S100_RE_RegisterItem «abstract»

Target: Public referenceSource (Class) S100_RE_ReferenceSource
Cardinality: [0..1]

Association (direction: Unspecified) Modification

Source: Public predecessor (Class) S100_RE_RegisterItem «abstract»
Cardinality: [0..*]

Target: Public successor (Class) S100_RE_RegisterItem «abstract»
Cardinality: [0..*]

Association (direction: Source -> Destination)

Reference to other relevant standards or documents

Source: Public (Class) S100_RE_RegisterItem «abstract»

Target: Public reference (Class) S100_RE_Reference
Cardinality: [0..*]

Association (direction: Unspecified) Modification

Source: Public predecessor (Class) S100_RE_RegisterItem «abstract»
Cardinality: [0..*]

Target: Public successor (Class) S100_RE_RegisterItem «abstract»
Cardinality: [0..*]

1.2.14 S121_FC_FeatureType

Class in package 'FeatureCatalogue'

Derived from S100_FC_FeatureType.

Class that defines all properties of a feature type in the S121. This is the Feature type as stored in the Feature Catalogue.

S121_FC_FeatureType
Version Phase Proposed
CHS created on 16/02/2015. Last modified 27/11/2016
Extends S100_FC_FeatureType

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from S121_FC_FeatureType to S100_FC_FeatureType
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from S121_FC_FeatureType_RI to S121_FC_FeatureType
[Direction is 'Source -> Destination'.]

Realization from FC_Dictionary_Feature_Entry to S121_FC_FeatureType
[Name is Instance. Direction is 'Source -> Destination'.]

ATTRIBUTES

context : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Categorization of the context of the Feature Type (topic area).
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

DirectedLine (direction: Source -> Destination) «directedLine»

Source: Public (Class) S121_FC_FeatureType

Target: Public (Boundary) Boundary

Association (direction: Unspecified)

Source: Public superType (Class) S121_FC_FeatureType
Cardinality: [0..1]

Indicates the feature type from which a feature type is derived. The sub type will inherit all properties from its super type: name, definition and code will usually be overridden by the sub type, although new properties may be added to the sub type.

Target: Public subType (Class) S121_FC_FeatureType
Cardinality: [0..*]

Indicates the feature types which are derived from a feature type.

Association (direction: Source -> Destination) Usage of registered definityon etc

Source: Public (Metaclass) S121_GF_FeatureType «metaclass»
Cardinality: [1]

Target: Public (Class) S121_FC_FeatureType
Cardinality: [0..*]

Association (direction: Unspecified)

Source: Public superType (Class) S121_FC_FeatureType
Cardinality: [0..1]

Indicates the feature type from which a feature type is derived. The sub type will inherit all properties from its super type: name, definition and code will usually be overridden by the sub type, although new properties may be added to the sub type.

Target: Public subType (Class) S121_FC_FeatureType
Cardinality: [0..*]

Indicates the feature types which are derived from a feature type.

1.2.15 Fig 13 Register Model RE_RegisterItem Types diagram

Class diagram in package 'S121_Register'

Fig 13 Register Model RE_RegisterItem Types
Version 1.0
CDO'Brien created on 17/09/2015. Last modified 21/10/2015

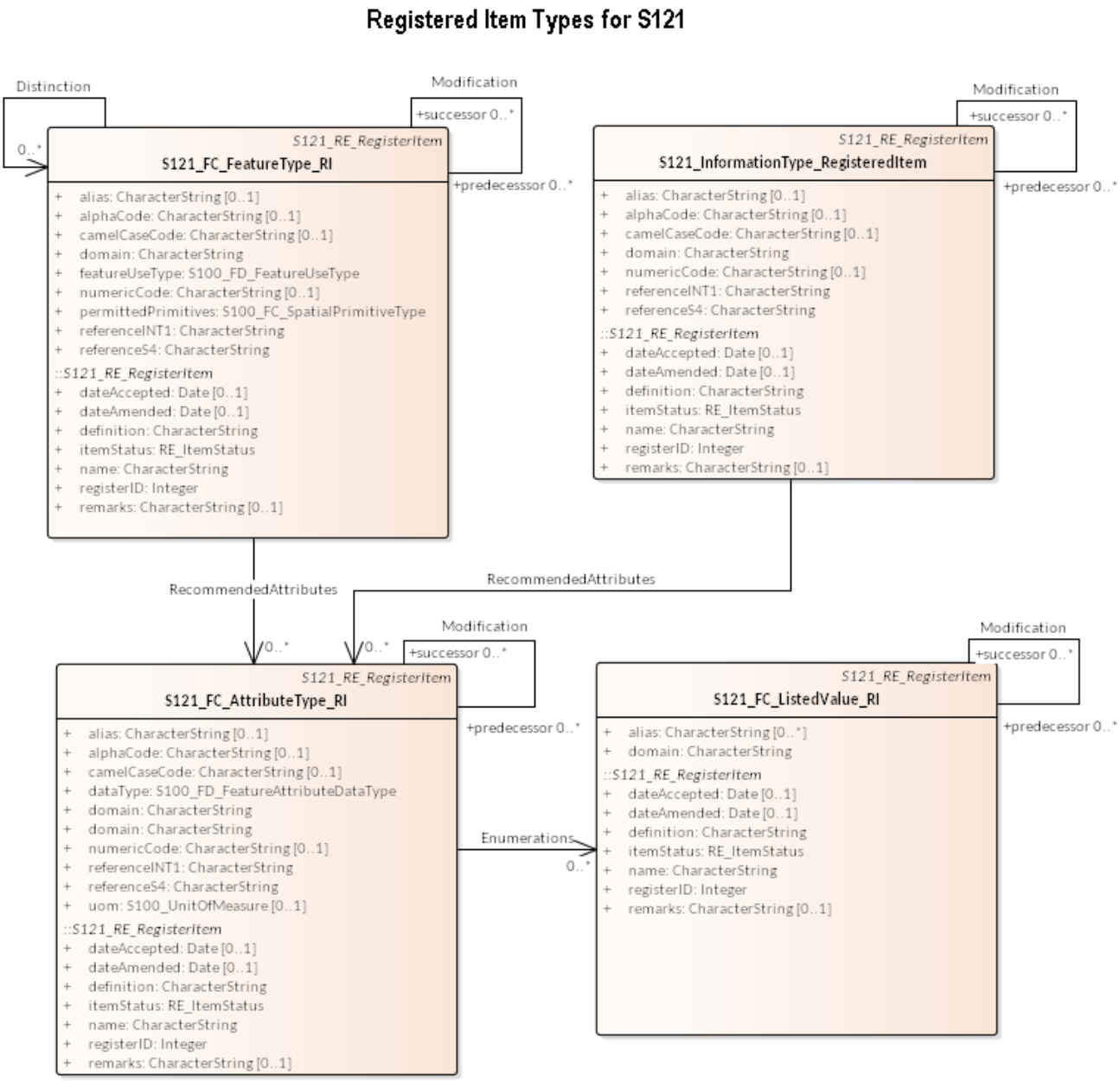

Figure 12: Fig 13 Register Model RE_RegisterItem Types

1.2.16 Fig 14 Register Model RE_ManagementInfo diagram

Class diagram in package 'S121_Register'

Fig 14 Register Model RE_ManagementInfo
Version 1.0
CDO'Brien created on 26/03/2015. Last modified 20/10/2015

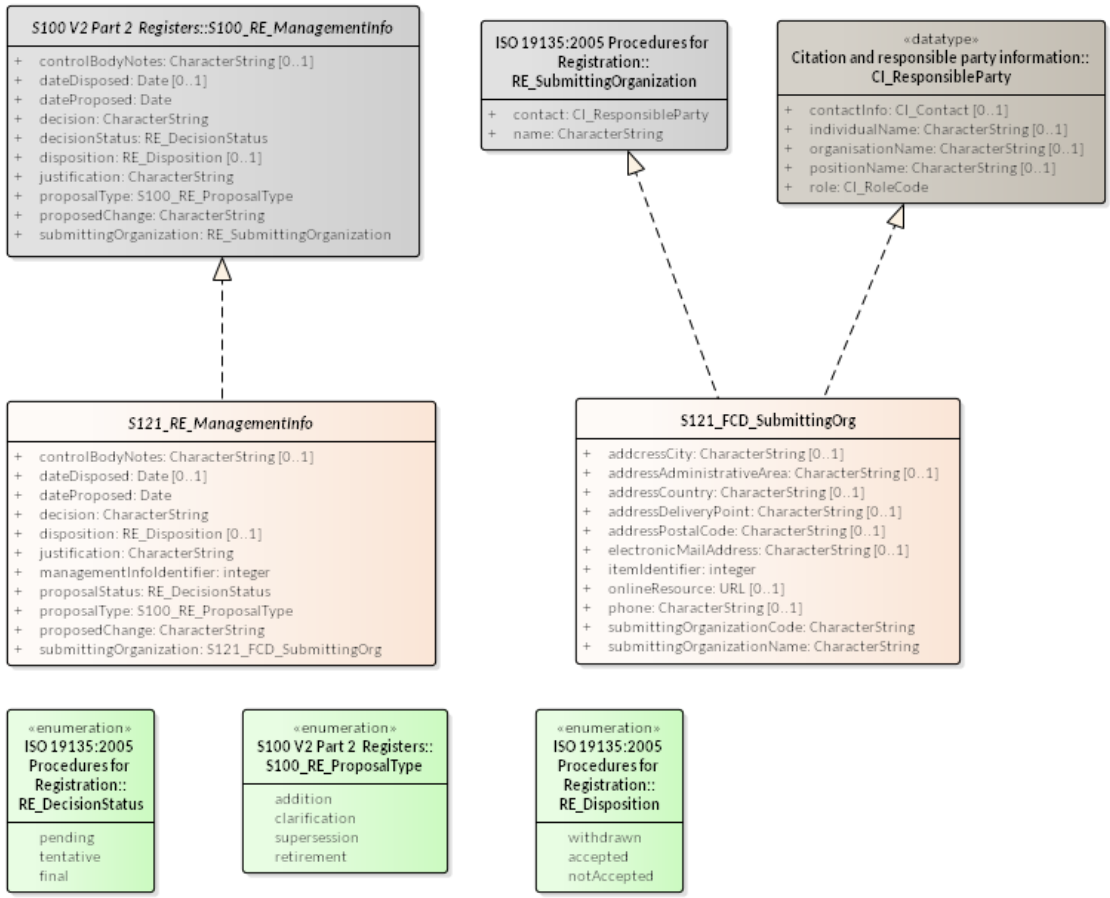

Figure 13: Fig 14 Register Model RE_ManagementInfo

1.2.17 RE_DecisionStatus

Enumeration «enumeration» in package 'ISO 19135:2005 Procedures for Registration'

<UsedBy>
<NameSpace>ISO 19135 Procedures for registration</NameSpace>
<Class>RE_ProposalManagementInformation</Class>
<Attribute>status</Attribute>
<Type>RE_DecisionStatus</Type>
<UsedBy>

RE_DecisionStatus
Version Phase Approved
ISO TC211 created on 10/04/2008. Last modified 17/09/2015

ATTRIBUTES

pending : <undefined> Public

No decision has been made.

[Is static False. Containment is Not Specified.]

tentative : <undefined> Public

A decision has been made, but it is still subject to appeal.

[Is static False. Containment is Not Specified.]

ATTRIBUTES

final : <undefined> Public

A decision has been made and the time limit for appeal has run out or an appeal has been resolved.

[Is static False. Containment is Not Specified.]

1.2.18 RE_Disposition

Enumeration «enumeration» in package 'ISO 19135:2005 Procedures for Registration'

<UsedBy>
<NameSpace>ISO 19135 Procedures for registration</NameSpace>
<Class>RE_ProposalManagementInformation</Class>
<Attribute>disposition[0..1]</Attribute>
<Type>RE_Disposition</Type>
<UsedBy>

RE_Disposition
Version Phase Approved
created on 10/04/2008. Last modified 17/09/2015

ATTRIBUTES

withdrawn : <undefined> Public

The submitting organization has withdrawn the proposal.

[Is static False. Containment is Not Specified.]

accepted : <undefined> Public

The control body decided to accept the proposal.

[Is static False. Containment is Not Specified.]

notAccepted : <undefined> Public

The control body decided not to accept the proposal.

[Is static False. Containment is Not Specified.]

1.2.19 S100_RE_ManagementInfo

Class in package 'S100 V2 Part 2 Registers'

The class S100_RE_ManagementInfo specifies the management record of a register item.

S100_RE_ManagementInfo amalgamates the implementation of the ISO 19135 classes: RE_DecisionStatus, S100_RE_ProposalType, S100_RE_SubmittingOrganization, RE_ItemStatus and S100_RE_Disposition.

S100_RE_ManagementInfo
Version 1.0 Phase 2.0 Proposed
IHO TSMAD created on 18/12/2014. Last modified 17/09/2015

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S100_RE_ManagementInfo to RE_ProposalManagementInformation
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from S121_RE_ManagementInfo to S100_RE_ManagementInfo
[Direction is 'Source -> Destination'.]

Realization from S121_RE_ManagementInfo to S100_RE_ManagementInfo
[Direction is 'Source -> Destination'.]

CONNECTORS

Dependency «trace» Source -> Destination
From: S100_RE_ManagementInfo : Class, Public
To: S100_RE_ManagementInfo : Class, Public

ATTRIBUTES

controlBodyNotes : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

supplementary management information
[Is static False. Containment is Not Specified.]

dateDisposed : Date Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Date the proposal was adjudicated
[Is static False. Containment is Not Specified.]

dateProposed : Date Public

Date the proposal was made.
[Is static False. Containment is Not Specified.]

decision : CharacterString Public

decision comments
[Is static False. Containment is Not Specified.]

decisionStatus : RE_DecisionStatus Public

The current status of a proposal
[Is static False. Containment is Not Specified.]

disposition : RE_Disposition Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Provides values for describing the disposition of a proposal to add or modify a register item.
[Is static False. Containment is Not Specified.]

ATTRIBUTES

justification : CharacterString Public

Primary reason for the proposal including how it is proposed to be used

[Is static False. Containment is Not Specified.]

proposalType : S100_RE_ProposalType Public

The type of the proposal.

[Is static False. Containment is Not Specified.]

proposedChange : CharacterString Public

The text of the proposed change

[Is static False. Containment is Not Specified.]

submittingOrganization : RE_SubmittingOrganization Public

The proposal's sponsor.

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination)

Sets of information describing the management of the item in the register

Source: Public (Class) S100_RE_RegisterItem «abstract»

Target: Public managementInfo (Class) S100_RE_ManagementInfo
Cardinality: [1..*]

Association (direction: Source -> Destination)

Source: Public (Class) S100_CD_RegisterItem

Target: Public managementInfo (Class) S100_RE_ManagementInfo
Cardinality: [1..*]

1.2.20 S100_RE_ProposalType

Enumeration «enumeration» in package 'S100 V2 Part 2 Registers'

The enumeration S100_RE_ProposalType species the type of proposal for a register item.

S100_RE_ProposalType amalgamates the implementation of the 19135 classes RE_AdditionInformation, RE_ClarificationInformation, RE_AmendmentInformation and RE_AmendmentType.

S100_RE_ProposalType
Version Phase 2.0 Proposed
IHO TSMAD created on 18/12/2014. Last modified 21/10/2015

OUTGOING STRUCTURAL RELATIONSHIPS

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from «enumeration» S100_RE_ProposalType to RE_ClarificationInformation
[Direction is 'Source -> Destination'.]

Realization from «enumeration» S100_RE_ProposalType to RE_AdditionInformation
[Direction is 'Source -> Destination'.]

Realization from «enumeration» S100_RE_ProposalType to «enumeration» RE_AmendmentType
[Direction is 'Source -> Destination'.]

Realization from «enumeration» S100_RE_ProposalType to RE_AmendmentInformation
[Direction is 'Source -> Destination'.]

CONNECTORS

Dependency «trace» Source -> Destination
From: S100_RE_ProposalType : Enumeration, Public
To: S100_RE_ProposalType : Enumeration, Public

ATTRIBUTES

addition : <undefined> Public

The item is to be added to the register
[Is static False. Containment is Not Specified.]

clarification : <undefined> Public

A non-substantive change to an item in the register
[Is static False. Containment is Not Specified.]

supersession : <undefined> Public

The item has been superseded by another item and is no longer recommended for use.
[Is static False. Containment is Not Specified.]

retirement : <undefined> Public

A decision has been made that the item is no longer recommended for use. It has not been superseded by another item
[Is static False. Containment is Not Specified.]

1.2.21 Fig 15 Register Model RE_Rererence diagram

Class diagram in package 'S121_Register'

Fig 15 Register Model RE_Rererence
Version 1.0

CDO'Brien created on 26/03/2015. Last modified 20/10/2015

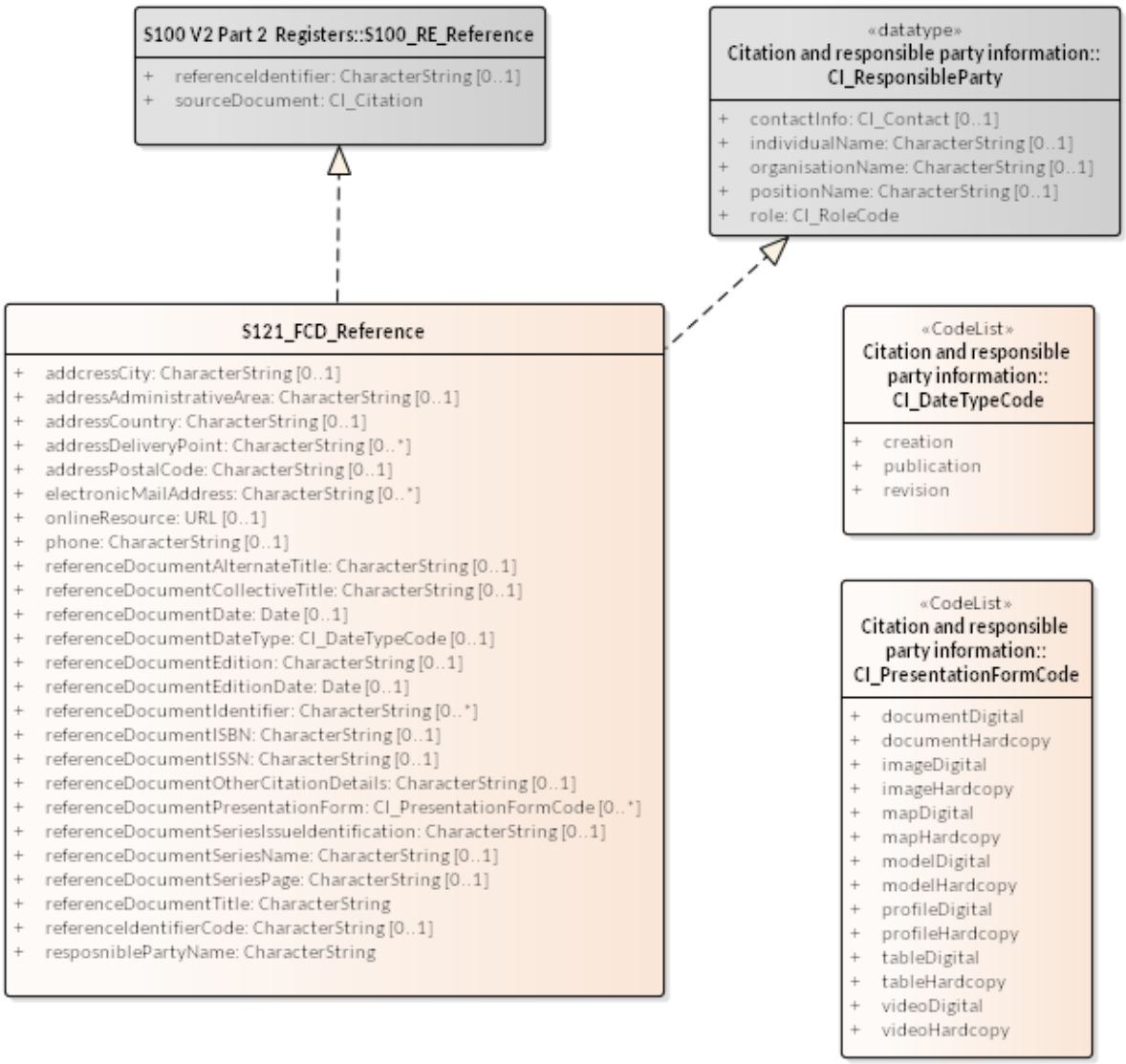

Figure 14: Fig 15 Register Model RE_Rererence

1.2.22 CI_PresentationFormCode

Class «CodeList» in package 'Citation and responsible party information'

Mode in which the data is represented

CI_PresentationFormCode
Version Phase Proposed
created on 10/04/2008. Last modified 17/09/2015

ATTRIBUTES

documentDigital : <undefined> Public

Piece of written or printed matter that provides a record or evidence of events, an agreement, ownership, identification, etc..

[Is static False. Containment is .]

ATTRIBUTES

documentHardcopy : <undefined> Public

Representation of a map which is printed on paper, photographic material, or other media and can be interpreted directly by the human user

[Is static False. Containment is .]

imageDigital : <undefined> Public

Permanent record of the likeness of any natural or man-made features, objects, and activities reproduced on photographic materials. This image can be acquired through the sensing of visual or any other segment of the electromagnetic spectrum by sensors, such as thermal infrared, and high resolution radar.

[Is static False. Containment is .]

imageHardcopy : <undefined> Public

[Is static False. Containment is .]

mapDigital : <undefined> Public

[Is static False. Containment is .]

mapHardcopy : <undefined> Public

[Is static False. Containment is .]

modelDigital : <undefined> Public

Representation in three dimensions of geospatial data

[Is static False. Containment is .]

modelHardcopy : <undefined> Public

[Is static False. Containment is .]

profileDigital : <undefined> Public

Vertical cross-section of geospatial data

[Is static False. Containment is .]

profileHardcopy : <undefined> Public

[Is static False. Containment is .]

tableDigital : <undefined> Public

[Is static False. Containment is .]

tableHardcopy : <undefined> Public

[Is static False. Containment is .]

videoDigital : <undefined> Public

[Is static False. Containment is .]

videoHardcopy : <undefined> Public

[Is static False. Containment is .]

ATTRIBUTES

1.2.23 S100_RE_Reference

Class in package 'S100 V2 Part 2 Registers'

The class S100_RE_Reference specifies information about the source and/or lineage of a specific register item derived from an external document or register.

S100_RE_Reference implements ISO 19135 RE_Reference

S100_RE_Reference
Version 1.0 Phase 2.0 Proposed
IHO TSMAD created on 18/12/2014. Last modified 15/09/2015

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S100_RE_Reference to RE_Reference
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from S121_FCD_Reference to S100_RE_Reference
[Direction is 'Source -> Destination'.]

Realization from S121_RE_Reference to S100_RE_Reference
[Direction is 'Source -> Destination'.]

CONNECTORS

Dependency «trace» Source -> Destination
From: S100_RE_Reference : Class, Public
To: S100_RE_Reference : Class, Public

ATTRIBUTES

referenceIdentifier : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

An identifier of the place in the source document that is referenced
[Is static False. Containment is Not Specified.]

sourceDocument : CI_Citation Public

The source document.
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination)

ASSOCIATIONS	
Source: Public (Class) S100_CD_RegisterItem	Target: Public reference (Class) S100_RE_Reference Cardinality: [0..*]

Association (direction: Source -> Destination)

Reference to other relevant standards or documents

Source: Public (Class) S100_RE_RegisterItem «abstract»	Target: Public reference (Class) S100_RE_Reference Cardinality: [0..*]

1.2.24 Fig 16 Register Model RE_RererenceSource diagram

Class diagram in package 'S121_Register'

Fig 16 Register Model RE_RererenceSource
Version 1.0
CDO'Brien created on 26/03/2015. Last modified 20/10/2015

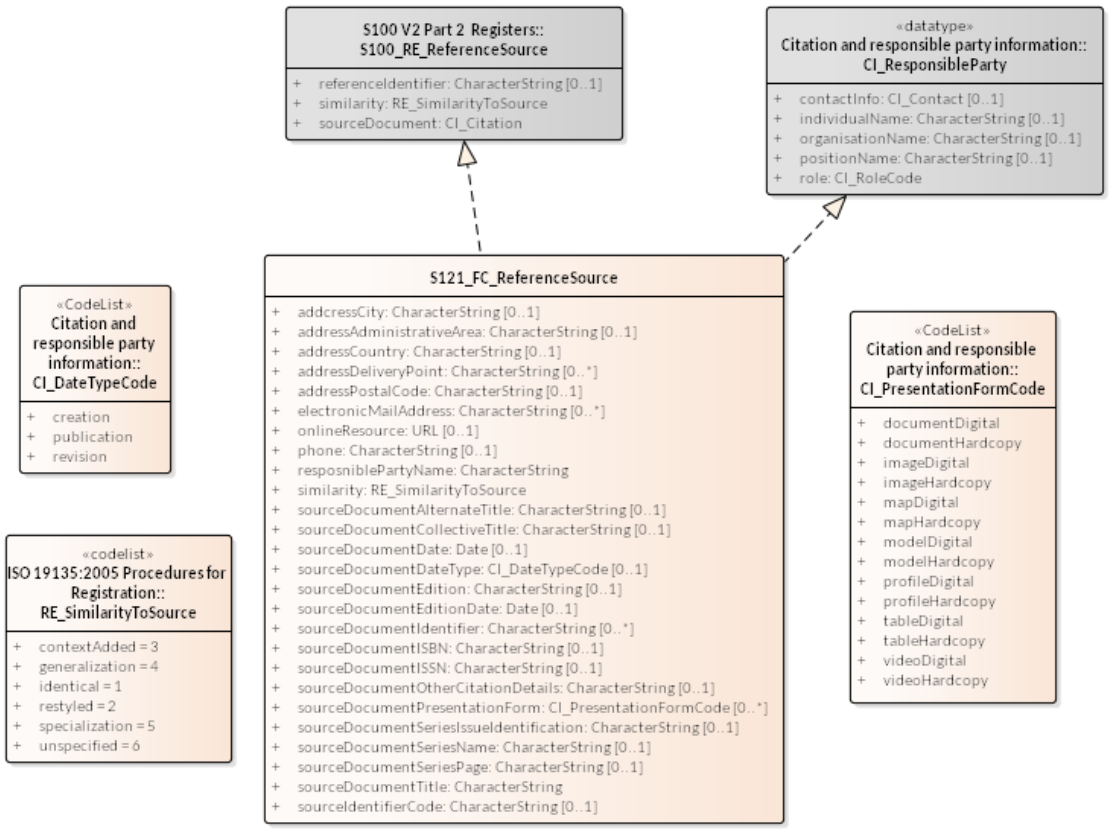

Figure 15: Fig 16 Register Model RE_RererenceSource

1.2.25 CI_PresentationFormCode

Class «CodeList» in package 'Citation and responsible party information'

Mode in which the data is represented

CI_PresentationFormCode
Version Phase Proposed
created on 10/04/2008. Last modified 17/09/2015

ATTRIBUTES

documentDigital : <undefined> Public

Piece of written or printed matter that provides a record or evidence of events, an agreement, ownership, identification, etc..

[Is static False. Containment is .]

documentHardcopy : <undefined> Public

Representation of a map which is printed on paper, photographic material, or other media and can be interpreted directly by the human user

[Is static False. Containment is .]

imageDigital : <undefined> Public

Permanent record of the likeness of any natural or man-made features, objects, and activities reproduced on photographic materials. This image can be acquired through the sensing of visual or any other segment of the electromagnetic spectrum by sensors, such as thermal infrared, and high resolution radar.

[Is static False. Containment is .]

imageHardcopy : <undefined> Public

[Is static False. Containment is .]

mapDigital : <undefined> Public

[Is static False. Containment is .]

mapHardcopy : <undefined> Public

[Is static False. Containment is .]

modelDigital : <undefined> Public

Representation in three dimensions of geospatial data

[Is static False. Containment is .]

modelHardcopy : <undefined> Public

[Is static False. Containment is .]

profileDigital : <undefined> Public

Vertical cross-section of geospatial data

[Is static False. Containment is .]

profileHardcopy : <undefined> Public

[Is static False. Containment is .]

tableDigital : <undefined> Public

ATTRIBUTES
[Is static False. Containment is .]
tableHardcopy : <undefined> Public [Is static False. Containment is .]
videoDigital : <undefined> Public [Is static False. Containment is .]
videoHardcopy : <undefined> Public [Is static False. Containment is .]

1.2.26 RE_SimilarityToSource

Class «codelist» in package 'ISO 19135:2005 Procedures for Registration'

<UsedBy>
<NameSpace>ISO 19135 Procedures for registration</NameSpace>
<Class>RE_Reference</Class>
<Attribute>similarity</Attribute>
<Type>RE_SimilarityToSource</Type>
<UsedBy>

RE_SimilarityToSource
Version Phase
ISO TC211 created on 10/04/2008. Last modified 17/09/2015

ATTRIBUTES
contextAdded : <undefined> Public = 3 The definition includes information about its context that is not explicit in the specification in the external source. [Is static False. Containment is Not Specified.]
generalization : <undefined> Public = 4 The definition of the register item has been generalized to have a broader meaning than the item specified in the external source. [Is static False. Containment is Not Specified.]
identical : <undefined> Public = 1 No change has been made to the definition. [Is static False. Containment is Not Specified.]
restyled : <undefined> Public = 2 The style of the definition has been changed to match the style and structure of other definitions in the register that has imported the definition. [Is static False. Containment is Not Specified.]
specialization : <undefined> Public = 5

ATTRIBUTES

The definition of the register item has been specialized to have a narrower meaning than the item specified in the external source.

[Is static False. Containment is Not Specified.]

unspecified : <undefined> Public = 6

The nature of the differences between the register item and the similar item in the external source is unspecified.

[Is static False. Containment is Not Specified.]

1.2.27 S100_RE_ReferenceSource

Class in package 'S100 V2 Part 2 Registers'

The class S100_RE_ReferenceSource specifies information about the source of a register item specifications taken from an external document or register.

S100_RE_ReferenceSource implements ISO 19135 RE_ReferenceSource

S100_RE_ReferenceSource
Version 1.0 Phase 2.0 Proposed
IHO TSMAD created on 18/12/2014. Last modified 15/09/2015

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S100_RE_ReferenceSource to RE_ReferenceSource

[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from S121_FC_ReferenceSource to S100_RE_ReferenceSource

[Direction is 'Source -> Destination'.]

Realization from S121_RE_ReferenceSource to S100_RE_ReferenceSource

[Direction is 'Source -> Destination'.]

CONNECTORS

Dependency «trace» Source -> Destination
From: S100_RE_ReferenceSource : Class, Public
To: S100_RE_ReferenceSource : Class, Public

ATTRIBUTES

referenceIdentifier : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

An identifier of the place in the source document that is referenced

[Is static False. Containment is Not Specified.]

ATTRIBUTES

similarity : RE_SimilarityToSource Public

Indicates how the definition is related to the source document

[Is static False. Containment is Not Specified.]

sourceDocument : CI_Citation Public

The source document.

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination)

The source information the item definition was taken from.

Source: Public (Class) S100_RE_RegisterItem «abstract»

Target: Public referenceSource (Class) S100_RE_ReferenceSource
Cardinality: [0..1]

Association (direction: Source -> Destination)

Source: Public (Class) S100_CD_RegisterItem

Target: Public referenceSource (Class) S100_RE_ReferenceSource
Cardinality: [0..1]

1.2.28 Fig A1 Security Acrhitecture diagram

Use Case diagram in package 'S121_Register'

Fig A1 Security Acrhitecture
Version 1.0
CDO'Brien created on 15/09/2015. Last modified 15/09/2015

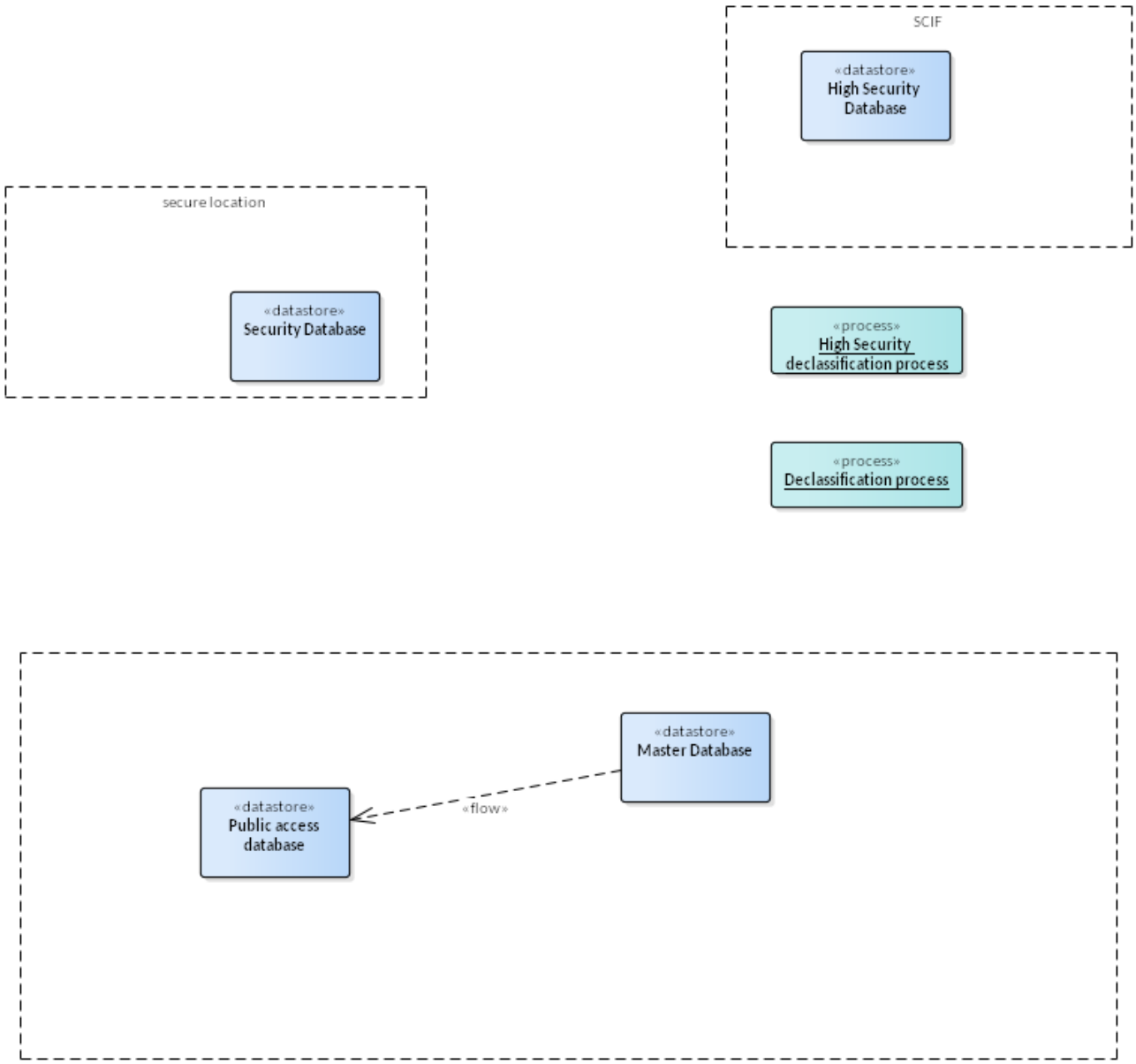

Figure 16: Fig A1 Security Acrhitecture

1.2.29 Fig A2 S121 Register Subtypes diagram

Class diagram in package 'S121_Register'

Fig A2 S121 Register Subtypes
Version 1.0
CDO'Brien created on 27/03/2015. Last modified 27/11/2016

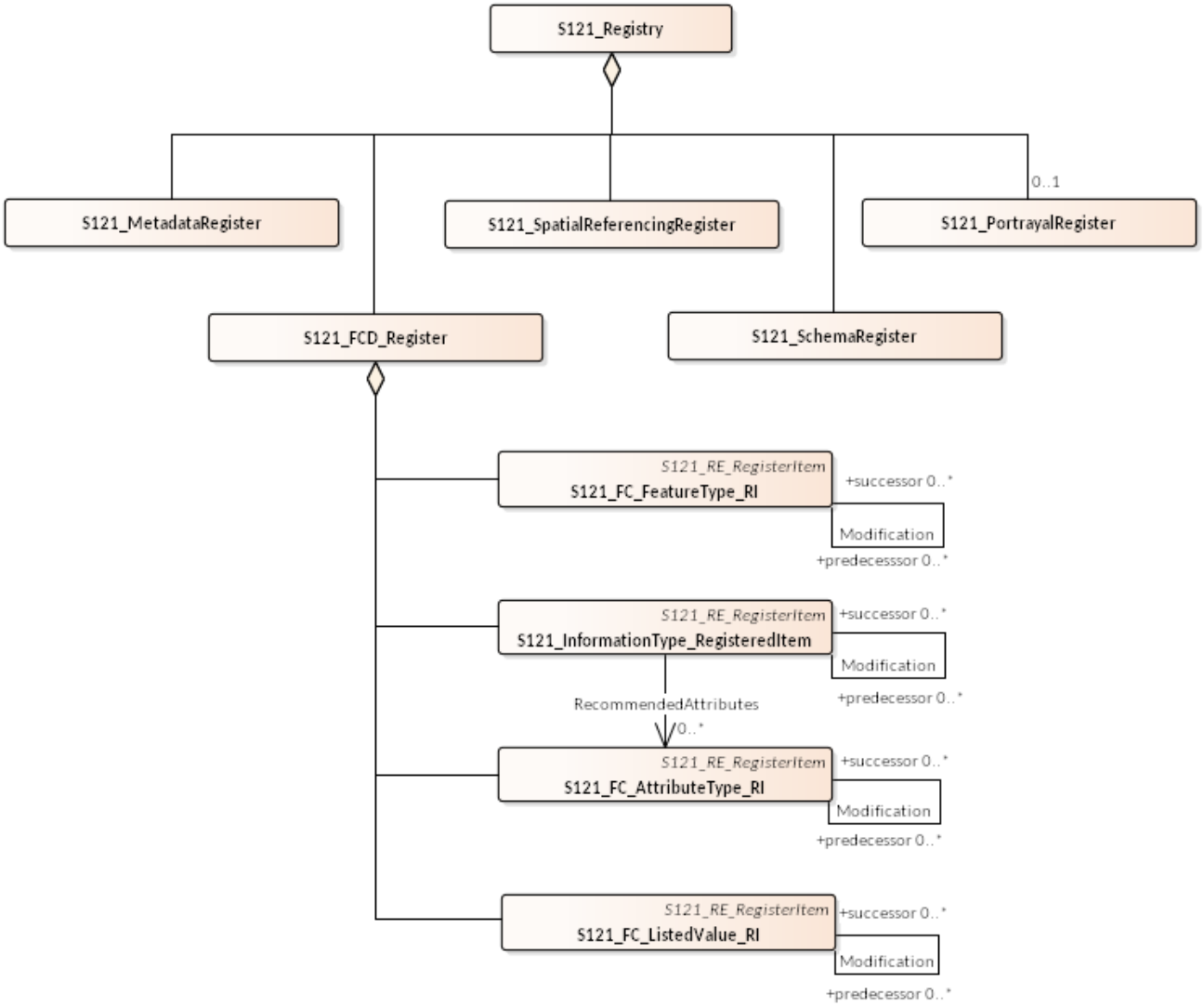

Figure 17: Fig A2 S121 Register Subtypes

1.2.30 Register base classes

Package in package 'S121_Register'

Register base classes
Version 1.0 Phase 1.0 Proposed
CDO'Brien created on 22/02/2016. Last modified 17/08/2016

1.2.30.1 S121_RE_ManagementInfo

Class in package 'Register base classes'

The class S121_RE_ManagementInfo specifies the management record of a register item.

S100_RE_ManagementInfo amalgamates the implementation of the ISO 19135 classes: RE_DecisionStatus, S100_RE_ProposalType, S100_RE_SubmittingOrganization, RE_ItemStatus and S100_RE_Disposition.

The class S121_RE_ManagementInfo is a parallel construct to S121_RE_ManagementInfo.

S121_RE_ManagementInfo
Version 1 Phase 2 Proposed
CHS created on 26/03/2015. Last modified 22/02/2016

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_RE_ManagementInfo to S100_RE_ManagementInfo
[Direction is 'Source -> Destination'.]

Realization from S121_RE_ManagementInfo to RE_ProposalManagementInformation
[Direction is 'Source -> Destination'.]

ATTRIBUTES

controlBodyNotes : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

supplementary management information
[Is static False. Containment is Not Specified.]

dateDisposed : Date Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Date the proposal was adjudicated
[Is static False. Containment is Not Specified.]

dateProposed : Date Public

Date the proposal was made.
[Is static False. Containment is Not Specified.]

decision : CharacterString Public

decision comments
[Is static False. Containment is Not Specified.]

decisionStatus : RE_DecisionStatus Public

The current status of a proposal
[Is static False. Containment is Not Specified.]

disposition : RE_Disposition Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Provides values for describing the disposition of a proposal to add or modify a register item.
[Is static False. Containment is Not Specified.]

justification : CharacterString Public

Primary reason for the proposal including how it is proposed to be used
[Is static False. Containment is Not Specified.]

proposalType : S100_RE_ProposalType Public

ATTRIBUTES

The type of the proposal.

[Is static False. Containment is Not Specified.]

proposedChange : CharacterString Public

The text of the proposed change

[Is static False. Containment is Not Specified.]

submittingOrganization : RE_SubmittingOrganization Public

The proposal's sponsor.

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination)

Source: Public (Class) S121_RE_RegisterItem «abstract»

Target: Public managementInfo (Class) S121_RE_ManagementInfo
Cardinality: [1]

1.2.30.2 S121_RE_Reference

Class in package 'Register base classes'

The class S121_RE_Reference implements S100_RE_Reference

It uses a simplified form of citation

The class S100_RE_Reference specifies information about the source and/or lineage of a specific register item derived from an external document or register.

S100_RE_Reference implements ISO 19135 RE_Reference

The class S121_RE_Reference is a parallel construct to S121_RE_Reference.

S121_RE_Reference
Version 1 Phase 2 Proposed
CHS created on 26/03/2015. Last modified 22/02/2016

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_RE_Reference to S100_RE_Reference

[Direction is 'Source -> Destination'.]

Realization from S121_RE_Reference to RE_Reference

[Direction is 'Source -> Destination'.]

ATTRIBUTES

referenceIdentifier : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

ATTRIBUTES

An identifier of the place in the source document that is referenced

[Is static False. Containment is Not Specified.]

sourceDocumentAlternateTitle : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

[Is static False. Containment is Not Specified.]

sourceDocumentCitedResponsibleParty : S121_ResponsibleParty Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Name and position information for an individual or organisation that is responsible for the resource.

[Is static False. Containment is Not Specified.]

sourceDocumentCollectiveTitle : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Common title with holdings note.

[Is static False. Containment is Not Specified.]

sourceDocumentDate : Date Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

[Is static False. Containment is Not Specified.]

sourceDocumentDateType : CI_DateTypeCode Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

[Is static False. Containment is Not Specified.]

sourceDocumentEdition : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Version of the dataset

[Is static False. Containment is Not Specified.]

sourceDocumentEditionDate : Date Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Date of the edition

[Is static False. Containment is Not Specified.]

sourceDocumentIdentifier : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

value uniquely identifying an object within a namespace

[Is static False. Containment is Not Specified.]

sourceDocumentISBN : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

International Standard Book Number.

[Is static False. Containment is Not Specified.]

sourceDocumentISSN : CharacterString Public

ATTRIBUTES

Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

International Standard Serial Number.

[Is static False. Containment is Not Specified.]

sourceDocumentOtherCitationDetails : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Other information required to complete the citation

[Is static False. Containment is Not Specified.]

sourceDocumentTitle : CharacterString Public

The source document.

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination)

Source: Public (Class) S121_RE_RegisterItem «abstract»

Target: Public reference (Class) S121_RE_Reference
Cardinality: [0..*]

1.2.30.3 S121_RE_ReferenceSource

Class in package 'Register base classes'

The class S121_RE_ReferenceSource implements S100_RE_ReferenceSource

It uses a simplified form of citation

The class S100_RE_ReferenceSource specifies information about the source of a register item specifications taken from an external document or register.

S100_RE_ReferenceSource implements ISO 19135 RE_ReferenceSource

S121_RE_ReferenceSource
Version 1 Phase Proposed
created on 26/03/2015. Last modified 22/02/2016

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_RE_ReferenceSource to S100_RE_ReferenceSource

[Direction is 'Source -> Destination'.]

Realization from S121_RE_ReferenceSource to RE_ReferenceSource

[Direction is 'Source -> Destination'.]

ATTRIBUTES

ATTRIBUTES

referenceIdentifier : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

An identifier of the place in the source document that is referenced

[Is static False. Containment is Not Specified.]

similarity : RE_SimilarityToSource Public

Indicates how the definition is related to the source document

[Is static False. Containment is Not Specified.]

sourceDocumentAlternateTitle : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

[Is static False. Containment is Not Specified.]

sourceDocumentCitedResponsibleParty : S121_ResponsibleParty Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Name and position information for an individual or organisation that is responsible for the resource.

[Is static False. Containment is Not Specified.]

sourceDocumentCollectiveTitle : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Common title with holdings note.

[Is static False. Containment is Not Specified.]

sourceDocumentDate : Date Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

[Is static False. Containment is Not Specified.]

sourceDocumentDateType : CI_DateTypeCode Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

[Is static False. Containment is Not Specified.]

sourceDocumentEdition : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Version of the dataset

[Is static False. Containment is Not Specified.]

sourceDocumentEditionDate : Date Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Date of the edition

[Is static False. Containment is Not Specified.]

sourceDocumentIdentifier : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

value uniquely identifying an object within a namespace

[Is static False. Containment is Not Specified.]

ATTRIBUTES

sourceDocumentISBN : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

International Standard Book Number.

[Is static False. Containment is Not Specified.]

sourceDocumentISSN : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

International Standard Serial Number.

[Is static False. Containment is Not Specified.]

sourceDocumentOtherCitationDetails : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Other information required to complete the citation

[Is static False. Containment is Not Specified.]

sourceDocumentSeriesIssueIdentification : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

[Is static False. Containment is Not Specified.]

sourceDocumentSeriesName : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Name of the series of which the dataset is a part

[Is static False. Containment is Not Specified.]

sourceDocumentSeriesPage : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

[Is static False. Containment is Not Specified.]

sourceDocumentTitle : CharacterString Public

The source document.

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination)

Source: Public (Class) S121_RE_RegisterItem «abstract»

Target: Public referenceSource (Class) S121_RE_ReferenceSource
Cardinality: [0..1]

Association (direction: Source -> Destination)

Source: Public (Class) S121_RE_RegisterItem

Target: Public referenceSource (Class) S121_RE_ReferenceSource
Cardinality: [0..1]

1.2.30.4 S121_RE_Register

Class in package 'Register base classes'

The class S121_RE_Register is a realization of IHO S100_RE_Register. It specifies information about the register itself.

S100_RE_Register implements ISO 19135 RE_Register.

The class S121_RE_Register is a parallel construct to S121_RE_Register.

S121_RE_Register
Version 2 Phase 2 Proposed
CHS created on 26/03/2015. Last modified 17/08/2016

CONSTRAINTS

Invariant. count(self.version +self.dateOfLastChange) >= 1

[Proposed, Weight is 0.]

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_RE_Register to RE_Register

[Direction is 'Source -> Destination'.]

Realization from S121_RE_Register to S100_RE_Register

[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Aggregation from «abstract» S121_RE_RegisterItem to S121_RE_Register

[Direction is 'Source -> Destination'.]

ATTRIBUTES

contentSummary : CharacterString Public

Summary of the content

[Is static False. Containment is Not Specified.]

dateOfLastChange : Date Public

The date when the last change was made to this register

[Is static False. Containment is Not Specified.]

name : CharacterString Public

The name of the register, unique within the register

[Is static False. Containment is Not Specified.]

operatingLanguage : LanguageCode Public

The language used in this register

[Is static False. Containment is Not Specified.]

ATTRIBUTES
operatingLanguageCountry : CharacterString Public [Is static False. Containment is Not Specified.]
uniformResourceIdentifier linkage : CharacterString Public The link to the interface of the register in the Internet [Is static False. Containment is Not Specified.]
uniformResourceIdentifier name : int Public [Is static False. Containment is Not Specified.]

1.2.30.5 S121_SubmittingOrganization

Class in package 'Register base classes'

The class S121_SubmittingOrganization describes the submitting organization for the registered item.

S121_SubmittingOrganization realizes the ISO RE_SubmittingOrganization which is used in S100_RE_ManagementInfo.

The class S121_SubmittingOrganization is a parallel construct to S121_SubmittingOrganization.

S121_SubmittingOrganization
Version Phase Approved
CHS created on 26/03/2015. Last modified 22/02/2016

OUTGOING STRUCTURAL RELATIONSHIPS
Realization from S121_SubmittingOrganization to RE_SubmittingOrganization [Direction is 'Source -> Destination'.]

ATTRIBUTES
contact : S121_ResponsibleParty Public [Is static False. Containment is Not Specified.]
name : CharacterString Public [Is static False. Containment is .]

1.2.31 S121_FCD_Reference

Class in package 'S121_Register'

The class S121_FC_Reference implements S100_RE_Reference

It uses a simplified form of citation

The class S100_RE_Reference specifies information about the source and/or lineage of a specific register item derived from an external document or register.

S100_RE_Reference implements ISO 19135 RE_Reference

S121_FCD_Reference
Version Phase Proposed
CHS created on 26/03/2015. Last modified 19/10/2015

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_FCD_Reference to S100_RE_Reference
[Direction is 'Source -> Destination'.]

Realization from S121_FCD_Reference to RE_Reference
[Direction is 'Source -> Destination'.]

Realization from S121_FCD_Reference to «datatype» CI_ResponsibleParty
[Direction is 'Source -> Destination'.]

ATTRIBUTES

addcressCity : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

City of the physical address
[Is static False. Containment is Not Specified.]

addressAdministrativeArea : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Administrative area (such as country, state, province) for the physical address.
[Is static False. Containment is Not Specified.]

addressCountry : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Country of the physical address.
[Is static False. Containment is Not Specified.]

addressDeliveryPoint : CharacterString Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

Address line for the physical address (Street name, box number, suite)
[Is static False. Containment is Not Specified.]

addressPostalCode : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Postal code for the physical address.
[Is static False. Containment is Not Specified.]

electronicMailAddress : CharacterString Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

Address of the electronic mailbox of the responsible organisation or individual.
[Is static False. Containment is Not Specified.]

ATTRIBUTES

onlineResource : URL Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Online information that can be used to contact the individual or organization.

[Is static False. Containment is Not Specified.]

phone : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Telephone numbers at which the organisation or individual may be contacted.

[Is static False. Containment is Not Specified.]

referenceDocumentAlternateTitle : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

An alternate title of the referenced document.

[Is static False. Containment is Not Specified.]

referenceDocumentCollectiveTitle : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Common title of the series.

[Is static False. Containment is Not Specified.]

referenceDocumentDate : Date Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Reference date of the referenced document.

[Is static False. Containment is Not Specified.]

referenceDocumentDateType : CI_DateTypeCode Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Type of date of the referenced document.

[Is static False. Containment is Not Specified.]

referenceDocumentEdition : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Edition of the referenced document.

[Is static False. Containment is Not Specified.]

referenceDocumentEditionDate : Date Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Date of the edition of the referenced document.

[Is static False. Containment is Not Specified.]

referenceDocumentIdentifier : CharacterString Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

Identifier uniquely identifying the referenced document.

[Is static False. Containment is Not Specified.]

ATTRIBUTES

referenceDocumentISBN : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

International Standard Book Number.

[Is static False. Containment is Not Specified.]

referenceDocumentISSN : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

International Standard Serial Number.

[Is static False. Containment is Not Specified.]

referenceDocumentOtherCitationDetails : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Other information required to complete the citation.

[Is static False. Containment is Not Specified.]

referenceDocumentPresentationForm : CI_PresentationFormCode Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

Mode in which the data is represented.

[Is static False. Containment is Not Specified.]

referenceDocumentSeriesIssueIdentification : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Identifier uniquely identifying the series of which the referenced document is a part.

[Is static False. Containment is Not Specified.]

referenceDocumentSeriesName : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Name of the series of which the referenced document is a part.

[Is static False. Containment is Not Specified.]

referenceDocumentSeriesPage : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Identifier of a page within a series.

[Is static False. Containment is Not Specified.]

referenceDocumentTitle : CharacterString Public

The title of the referenced document.

[Is static False. Containment is Not Specified.]

referenceIdentifierCode : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

An identifier of the place in the document that is referenced

[Is static False. Containment is Not Specified.]

resposniblePartyName : CharacterString Public

ATTRIBUTES

Name of responsible party for the referenced document.

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination)

Source: Public (Class) S121_RE_RegisterItem

Target: Public reference (Class) S121_FCD_Reference
Cardinality: [0..*]

1.2.32 S121_FCD_SubmittingOrg

Class in package 'S121_Register'

A list of permitted Submitting Organizations is maintained with addresses. The class S121_FCD_SubmittingOrg implements both ISO RE_SubmittingOrganization and ISO CI_ResponsibleParty. This simply expands the contact information into a flat structure. Elements of the contact information, such as phone and address have also be expanded into a flat structure.

S121_FCD_SubmittingOrg
Version Phase Approved
CHS created on 26/03/2015. Last modified 23/09/2015

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_FCD_SubmittingOrg to RE_SubmittingOrganization

[Direction is 'Source -> Destination'.]

Realization from S121_FCD_SubmittingOrg to «datatype» CI_ResponsibleParty

[Direction is 'Source -> Destination'.]

ATTRIBUTES

addcressCity : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

City of the physical address

[Is static False. Containment is Not Specified.]

addressAdministrativeArea : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Administrative area (such as country, state, province) for the physical address.

[Is static False. Containment is Not Specified.]

addressCountry : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Country of the physical address.

[Is static False. Containment is Not Specified.]

ATTRIBUTES

addressDeliveryPoint : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Address line for the physical address (Street name, box number, suite)

[Is static False. Containment is Not Specified.]

addressPostalCode : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Postal code for the physical address.

[Is static False. Containment is Not Specified.]

electronicMailAddress : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Address of the electronic mailbox of the responsible organisation or individual.

[Is static False. Containment is Not Specified.]

itemIdentifier : integer Public

Each submitting Organization entry has iots own unique identifier

[Is static False. Containment is Not Specified.]

onlineResource : URL Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Online information that can be used to contact the individual or organization.

[Is static False. Containment is Not Specified.]

phone : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Telephone numbers at which the organisation or individual may be contacted.

[Is static False. Containment is Not Specified.]

submittingOrganizationCode : CharacterString Public

Unique code to represent the submitting organization.

[Is static False. Containment is Not Specified.]

submittingOrganizationName : CharacterString Public

Name of submitting organization.

[Is static False. Containment is Not Specified.]

1.2.33 S121_FC_AttributeType_RI

Class in package 'S121_Register'

The class S121_FC_AttributeType_RI defines the actual item of registration for AttributeTypes derived from RE_Registered Item, that defines the information that needs to be included in any compliant register, and S100_FC_SimpleAttribute that describes the particular information to be registered for a S121 Attribute Type. The class

SS121_FC_AttributeType_RI is a subtype of S121_RE_Registered Item and realizes S121_FC_SimpleAttribute. The relationship with S121_FC_SimpleAttribute is a realization relationship to avoid duplication of some attributes.

S121_FC_AttributeType_RI
Version Phase Proposed
created on 17/09/2015. Last modified 27/11/2016
Extends S121_RE_RegisterItem

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from S121_FC_AttributeType_RI to S121_RE_RegisterItem
[Direction is 'Source -> Destination'.]

Realization from S121_FC_AttributeType_RI to S121_FC_SimpleAttribute
[Direction is 'Source -> Destination'.]

Aggregation from S121_FC_AttributeType_RI to S121_FCD_Register
[Direction is 'Source -> Destination'.]

ATTRIBUTES

alias : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

equivalent name(s) of this item
[Is static False. Containment is Not Specified.]

alphaCode : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Traditionally (i.e. in IHO S-57) a six character **alphaCode** that uniquely identifies the named type within the feature catalogue.
[Is static False. Containment is Not Specified.]

camelCaseCode : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

camelCaseCode textual code using no spaces but “CamelCase” formatting that uniquely identifies the named type within the feature catalogue.
[Is static False. Containment is Not Specified.]

dataType : S100_FD_FeatureAttributeDataType Public

The data type of this feature attribute.
[Is static False. Containment is Not Specified.]

domain : CharacterString Public

Categorization of the domain of the Feature Type (topic area).
[Is static False. Containment is Not Specified.]

domain : CharacterString Public

Categorization of the domain of the Feature Type (topic area).
[Is static False. Containment is Not Specified.]

ATTRIBUTES

numericCode : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

numericCode that uniquely identifies the named type within the feature catalogue.
[Is static False. Containment is Not Specified.]

referenceINT1 : CharacterString Public

Itentifier for a reference to IHO **INT1** .
[Is static False. Containment is Not Specified.]

referenceS4 : CharacterString Public

Itentifier for a reference to IHO **INT1** .
[Is static False. Containment is Not Specified.]

uom : S100_UnitOfMeasure Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Unit of measure used for values of this feature attribute.
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination) Enumerations

Source: Public (Class) S121_FC_AttributeType_RI
Target: Public (Class) S121_FC_ListedValue_RI
Cardinality: [0..*]

Association (direction: Unspecified) Modification

Source: Public predecessor (Class) S121_FC_AttributeType_RI
Cardinality: [0..*]
Target: Public successor (Class) S121_FC_AttributeType_RI
Cardinality: [0..*]

Association (direction: Source -> Destination) RecommendedAttributes

Source: Public (Class) S121_FC_FeatureType_RI
Target: Public (Class) S121_FC_AttributeType_RI
Cardinality: [0..*]

Association (direction: Source -> Destination) RecommendedAttributes

Source: Public (Class) S121_InformationType_RegisteredItem
Target: Public (Class) S121_FC_AttributeType_RI
Cardinality: [0..*]

Association (direction: Unspecified) Modification

Source: Public predecessor (Class) S121_FC_AttributeType_RI
Cardinality: [0..*]
Target: Public successor (Class) S121_FC_AttributeType_RI
Cardinality: [0..*]

1.2.34 S121_FC_FeatureType_RI

Class in package 'S121_Register'

The class S121_FC_FeatureType_RI defines the actual item of registration for Feature Types derived from RE_Registered Item, that defines the information that needs to be included in any compliant register. The class S121_FC_FeatureType_RI is a subtype of S121_FC_RegisteredItem and realizes S121_FC_FeatureType. The relationship with S121_FC_FeatureType is a realization relationship to avoid duplication of some attributes.

S121_FC_FeatureType_RI
Version Phase Proposed
created on 17/09/2015. Last modified 27/11/2016
Extends S121_RE_RegisterItem

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from S121_FC_FeatureType_RI to S121_RE_RegisterItem
[Direction is 'Source -> Destination'.]

Realization from S121_FC_FeatureType_RI to S121_FC_FeatureType
[Direction is 'Source -> Destination'.]

Aggregation from S121_FC_FeatureType_RI to S121_FCD_Register
[Direction is 'Source -> Destination'.]

ATTRIBUTES

alias : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

equivalent name(s) of this item
[Is static False. Containment is Not Specified.]

alphaCode : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Traditional (i.e. in IHO S-57) a six character **alphaCode** that uniquely identifies the named type within the feature catalogue.
[Is static False. Containment is Not Specified.]

camelCaseCode : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

camelCaseCode textual code using no spaces but “CamelCase” formatting that uniquely identifies the named type within the feature catalogue.
[Is static False. Containment is Not Specified.]

domain : CharacterString Public

Categorization of the domain of the Feature Type (topic area).
[Is static False. Containment is Not Specified.]

featureUseType : S100_FD_FeatureUseType Public

The use type of this feature type.
[Is static False. Containment is Not Specified.]

ATTRIBUTES

numericCode : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

numericCode that uniquely identifies the named type within the feature catalogue.
[Is static False. Containment is Not Specified.]

permittedPrimitives : S100_FC_SpatialPrimitiveType Public

The combination of 0 or more spatial primitives permitted for representation of the spatial geometry of a feature type.
[Is static False. Containment is Not Specified.]

referenceINT1 : CharacterString Public

Itentifier for a reference to IHO **INT1** .
[Is static False. Containment is Not Specified.]

referenceS4 : CharacterString Public

Itentifier for a reference to IHO **INT1** .
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination) RecommendedAttributes

Source: Public (Class) S121_FC_FeatureType_RI
Target: Public (Class) S121_FC_AttributeType_RI
Cardinality: [0..*]

Association (direction: Unspecified) Modification

Source: Public predecesssor (Class) S121_FC_FeatureType_RI
Cardinality: [0..*]
Target: Public successor (Class) S121_FC_FeatureType_RI
Cardinality: [0..*]

Association (direction: Source -> Destination) Distinction

Source: Public (Class) S121_FC_FeatureType_RI
Target: Public (Class) S121_FC_FeatureType_RI
Cardinality: [0..*]

Association (direction: Unspecified) Modification

Source: Public predecesssor (Class) S121_FC_FeatureType_RI
Cardinality: [0..*]
Target: Public successor (Class) S121_FC_FeatureType_RI
Cardinality: [0..*]

Association (direction: Source -> Destination) Distinction

Source: Public (Class) S121_FC_FeatureType_RI
Target: Public (Class) S121_FC_FeatureType_RI
Cardinality: [0..*]

1.2.35 S121_FC_ItemClass

Class in package 'S121_Register'

The Class S121_FC_ItemClass is a realization of RE_ItemClass from ISO 19135

The Registered Item is a list of items that contain the information. The Item Class describes what is in the Registered Item.

The RE_ItemClass was not included in S-100 because all of the register items were defined in the S-100 standard. In S-121 it is re-introduced from ISO 19135 in order to allow freedom to add elements to the register; that is, to add columns of elements to the tables implementing the S121_RE_RegisterItem class. It has been simplified to contain only the element name and description since the citation is to the S-121 standard.

S121_FC_ItemClass
Version Phase Proposed
CHS created on 16/09/2015. Last modified 19/10/2015

INCOMING STRUCTURAL RELATIONSHIPS

Realization from RE_ItemClass to S121_FC_ItemClass

[Direction is 'Source -> Destination'.]

ATTRIBUTES

itemClassDataType : CharString Public

Data type of the register item element.

[Is static False. Containment is Not Specified.]

registerID : integer Public

Unique ID of Item Class. Each item identifier has its own unique identifier in a register.

[Is static False. Containment is Not Specified.]

registerItemDescription : CharacterString Public

Description of a register item element; That is, the meaning of the register table column, not the content. The RE_RegisterItem class contains the content.

[Is static False. Containment is Not Specified.]

registerItemName : CharacterString Public

Name of a register item element; that is, corresponding to a regsiter item name.

[Is static False. Containment is Not Specified.]

registerName : CharacterString Public

Name of the register that contains the register item element.

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination) ContentDescription

ASSOCIATIONS

Source: Public register (Class) S121_FCD_Register
Cardinality: [1..*]

Target: Public containedItemClass (Class) S121_FC_ItemClass
Cardinality: [1..*]

1.2.36 S121_FC_ListedValue_RI

Class in package 'S121_Register'

The class S121_FC_ListedValue_RI defines the actual item of registration for Listed Values derived from RE_Registered Item, that defines the information that needs to be included in any compliant register, and S100_FC_ListedValue that describes the particular information to be registered for a S121 Attribute Type. The class S121_FC_ListedValue_RI is a subtype of S121_RE_Registered Item and realizes S100_FC_ListedValue. The relationship with S100_FC_ListedValue is a realization relationship to avoid duplication of some attributes.

S121_FC_ListedValue_RI
Version Phase Proposed
created on 17/09/2015. Last modified 27/11/2016
Extends S121_RE_RegisterItem

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from S121_FC_ListedValue_RI to S121_RE_RegisterItem
[Direction is 'Source -> Destination'.]

Realization from S121_FC_ListedValue_RI to S121_FC_ListedValue
[Direction is 'Source -> Destination'.]

Aggregation from S121_FC_ListedValue_RI to S121_FCD_Register
[Direction is 'Source -> Destination'.]

ATTRIBUTES

alias : CharacterString Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

equivalent name(s) of this item
[Is static False. Containment is Not Specified.]

domain : CharacterString Public

Categorization of the domain of the Feature Type (topic area).
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified) Modification

Source: Public predecessor (Class) S121_FC_ListedValue_RI
Cardinality: [0..*]

Target: Public successor (Class) S121_FC_ListedValue_RI
Cardinality: [0..*]

ASSOCIATIONS

Association (direction: Source -> Destination) Enumerations

Source: Public (Class) S121_FC_AttributeType_RI

Target: Public (Class) S121_FC_ListedValue_RI
Cardinality: [0..*]

Association (direction: Unspecified) Modification

Source: Public predecessor (Class) S121_FC_ListedValue_RI
Cardinality: [0..*]

Target: Public successor (Class) S121_FC_ListedValue_RI
Cardinality: [0..*]

1.2.37 S121_FC_ReferenceSource

Class in package 'S121_Register'

The class S121_FC_ReferenceSource implements S100_RE_ReferenceSource

It uses a simplified form of citation

The class S100_RE_ReferenceSource specifies information about the source of a register item specifications taken from an external document or register.

S100_RE_ReferenceSource implements ISO 19135 RE_ReferenceSource

S121_FC_ReferenceSource
Version 1.0 Phase Proposed
created on 26/03/2015. Last modified 21/10/2015

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_FC_ReferenceSource to RE_ReferenceSource
[Direction is 'Source -> Destination'.]

Realization from S121_FC_ReferenceSource to S100_RE_ReferenceSource
[Direction is 'Source -> Destination'.]

Realization from S121_FC_ReferenceSource to «datatype» CI_ResponsibleParty
[Direction is 'Source -> Destination'.]

ATTRIBUTES

addcressCity : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

City of the physical address

[Is static False. Containment is Not Specified.]

addressAdministrativeArea : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

ATTRIBUTES

Administrative area (such as country, state, province) for the physical address.

[Is static False. Containment is Not Specified.]

addressCountry : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Country of the physical address

[Is static False. Containment is Not Specified.]

addressDeliveryPoint : CharacterString Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

Address line for the physical address (Street name, box number, suite)

[Is static False. Containment is Not Specified.]

addressPostalCode : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Postal code for the physical address.

[Is static False. Containment is Not Specified.]

electronicMailAddress : CharacterString Public
Multiplicity: ([0..*], Allow duplicates: , Is ordered: False)

Address of the electronic mailbox of the responsible organisation or individual

[Is static False. Containment is .]

onlineResource : URL Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Online information that can be used to contact the individual or organization

[Is static False. Containment is Not Specified.]

phone : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Telephone numbers at which the organisation or individual may be contacted

[Is static False. Containment is Not Specified.]

resposniblePartyName : CharacterString Public

Name of responsible party for the referenced document.

[Is static False. Containment is Not Specified.]

similarity : RE_SimilarityToSource Public

Indicates how the definition is related to the source document

[Is static False. Containment is Not Specified.]

sourceDocumentAlternateTitle : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Alternate source document title.

[Is static False. Containment is Not Specified.]

ATTRIBUTES

sourceDocumentCollectiveTitle : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Common title of the series.

[Is static False. Containment is Not Specified.]

sourceDocumentDate : Date Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Reference date of the source document.

[Is static False. Containment is Not Specified.]

sourceDocumentDateType : CI_DateTypeCode Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Type of date of the source document.

[Is static False. Containment is Not Specified.]

sourceDocumentEdition : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Edition of the source document.

[Is static False. Containment is Not Specified.]

sourceDocumentEditionDate : Date Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Date of the edition of the source document.

[Is static False. Containment is Not Specified.]

sourceDocumentIdentifier : CharacterString Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

Identifier uniquely identifying the source document.

[Is static False. Containment is Not Specified.]

sourceDocumentISBN : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

International Standard Book Number.

[Is static False. Containment is Not Specified.]

sourceDocumentISSN : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

International Standard Serial Number.

[Is static False. Containment is Not Specified.]

sourceDocumentOtherCitationDetails : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Other information required to complete the citation.

[Is static False. Containment is Not Specified.]

ATTRIBUTES

sourceDocumentPresentationForm : CI_PresentationFormCode Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

Mode in which the data is represented.

[Is static False. Containment is Not Specified.]

sourceDocumentSeriesIssueIdentification : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Identifier uniquely identifying the series of which the source document is a part.

[Is static False. Containment is Not Specified.]

sourceDocumentSeriesName : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Name of the series of which the source document is a part.

[Is static False. Containment is Not Specified.]

sourceDocumentSeriesPage : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Identifier of a page within a series.

[Is static False. Containment is Not Specified.]

sourceDocumentTitle : CharacterString Public

The source document title.

[Is static False. Containment is Not Specified.]

sourceIdentifierCode : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

An identifier of the place in the source document that is referenced

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination)

Source: Public (Class) S121_RE_RegisterItem

Target: Public referenceSource (Class) S121_FC_ReferenceSource
Cardinality: [0..1]

1.2.38 S121_InformationType_RegisteredItem

Class in package 'S121_Register'

The class S121_FCD_InformationType_RI defines the actual item of registration for InformationTypes derived from RE_Registered Item, that defines the information that needs to be included in any compliant register, and S100_FC_InformationType that describes the particular information to be registered for a S121 Information Type. The class S121_FCD_InformationType_RI is a subtype of S121_RE_Registered Item and realizes S100_FC_InformationType. The relationship with S100_FC_FeatureType is a realization relationship to avoid duplication of some attributes.

S121_InformationType_RegisteredItem
Version Phase Proposed
created on 17/09/2015. Last modified 27/11/2016
Extends S121_RE_RegisterItem

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_InformationType_RegisteredItem to S100_FC_InformationType
[Direction is 'Source -> Destination'.]

Generalization from S121_InformationType_RegisteredItem to S121_RE_RegisterItem
[Direction is 'Source -> Destination'.]

Aggregation from S121_InformationType_RegisteredItem to S121_FCD_Register
[Direction is 'Source -> Destination'.]

ATTRIBUTES

alias : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

equivalent name(s) of this item

[Is static False. Containment is Not Specified.]

alphaCode : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Traditionally (i.e. in IHO S-57) a six character **alphaCode** that uniquely identifies the named type within the feature catalogue.

[Is static False. Containment is Not Specified.]

camelCaseCode : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

camelCaseCode textual code using no spaces but “CamelCase” formatting that uniquely identifies the named type within the feature catalogue.

[Is static False. Containment is Not Specified.]

domain : CharacterString Public

Categorization of the domain of the Feature Type (topic area).

[Is static False. Containment is Not Specified.]

numericCode : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

numericCode that uniquely identifies the named type within the feature catalogue.

[Is static False. Containment is Not Specified.]

referenceINT1 : CharacterString Public

Itentifier for a reference to IHO **INT1** .

[Is static False. Containment is Not Specified.]

ATTRIBUTES

referenceS4 : CharacterString Public

Itentifier for a reference to IHO **INT1** .

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified) Modification

Source: Public predecessor (Class) S121_InformationType_RegisteredItem
Cardinality: [0..*]

Target: Public successor (Class) S121_InformationType_RegisteredItem
Cardinality: [0..*]

Association (direction: Source -> Destination) RecommendedAttributes

Source: Public (Class) S121_InformationType_RegisteredItem

Target: Public (Class) S121_FC_AttributeType_RI
Cardinality: [0..*]

Association (direction: Unspecified) Modification

Source: Public predecessor (Class) S121_InformationType_RegisteredItem
Cardinality: [0..*]

Target: Public successor (Class) S121_InformationType_RegisteredItem
Cardinality: [0..*]

1.2.39 S121_FCD_Register

Class in package 'S121_Register'

The class S121_FCD_Register is a realization of IHO S100_RE_Register. It specifies information about the register itself.

S100_RE_Register implements ISO 19135 RE_Register

S121_FCD_Register
Version Phase Proposed
CHS created on 26/03/2015. Last modified 23/09/2015

CONSTRAINTS

Invariant. count(self.version +self.dateOfLastChange) >= 1

[Proposed, Weight is 0.]

OUTGOING STRUCTURAL RELATIONSHIPS

Aggregation from S121_FCD_Register to S121_Registry

[Direction is 'Source -> Destination'.]

Realization from S121_FCD_Register to S100_RE_Register

[Direction is 'Source -> Destination'.]

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_FCD_Register to RE_Register

[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Aggregation from S121_InformationType_RegisteredItem to S121_FCD_Register

[Direction is 'Source -> Destination'.]

Aggregation from S121_FC_FeatureType_RI to S121_FCD_Register

[Direction is 'Source -> Destination'.]

Aggregation from S121_RE_RegisterItem to S121_FCD_Register

[Direction is 'Source -> Destination'.]

Aggregation from S121_FC_ListedValue_RI to S121_FCD_Register

[Direction is 'Source -> Destination'.]

Aggregation from S121_FC_AttributeType_RI to S121_FCD_Register

[Direction is 'Source -> Destination'.]

ATTRIBUTES

contentSummary : CharacterString Public

Summary of the content

[Is static False. Containment is Not Specified.]

dateOfLastChange : Date Public

The date when the last change was made to this register

[Is static False. Containment is Not Specified.]

itemIdentifier : integer Public

Each sub-register has its own unique identifier.

[Is static False. Containment is Not Specified.]

operatingLanguage : LanguageCode Public

The language used in this register

[Is static False. Containment is Not Specified.]

operatingLanguageCountry : CharacterString Public

[Is static False. Containment is Not Specified.]

registerName : CharacterString Public

The name of the register, unique within a multi-part register

[Is static False. Containment is Not Specified.]

ATTRIBUTES

uniformResourceIdentifier linkage : URL Public

The link to the interface of the register in the Internet

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination) ContentDescription

Source: Public register (Class) S121_FCD_Register
Cardinality: [1..*]

Target: Public containedItemClass (Class) S121_FC_ItemClass
Cardinality: [1..*]

1.2.40 S121_RE_ManagementInfo

Class in package 'S121_Register'

S121_RE_ManagementInfo is a realization of S100_RE_ManagementInfo.

The class S100_RE_ManagementInfo specifies the management record of a register item.

S100_RE_ManagementInfo amalgamates the implementation of the ISO 19135 classes: RE_DecisionStatus, S100_RE_ProposalType, S100_RE_SubmittingOrganization, RE_ItemStatus and S100_RE_Disposition.

S121_RE_ManagementInfo
Version Phase Proposed
CHS created on 26/03/2015. Last modified 21/10/2015

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_RE_ManagementInfo to S100_RE_ManagementInfo

[Direction is 'Source -> Destination'.]

Realization from S121_RE_ManagementInfo to RE_ProposalManagementInformation

[Direction is 'Source -> Destination'.]

ATTRIBUTES

controlBodyNotes : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Supplementary management information.

[Is static False. Containment is Not Specified.]

dateDisposed : Date Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Date the proposal was adjudicated.

[Is static False. Containment is Not Specified.]

dateProposed : Date Public

ATTRIBUTES

Date the proposal was made.

[Is static False. Containment is Not Specified.]

decision : CharacterString Public

Decision comments.

[Is static False. Containment is Not Specified.]

disposition : RE_Disposition Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Provides values for describing the disposition of a proposal to add or modify a register item.

[Is static False. Containment is Not Specified.]

justification : CharacterString Public

Primary reason for the proposal including how it is proposed to be used.

[Is static False. Containment is Not Specified.]

managementInfoIdentifier : integer Public

ID

[Is static False. Containment is Not Specified.]

proposalStatus : RE_DecisionStatus Public

The current status of a proposal

[Is static False. Containment is Not Specified.]

proposalType : S100_RE_ProposalType Public

The type of the proposal.

[Is static False. Containment is Not Specified.]

proposedChange : CharacterString Public

The text of the proposed change.

[Is static False. Containment is Not Specified.]

submittingOrganization : S121_FCD_SubmittingOrg Public

The proposal's sponsor.

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination)

Source: Public (Class) S121_RE_RegisterItem

Target: Public managementInfo (Class) S121_RE_ManagementInfo
Cardinality: [1]

1.2.41 S121_RE_RegisterItem

Class in package 'S121_Register'

The class S121_RE_RegisterItem implements IHO S100_RE_RegisterItem

The class S100_RE_RegisterItem carries the characteristics that are common to all types of registered items. Domain specific extensions may be added in the appropriate part of S-100 e.g. Part 3a – Feature Concept Dictionary.

S100_RE_RegisterItem implements ISO 19135 RE_RegisterItem

S121_RE_RegisterItem
Version Phase Proposed
CHS created on 26/03/2015. Last modified 17/09/2015

OUTGOING STRUCTURAL RELATIONSHIPS

Aggregation from S121_RE_RegisterItem to S121_FCD_Register
[Direction is 'Source -> Destination'.]

Realization from S121_RE_RegisterItem to «abstract» S100_RE_RegisterItem
[Direction is 'Source -> Destination'.]

Realization from S121_RE_RegisterItem to RE_RegisterItem
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from S121_InformationType_RegisteredItem to S121_RE_RegisterItem
[Direction is 'Source -> Destination'.]

Generalization from S121_FC_FeatureType_RI to S121_RE_RegisterItem
[Direction is 'Source -> Destination'.]

Generalization from S121_FC_AttributeType_RI to S121_RE_RegisterItem
[Direction is 'Source -> Destination'.]

Generalization from S121_FC_ListedValue_RI to S121_RE_RegisterItem
[Direction is 'Source -> Destination'.]

ATTRIBUTES

dateAccepted : Date Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

The date a registered item became valid.
[Is static False. Containment is Not Specified.]

dateAmended : Date Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

The date a registered item is clarified, superseded or retired.

ATTRIBUTES

[Is static False. Containment is Not Specified.]

definition : CharacterString Public

A precise statement of the nature, properties, scope, or essential qualities of the concept as realized by the item.

[Is static False. Containment is Not Specified.]

itemStatus : RE_ItemStatus Public

The state in which a registered item exists.

[Is static False. Containment is Not Specified.]

name : CharacterString Public

Succinct expression of the item concept it denotes.

[Is static False. Containment is Not Specified.]

registerID : Integer Public

Each item has its own unique identifier in a register

[Is static False. Containment is Not Specified.]

remarks : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Supplementary information.

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified) Modification

Source: Public predecessor (Class) S121_RE_RegisterItem
Cardinality: [0..*]

Target: Public successor (Class) S121_RE_RegisterItem
Cardinality: [0..*]

Association (direction: Source -> Destination)

Source: Public (Class) S121_RE_RegisterItem

Target: Public managementInfo (Class) S121_RE_ManagementInfo
Cardinality: [1]

Association (direction: Source -> Destination)

Source: Public (Class) S121_RE_RegisterItem

Target: Public referenceSource (Class) S121_FC_ReferenceSource
Cardinality: [0..1]

Association (direction: Source -> Destination)

Source: Public (Class) S121_RE_RegisterItem

Target: Public reference (Class) S121_FCD_Reference
Cardinality: [0..*]

ASSOCIATIONS

Association (direction: Source -> Destination)

Source: Public (Class) S121_RE_RegisterItem

Target: Public referenceSource (Class) S121_RE_ReferenceSource
Cardinality: [0..1]

Association (direction: Unspecified) Modification

Source: Public predecessor (Class) S121_RE_RegisterItem
Cardinality: [0..*]

Target: Public successor (Class) S121_RE_RegisterItem
Cardinality: [0..*]

1.2.42 S121_RE_RegisterItem

Class «abstract» in package 'S121_Register'

The class S121_RE_RegisterItem implements IHO S100_RE_RegisterItem

The class S100_RE_RegisterItem carries the characteristics that are common to all types of registered items. Domain specific extensions may be added in the appropriate part of S-100 e.g. Part 3a – Feature Concept Dictionary.

S100_RE_RegisterItem implements ISO 19135 RE_RegisterItem

The class S121_RE_RegisterItem is a parallel construct to S121_RE_RegisterItem

S121_RE_RegisterItem
Version 1 Phase 2 Proposed
IHO TSMAD created on 26/03/2015. Last modified 27/11/2016

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from «abstract» S121_RE_RegisterItem to RE_RegisterItem
[Direction is 'Source -> Destination'.]

Realization from «abstract» S121_RE_RegisterItem to «abstract» S100_RE_RegisterItem
[Direction is 'Source -> Destination'.]

Aggregation from «abstract» S121_RE_RegisterItem to S121_RE_Register
[Direction is 'Source -> Destination'.]

ATTRIBUTES

dateAccepted : Date Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

The date a registered item became valid
[Is static False. Containment is Not Specified.]

dateAmended : Date Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

The date a registered item is clarified, superseded or retired

ATTRIBUTES

[Is static False. Containment is Not Specified.]

definition : CharacterString Public

A precise statement of the nature, properties, scope, or essential qualities of the concept as realized by the item.

[Is static False. Containment is Not Specified.]

itemIdentifier : int Public

Each item has its own unique identifier in a register

[Is static False. Containment is Not Specified.]

itemStatus : RE_ItemStatus Public

The state in which a registered item exists

[Is static False. Containment is Not Specified.]

name : CharacterString Public

Succinct expression of the item concept it denotes

[Is static False. Containment is Not Specified.]

remarks : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Supplementary information

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination)

Source: Public (Class) S121_RE_RegisterItem «abstract»

Target: Public reference (Class) S121_RE_Reference
Cardinality: [0..*]

Association (direction: Source -> Destination)

Source: Public (Class) S121_RE_RegisterItem «abstract»

Target: Public referenceSource (Class) S121_RE_ReferenceSource
Cardinality: [0..1]

Association (direction: Source -> Destination)

Source: Public (Class) S121_RE_RegisterItem «abstract»

Target: Public managementInfo (Class) S121_RE_ManagementInfo
Cardinality: [1]

Association (direction: Unspecified) Modification

Source: Public predecessor (Class) S121_RE_RegisterItem «abstract»
Cardinality: [0..*]

Target: Public successor (Class) S121_RE_RegisterItem «abstract»
Cardinality: [0..*]

ASSOCIATIONS

Association (direction: Unspecified) Modification

Source: Public predecessor (Class) S121_RE_RegisterItem «abstract»
Cardinality: [0..*]

Target: Public successor (Class) S121_RE_RegisterItem «abstract»
Cardinality: [0..*]

1.3 S121 Information Structure

Package in package 'S-121 Maritime Limits and Boundaries'

S121 Information Structure
Version Phase Approved
S-121 PT created on 12/08/2015. Last modified 20/02/2016

1.3.1LADM Spatial Hierachy diagram

Class diagram in package 'S121 Information Structure'

LADM Spatial Hierachy
Version 1.0
CDOBrien created on 21/11/2016. Last modified 27/11/2016

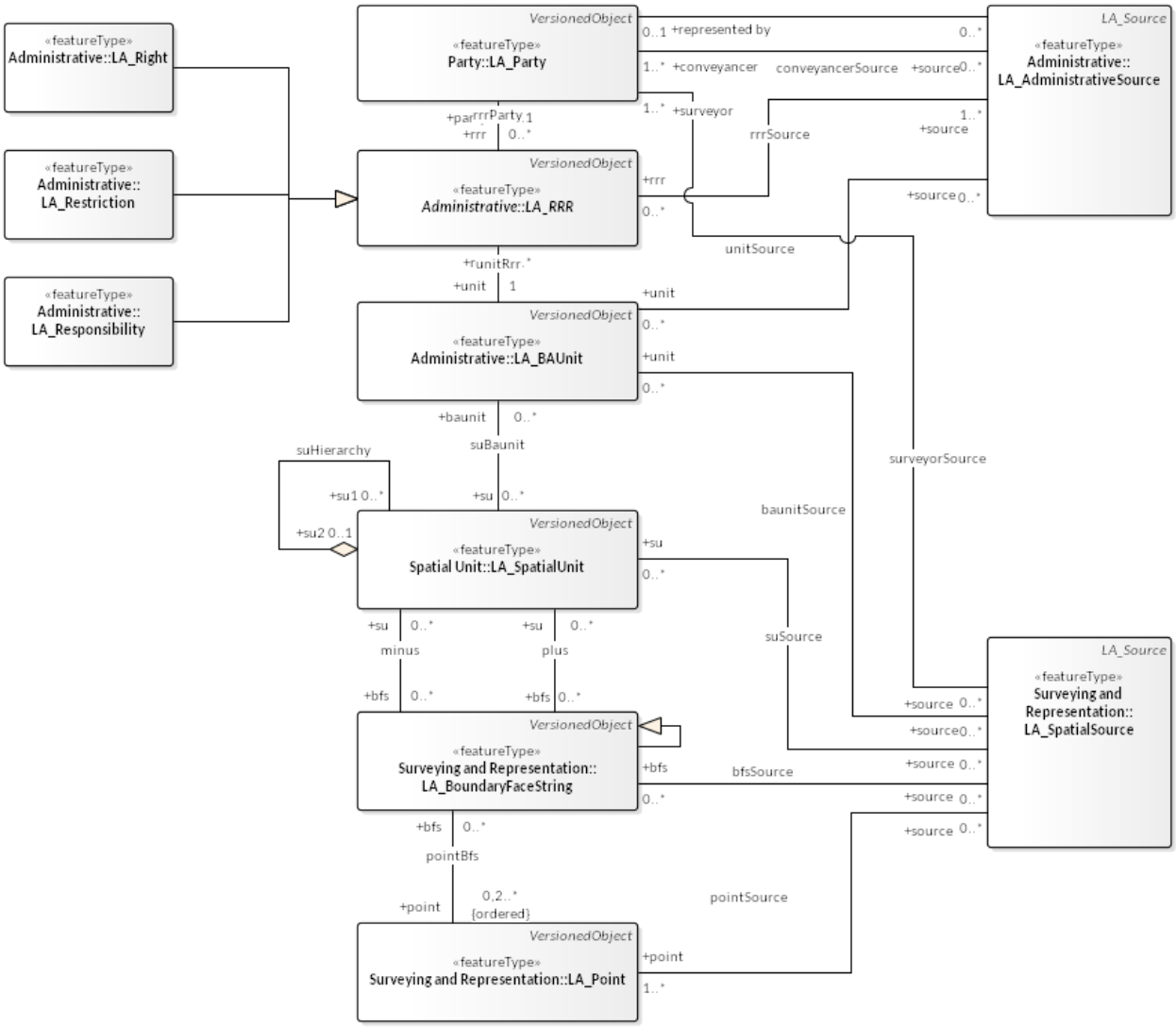

Figure 18: LADM Spatial Hierachy

1.3.2LA_Party

Class «featureType» in package 'Party'

a person or organisation that plays a role in a **rights** transaction

LA_Party
Version 1.0 Phase Mandatory
ISO 19152 created on 20/05/2008. Last modified 23/11/2016

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «featureType» LA_Party to «featureType» VersionedObject
[Direction is 'Source -> Destination'.]

Aggregation from «featureType» LA_Party to «interface» LA_SpatialUnitOverview
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from «featureType» LA_GroupParty to «featureType» LA_Party
[Direction is 'Source -> Destination'.]

Realization from S121_Party to «featureType» LA_Party
[Name is Realize. Direction is 'Source -> Destination'.]

Generalization from «featureType» KR_OwnerInformation to «featureType» LA_Party
[Direction is 'Source -> Destination'.]

Realization from S121_Party to «featureType» LA_Party
[Name is Realize. Direction is 'Source -> Destination'.]

Generalization from «featureType» Farmer to «featureType» LA_Party
[Direction is 'Source -> Destination'.]

Generalization from QLD_Party to «featureType» LA_Party
[Direction is 'Source -> Destination'.]

Generalization from NL_Party to «featureType» LA_Party
[Direction is 'Source -> Destination'.]

ATTRIBUTES

extPID : Oid Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the identifier of the party in an external registration
[Is static False. Containment is Not Specified.]

name : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the name of the party
[Is static False. Containment is Not Specified.]

pID : Oid Public

ATTRIBUTES

the identifier of the party

[Is static False. Containment is Not Specified.]

role : LA_PartyRoleType Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

the role of a party in the data update and maintenance process

[Is static False. Containment is Not Specified.]

type : LA_PartyType Public

the type of the party

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified) conveyancerSource

Source: Public conveyancer (Class) LA_Party «featureType»
Cardinality: [1..*]

Target: Public source (Class) LA_AdministrativeSource «featureType»
Cardinality: [0..*]

Association (direction: Unspecified) surveyorSource

Source: Public surveyor (Class) LA_Party «featureType»
Cardinality: [1..*]

Target: Public source (Class) LA_SpatialSource «featureType»
Cardinality: [0..*]

Association (direction: Unspecified) rrrParty

Source: Public party (Class) LA_Party «featureType»
Cardinality: [0..1]

Target: Public rrr (Class) LA_RRR «featureType»
Cardinality: [0..*]

AssociationClass (direction: Unspecified) members

Source: Public group (Class) LA_GroupParty «featureType»
Cardinality: [0..1]

Target: Public parties (Class) LA_Party «featureType»
Cardinality: [2..*]

Association (direction: Unspecified) baunitAsParty

Source: Public unit (Class) LA_BAUnit «featureType»
Cardinality: [0..*]

Target: Public party (Class) LA_Party «featureType»
Cardinality: [0..*]

Association (direction: Unspecified)

Source: Public folio (Class) LA_PartyPortfolio «interface»
Cardinality: [0..*]

Target: Public party (Class) LA_Party «featureType»
Cardinality: [1]

Association (direction: Unspecified)

Source: Public (Class) LA_AdministrativeSource «featureType»
Cardinality: [0..*]

Target: Public represented by (Class) LA_Party «featureType»

ASSOCIATIONS
Cardinality: [0..1]

1.3.3LA_RRR

Class «featureType» in package 'Administrative'

An instance of a subclass of LA_RRR is a **right** (or social tenure relationship), a **restriction**, or a **responsibility**

LA_RRR
Version 1.0 Phase 1.0 Proposed
ISO 19152 created on 27/05/2008. Last modified 23/11/2016
Alias LA_SocialTenureRelationship

OUTGOING STRUCTURAL RELATIONSHIPS
Aggregation from «featureType» LA_RRR to «interface» LA_SpatialUnitOverview [Direction is 'Source -> Destination'.]
Aggregation from «featureType» LA_RRR to «interface» LA_PartyPortfolio [Direction is 'Source -> Destination'.]
Generalization from «featureType» LA_RRR to «featureType» VersionedObject [Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS
Realization from S121_RRR to «featureType» LA_RRR [Name is Realize. Direction is 'Source -> Destination'.]
Generalization from «featureType» LA_Restriction to «featureType» LA_RRR [Direction is 'Source -> Destination'.]
Realization from «abstract» S121_RRR to «featureType» LA_RRR [Name is Realize. Direction is 'Source -> Destination'.]
Generalization from «featureType» KR_ParcelPrice to «featureType» LA_RRR [Direction is 'Source -> Destination'.]
Generalization from QLD_RRR to «featureType» LA_RRR [Direction is 'Source -> Destination'.]
Generalization from NL_RRR to «featureType» LA_RRR [Direction is 'Source -> Destination'.]
Generalization from «featureType» LA_Responsibility to «featureType» LA_RRR [Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from «featureType» LA_Right to «featureType» LA_RRR

[Direction is 'Source -> Destination'.]

CONNECTORS

Dependency Source -> Destination
From: Legal Profiles : Package, Public
To: LA_RRR : Class, Public

ATTRIBUTES

description : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

description regarding the right, restriction or responsibility

[Is static False. Containment is Not Specified.]

rID : Oid Public

The RRR identifier

[Is static False. Containment is Not Specified.]

share : Fraction Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

a share in an instance of a subclass of LA_RRR

[Is static False. Containment is Not Specified.]

shareCheck : Boolean Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

boolean indicating whether the constraint is applicable

[Is static False. Containment is Not Specified.]

timeSpec : ISO8601_ISO14825_Type Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

operational use of a right in time sharing

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified) unitRrr

Source: Public rrr (Class) LA_RRR «featureType»
Cardinality: [1..*]

Target: Public unit (Class) LA_BAUnit «featureType»
Cardinality: [1]

Association (direction: Unspecified) rrrSource

Source: Public rrr (Class) LA_RRR «featureType»
Cardinality: [0..*]

Target: Public source (Class) LA_AdministrativeSource «featureType»

ASSOCIATIONS

Cardinality: [1..*]

Association (direction: Unspecified) rrrParty

Source: Public party (Class) LA_Party «featureType»
Cardinality: [0..1]

Target: Public rrr (Class) LA_RRR «featureType»
Cardinality: [0..*]

1.3.4LA_BAUnit

Class «featureType» in package 'Administrative'

administrative entity consisting of zero or more **spatial units** against which (one or more) unique and homogeneous **rights** (e.g. ownership right or land use right), **responsibilities** or **restrictions** are associated to the whole entity, as included in a **Land Administration** system

LA_BAUnit
Version 1.0 Phase 1.0 Proposed
ISO 19152 created on 26/05/2008. Last modified 27/11/2016

CONSTRAINTS

Invariant. sum(RRR.share)=1 per type if RRR.shareCheck

[Approved, Weight is 0.]

Invariant. no overlap RRR.timeSpec per summed type

[Approved, Weight is 1.]

OUTGOING STRUCTURAL RELATIONSHIPS

Aggregation from «featureType» LA_BAUnit to «interface» LA_SpatialUnitOverview

[Direction is 'Source -> Destination'.]

Generalization from «featureType» LA_BAUnit to «featureType» VersionedObject

[Direction is 'Source -> Destination'.]

Aggregation from «featureType» LA_BAUnit to «interface» LA_PartyPortfolio

[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from S121_BAUnit to «featureType» LA_BAUnit

[Name is Realize. Direction is 'Source -> Destination'.]

Generalization from «featureType» BasicPropertyUnit to «featureType» LA_BAUnit

[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from «featureType» KR_ParcelPrice to «featureType» LA_BAUnit
[Direction is 'Source -> Destination'.]

Generalization from Parcel to «featureType» LA_BAUnit
[Direction is 'Source -> Destination'.]

Generalization from NL_BAUnit to «featureType» LA_BAUnit
[Direction is 'Source -> Destination'.]

Generalization from QLD_BAUnit to «featureType» LA_BAUnit
[Direction is 'Source -> Destination'.]

Realization from S121_BAUnit to «featureType» LA_BAUnit
[Name is Realize. Direction is 'Source -> Destination'.]

ATTRIBUTES

name : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the name of the basic administrative unit
[Is static False. Containment is Not Specified.]

type : LA_BAUnitType Public

the type of the basic administrative unit
[Is static False. Containment is Not Specified.]

uID : Oid Public

the identifier of the basic administrative unit
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified) baunitSource

Source: Public unit (Class) LA_BAUnit «featureType»
Cardinality: [0..*]

Target: Public source (Class) LA_SpatialSource «featureType»
Cardinality: [0..*]

Association (direction: Unspecified) unitSource

Source: Public unit (Class) LA_BAUnit «featureType»
Cardinality: [0..*]

Target: Public source (Class) LA_AdministrativeSource «featureType»
Cardinality: [0..*]

Association (direction: Unspecified) baunitAsParty

Source: Public unit (Class) LA_BAUnit «featureType»
Cardinality: [0..*]

Target: Public party (Class) LA_Party «featureType»
Cardinality: [0..*]

ASSOCIATIONS

AssociationClass (direction: Unspecified) relationBaunit

Source: Public unit1 (Class) LA_BAUnit «featureType»
Cardinality: [0..*]

Target: Public unit2 (Class) LA_BAUnit «featureType»
Cardinality: [0..*]

Association (direction: Unspecified)

Source: Public value (Class) ExtValuation «blueprint»
Cardinality: [0..*]

Target: Public unit (Class) LA_BAUnit «featureType»
Cardinality: [1]

Association (direction: Unspecified) suBaunit

Source: Public su (Class) LA_SpatialUnit «featureType»
Cardinality: [0..*]

Target: Public baunit (Class) LA_BAUnit «featureType»
Cardinality: [0..*]

Association (direction: Unspecified) unitRrr

Source: Public rrr (Class) LA_RRR «featureType»
Cardinality: [1..*]

Target: Public unit (Class) LA_BAUnit «featureType»
Cardinality: [1]

Association (direction: Unspecified)

Source: Public tax (Class) ExtTaxation «blueprint»
Cardinality: [0..*]

Target: Public unit (Class) LA_BAUnit «featureType»
Cardinality: [1]

AssociationClass (direction: Unspecified) relationBaunit

Source: Public unit1 (Class) LA_BAUnit «featureType»
Cardinality: [0..*]

Target: Public unit2 (Class) LA_BAUnit «featureType»
Cardinality: [0..*]

1.3.5LA_Right

Class «featureType» in package 'Administrative'

action, activity or class of actions that a system participant may perform on or using an associated resource

LA_Right
Version 1.0 Phase 1.0 Proposed
created on 27/05/2008. Last modified 22/11/2016
Alias STDM_Relationship

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «featureType» LA_Right to «featureType» LA_RRR
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from ID_Right to «featureType» LA_Right
[Direction is 'Source -> Destination'.]

Generalization from NL_RealRight to «featureType» LA_Right
[Direction is 'Source -> Destination'.]

Generalization from Appurtenance to «featureType» LA_Right
[Direction is 'Source -> Destination'.]

Realization from S121_Right to «featureType» LA_Right
[Direction is 'Source -> Destination'.]

Realization from S121_Right to «featureType» LA_Right
[Direction is 'Source -> Destination'.]

Generalization from BasicOwnership to «featureType» LA_Right
[Direction is 'Source -> Destination'.]

ATTRIBUTES

type : LA_RightType Public

the type of the right
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified) mortgageRight

Source: Public mortgage (Class) LA_Mortgage «featureType»
Cardinality: [0..*]

Target: Public right (Class) LA_Right «featureType»
Cardinality: [0..*]

1.3.6LA_Restriction

Class «featureType» in package 'Administrative'

formal or informal entitlement to refrain from doing something

LA_Restriction
Version 1.0 Phase 1.0 Proposed
created on 27/05/2008. Last modified 22/11/2016

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «featureType» LA_Restriction to «featureType» LA_RRR
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from «featureType» FarmingLimitation to «featureType» LA_Restriction
[Direction is 'Source -> Destination'.]

Generalization from QLD_Restriction to «featureType» LA_Restriction
[Direction is 'Source -> Destination'.]

Generalization from Encumbrance to «featureType» LA_Restriction
[Direction is 'Source -> Destination'.]

Generalization from «featureType» LA_Mortgage to «featureType» LA_Restriction
[Direction is 'Source -> Destination'.]

Generalization from AdministrativeServitude to «featureType» LA_Restriction
[Direction is 'Source -> Destination'.]

Realization from S121_Restriction to «featureType» LA_Restriction
[Direction is 'Source -> Destination'.]

Generalization from NL_Restriction to «featureType» LA_Restriction
[Direction is 'Source -> Destination'.]

Realization from S121_Restriction to «featureType» LA_Restriction
[Direction is 'Source -> Destination'.]

ATTRIBUTES

partyRequired : Boolean Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

indicates whether a party is required for the registration of the restriction in the association to LA_Party
[Is static False. Containment is Not Specified.]

type : LA_RestrictionType Public

the type of the restriction
[Is static False. Containment is Not Specified.]

1.3.7LA_Responsibility

Class «featureType» in package 'Administrative'

formal or informal obligation to do something

LA_Responsibility
Version 1.0 Phase 1.0 Proposed
created on 27/05/2008. Last modified 22/11/2016

OUTGOING STRUCTURAL RELATIONSHIPS

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «featureType» LA_Responsibility to «featureType» LA_RRR
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from S121_Responsibility to «featureType» LA_Responsibility
[Direction is 'Source -> Destination'.]

Realization from S121_Responsibility to «featureType» LA_Responsibility
[Direction is 'Source -> Destination'.]

ATTRIBUTES

type : LA_ResponsibilityType Public

the type of the responsibility
[Is static False. Containment is Not Specified.]

1.3.8LA_AdministrativeSource

Class «featureType» in package 'Administrative'

source with the administrative description (where applicable) of the **parties** involved, the **rights**, **restrictions** and **responsibilities** created and the **basic administrative units** affected

LA_AdministrativeSource
Version 1.0 Phase 1.0 Proposed
created on 03/06/2008. Last modified 23/11/2016
Alias LA_SocialTenureInventory

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «featureType» LA_AdministrativeSource to «featureType» LA_Source
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from S121_AdministrativeSource to «featureType» LA_AdministrativeSource
[Direction is 'Source -> Destination'.]

Realization from S121_AdministrativeSource to «featureType» LA_AdministrativeSource
[Direction is 'Source -> Destination'.]

Generalization from NL_AdminSourceDocument to «featureType» LA_AdministrativeSource
[Direction is 'Source -> Destination'.]

ATTRIBUTES

ATTRIBUTES

text : MultiMediaType Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the content of the document

[Is static False. Containment is Not Specified.]

type : LA_AdministrativeSourceType Public

the type of document

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified) relationSource

Source: Public source (Class) LA_AdministrativeSource «featureType»
Cardinality: [0..*]

Target: Public requiredRelationBaunit (AssociationClass) LA_RequiredRelationshipBAUnit «featureType»
Cardinality: [0..*]

Association (direction: Unspecified)

Source: Public (Class) LA_AdministrativeSource «featureType»
Cardinality: [0..*]

Target: Public represented by (Class) LA_Party «featureType»
Cardinality: [0..1]

Association (direction: Unspecified) conveyancerSource

Source: Public conveyancer (Class) LA_Party «featureType»
Cardinality: [1..*]

Target: Public source (Class) LA_AdministrativeSource «featureType»
Cardinality: [0..*]

Association (direction: Unspecified) unitSource

Source: Public unit (Class) LA_BAUnit «featureType»
Cardinality: [0..*]

Target: Public source (Class) LA_AdministrativeSource «featureType»
Cardinality: [0..*]

Association (direction: Unspecified) rrrSource

Source: Public rrr (Class) LA_RRR «featureType»
Cardinality: [0..*]

Target: Public source (Class) LA_AdministrativeSource «featureType»
Cardinality: [1..*]

1.3.9LA_SpatialUnit

Class «featureType» in package 'Spatial Unit'

single area (or multiple areas) of land or water, or a single volume (or multiple volumes) of space

LA_SpatialUnit
Version 1.0 Phase 1.0 Proposed
ISO 19152 created on 12/09/2008. Last modified 23/11/2016

Alias LA_Parcel

OUTGOING STRUCTURAL RELATIONSHIPS

Aggregation from «featureType» LA_SpatialUnit to «interface» LA_PartyPortfolio
[Direction is 'Source -> Destination'.]

Aggregation from «featureType» LA_SpatialUnit to «interface» LA_RegionMap
[Direction is 'Source -> Destination'.]

Aggregation from «featureType» LA_SpatialUnit to «featureType» LA_SpatialUnit
[Name is suHierarchy. Direction is 'Source -> Destination'.]

Generalization from «featureType» LA_SpatialUnit to «featureType» VersionedObject
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from Text_SpatialUnit to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

Generalization from QLD_AdminArea to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

Generalization from SurfacewHoles_SpatialUnit to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

Generalization from «featureType» JP_LASpatialUnit to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

Realization from «FeatureType» S121_Space to «featureType» LA_SpatialUnit
[Name is Realize. Direction is 'Source -> Destination'.]

Generalization from Unstructured_SpatialUnit to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

Generalization from «featureType» LA_LegalSpaceBuildingUnit to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

Generalization from «featureType» LA_LegalSpaceUtilityNetwork to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

Generalization from Topological_SpatialUnit to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

Realization from «FeatureType» S121_FeatureUnit to «featureType» LA_SpatialUnit
[Name is Realize. Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from «featureType» KR_Parcel to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

Realization from «FeatureType» S121_Zone to «featureType» LA_SpatialUnit
[Name is Realize. Direction is 'Source -> Destination'.]

Generalization from Polygon_SpatialUnit to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

Aggregation from «featureType» SubParcel to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

Generalization from «featureType» RF_LegalSpaceBuilding to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

Generalization from «featureType» RF_LegalSpaceUnfinshed to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

Generalization from 3D_SpatialUnit to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

Generalization from «Feature Type» HUN_SpatialUnit to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

Generalization from «featureType» RF_LandParcel to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

Generalization from «featureType» RF_LegalSpaceOtherConstruction to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

Generalization from QLD_SpatialUnit to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

Generalization from Point_SpatialUnit to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

Realization from «FeatureAttribute» S121_SpatialAttributeType to «featureType» LA_SpatialUnit
[Name is Realize. Direction is 'Source -> Destination'.]

Generalization from «featureType» CadastralParcel to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

Aggregation from «featureType» LA_SpatialUnit to «featureType» LA_SpatialUnit
[Name is suHierarchy. Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from NL_SpatialUnit to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

Generalization from «featureType» RF_LegalSpaceBuildingUnit to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

CONNECTORS

Dependency Source -> Destination
From: WithHoles not separate option : Package, Public
To: LA_SpatialUnit : Class, Public

Dependency Source -> Destination
From: Topological_Profile : Package, Public
To: LA_SpatialUnit : Class, Public

ATTRIBUTES

area : LA_AreaValue Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

the area value
[Is static False. Containment is Not Specified.]

dimension : LA_DimensionType Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the dimension of the spatial unit
[Is static False. Containment is Not Specified.]

extAddressID : ExtAddress Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

the link to external address(es) of the spatial unit
[Is static False. Containment is Not Specified.]

label : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

short textual description of the spatial unit
[Is static False. Containment is Not Specified.]

referencePoint : GM_Point Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the coordinates of a point inside the spatial unit
[Is static False. Containment is Not Specified.]

suID : Oid Public
Alias: nationalCadastralReference

the spatial unit identifier

ATTRIBUTES

[Is static False. Containment is Not Specified.]

surfaceRelation : LA_SurfaceRelationType Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

[Is static False. Containment is Not Specified.]

volume : LA_VolumeValue Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

the volume value (in case of bounded 3D description)

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

AssociationClass (direction: Unspecified) relationSu

Source: Public su1 (Class) LA_SpatialUnit «featureType»
Cardinality: [0..*]

Target: Public su2 (Class) LA_SpatialUnit «featureType»
Cardinality: [0..*]

Association (direction: Unspecified) suBaunit

Source: Public su (Class) LA_SpatialUnit «featureType»
Cardinality: [0..*]

Target: Public baunit (Class) LA_BAUnit «featureType»
Cardinality: [0..*]

Association (direction: Unspecified)

Source: Public suID (Class) LA_SpatialUnit «featureType»
Cardinality: [1]

Target: Public (Class) QLD_BoundaryConnector
Cardinality: [*]

Association (direction: Unspecified) plus

Source: Public su (Class) LA_SpatialUnit «featureType»
Cardinality: [0..*]

Target: Public bf (Class) LA_BoundaryFace «featureType»
Cardinality: [0..*]

Association (direction: Unspecified) minus

Source: Public su (Class) LA_SpatialUnit «featureType»
Cardinality: [0..*]

Target: Public bfs (Class) LA_BoundaryFaceString «featureType»
Cardinality: [0..*]

AssociationClass (direction: Unspecified) relationSu

Source: Public su1 (Class) LA_SpatialUnit «featureType»
Cardinality: [0..*]

Target: Public su2 (Class) LA_SpatialUnit «featureType»
Cardinality: [0..*]

Association (direction: Unspecified)

Source: Public overview (Class) LA_SpatialUnitOverview «interface»
Cardinality: [0..*]

Target: Public spatialUnit (Class) LA_SpatialUnit «featureType»
Cardinality: [1]

ASSOCIATIONS

Association (direction: Unspecified) minus

Source: Public bf (Class) LA_BoundaryFace «featureType»
Cardinality: [0..*]

Target: Public su (Class) LA_SpatialUnit «featureType»
Cardinality: [0..*]

Association (direction: Unspecified) suSuGroup

Source: Public whole (Class) LA_SpatialUnitGroup «featureType»
Cardinality: [0..*]

Target: Public part (Class) LA_SpatialUnit «featureType»
Cardinality: [0..*]

Association (direction: Unspecified) plus

Source: Public bfs (Class) LA_BoundaryFaceString «featureType»
Cardinality: [0..*]

Target: Public su (Class) LA_SpatialUnit «featureType»
Cardinality: [0..*]

Association (direction: Unspecified)

Source: Public use (Class) ExtLandUse «blueprint»
Cardinality: [0..*]

Target: Public su (Class) LA_SpatialUnit «featureType»
Cardinality: [1]

Association (direction: Unspecified) suSource

Source: Public source (Class) LA_SpatialSource «featureType»
Cardinality: [0..*]

Target: Public su (Class) LA_SpatialUnit «featureType»
Cardinality: [0..*]

Association (direction: Unspecified) referencePoint

Source: Public point (Class) LA_Point «featureType»
Cardinality: [0..1]

Target: Public su (Class) LA_SpatialUnit «featureType»
Cardinality: [0..1]

Association (direction: Unspecified)

Source: Public (Class) QLD_NonPropertyDetail
Cardinality: [0..*]

Target: Public (Class) LA_SpatialUnit «featureType»
Cardinality: [0..1]

Association (direction: Unspecified)

Source: Public cov (Class) ExtLandCover «blueprint»
Cardinality: [0..*]

Target: Public su (Class) LA_SpatialUnit «featureType»
Cardinality: [1]

Association (direction: Unspecified) suLevel

Source: Public level (Class) LA_Level «featureType»
Cardinality: [0..1]

Target: Public su (Class) LA_SpatialUnit «featureType»
Cardinality: [0..*]

OPERATIONS
areaClosed () : Boolean Public [Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]
computeArea () : Area Public [Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]
computeVolume () : Volume Public [Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]
createArea () : GM_MultiSurface Public [Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]
createVolume () : GM_MultiSolid Public [Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]
volumeClosed () : Boolean Public [Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

1.3.10 LA_Point

Class «featureType» in package 'Surveying and Representation'

0-dimensional geometric primitive, representing a position

LA_Point
Version 1.0 Phase 1.0 Proposed
uitermark created on 23/05/2008. Last modified 23/11/2016
Alias LA_SurveyPoint

OUTGOING STRUCTURAL RELATIONSHIPS
Generalization from «featureType» LA_Point to «featureType» VersionedObject [Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS
Generalization from «featureType» JP_LAPoint to «featureType» LA_Point [Direction is 'Source -> Destination'.]
Generalization from «featureType» KR_ControlPoint to «featureType» LA_Point [Direction is 'Source -> Destination'.]
Realization from «FeatureType» S121_Location to «featureType» LA_Point [Name is Realize. Direction is 'Source -> Destination'.]

ATTRIBUTES

ATTRIBUTES

interpolationRole : LA_InterpolationType Public

the role of point in the structure of a straight line or curve

[Is static False. Containment is Not Specified.]

monumentation : LA_MonumentationType Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the type of monumentation

[Is static False. Containment is Not Specified.]

originalLocation : GM_Point Public

the calculated co-ordinates, based on observations

[Is static False. Containment is Not Specified.]

pID : Oid Public

the point identifier

[Is static False. Containment is Not Specified.]

pointType : LA_PointType Public = control

the type of point

[Is static False. Containment is Not Specified.]

productionMethod : LI_Lineage Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

lineage

[Is static False. Containment is Not Specified.]

transAndResult : LA _Transformation Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

transformation and transformed location

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified) pointSource

Source: Public point (Class) LA_Point «featureType»
Cardinality: [1..*]

Target: Public source (Class) LA_SpatialSource «featureType»
Cardinality: [0..*]

Association (direction: Unspecified) referencePoint

Source: Public point (Class) LA_Point «featureType»
Cardinality: [0..1]

Target: Public su (Class) LA_SpatialUnit «featureType»
Cardinality: [0..1]

Association (direction: Unspecified) pointBf

ASSOCIATIONS

Source: Public bf (Class) LA_BoundaryFace «featureType»
Cardinality: [0..*]

Target: Public point (Class) LA_Point «featureType»
Cardinality: [0,3..*]

Association (direction: Unspecified) geometry

Source: Public (Class) ExtNetworkSegment «blueprint»
Cardinality: [0..*]

Target: Public (Class) LA_Point «featureType»
Cardinality: [0..*]

Association (direction: Unspecified) pointBfs

Source: Public bfs (Class) LA_BoundaryFaceString «featureType»
Cardinality: [0..*]

Target: Public point (Class) LA_Point «featureType»
Cardinality: [0,2..*]

Association (direction: Unspecified) geometry

Source: Public (Class) ExtNetworkNode «blueprint»
Cardinality: [0..*]

Target: Public (Class) LA_Point «featureType»

OPERATIONS

getTransResult () : GM_Point Public
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

1.3.11 LA_SpatialSource

Class «featureType» in package 'Surveying and Representation'

source with the spatial representation of one (part of) or more **spatial units**

LA_SpatialSource
Version 1.0 Phase 1.0 Proposed
created on 03/06/2008. Last modified 23/11/2016
Alias LA_SpatialUnitInventory

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «featureType» LA_SpatialSource to «featureType» LA_Source
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from «featureType» JP_LASpatialSource to «featureType» LA_SpatialSource
[Direction is 'Source -> Destination'.]

Generalization from «featureType» KR_SpatialSource to «featureType» LA_SpatialSource
[Direction is 'Source -> Destination'.]

Realization from S121_SpatialSource to «featureType» LA_SpatialSource
[Direction is 'Source -> Destination'.]

ATTRIBUTES

measurements : OM_Observation Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

the observations, and measurements, as a basis for mapping, and as a basis for historical reconstruction of the location of (parts of) the spatial unit in the field

[Is static False. Containment is Not Specified.]

procedure : OM_Process Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

[Is static False. Containment is Not Specified.]

type : LA_SpatialSourceType Public

the type of the spatial source

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified) bfSource

Source: Public source (Class) LA_SpatialSource «featureType»
Cardinality: [0..*]

Target: Public bf (Class) LA_BoundaryFace «featureType»
Cardinality: [0..*]

Association (direction: Unspecified) suSource

Source: Public source (Class) LA_SpatialSource «featureType»
Cardinality: [0..*]

Target: Public su (Class) LA_SpatialUnit «featureType»
Cardinality: [0..*]

Association (direction: Unspecified) bfsSource

Source: Public source (Class) LA_SpatialSource «featureType»
Cardinality: [0..*]

Target: Public bfs (Class) LA_BoundaryFaceString «featureType»
Cardinality: [0..*]

Association (direction: Unspecified) baunitSource

Source: Public unit (Class) LA_BAUnit «featureType»
Cardinality: [0..*]

Target: Public source (Class) LA_SpatialSource «featureType»
Cardinality: [0..*]

Association (direction: Unspecified) pointSource

Source: Public point (Class) LA_Point «featureType»
Cardinality: [1..*]

Target: Public source (Class) LA_SpatialSource «featureType»
Cardinality: [0..*]

Association (direction: Unspecified) surveyorSource

Source: Public surveyor (Class) LA_Party «featureType»
Cardinality: [1..*]

Target: Public source (Class) LA_SpatialSource «featureType»
Cardinality: [0..*]

ASSOCIATIONS

1.3.12 LA_BoundaryFaceString

Class «featureType» in package 'Surveying and Representation'

boundary forming part of the outside of a **spatial unit**

LA_BoundaryFaceString
Version 1.0 Phase 1.0 Proposed
uitermark created on 29/08/2008. Last modified 23/11/2016

CONSTRAINTS
Invariant. (count (geometry) + count (locationByText)) > 0 or count (point) >1 [Approved, Weight is 1.]

OUTGOING STRUCTURAL RELATIONSHIPS
Generalization from «featureType» LA_BoundaryFaceString to «featureType» VersionedObject [Direction is 'Source -> Destination'.]
Generalization from «featureType» LA_BoundaryFaceString to «featureType» LA_BoundaryFaceString [Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS
Generalization from Text_Boundary to «featureType» LA_BoundaryFaceString [Direction is 'Source -> Destination'.]
Generalization from SurfacewHoles_FaceString to «featureType» LA_BoundaryFaceString [Direction is 'Source -> Destination'.]
Generalization from Polygon_Boundary to «featureType» LA_BoundaryFaceString [Direction is 'Source -> Destination'.]
Generalization from Unstructured_Boundary to «featureType» LA_BoundaryFaceString [Direction is 'Source -> Destination'.]
Generalization from «featureType» JP_LABoundaryFaceString to «featureType» LA_BoundaryFaceString [Direction is 'Source -> Destination'.]
Generalization from Topological_Boundary to «featureType» LA_BoundaryFaceString [Direction is 'Source -> Destination'.]
Realization from «Geometry» S121_Curve to «featureType» LA_BoundaryFaceString [Name is Realize. Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from «featureType» LA_BoundaryFaceString to «featureType» LA_BoundaryFaceString
[Direction is 'Source -> Destination'.]

Generalization from «featureType» CadastralBoundary to «featureType» LA_BoundaryFaceString
[Direction is 'Source -> Destination'.]

ATTRIBUTES

bfsID : Oid Public

the boundary face string identifier

[Is static False. Containment is Not Specified.]

geometry : GM_MultiCurve Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

boundary represented via a curve at ground level

Constraints:
interpolation : Invariant

[Is static False. Containment is Not Specified.]

locationByText : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the boundary represented in text

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified) plus

Source: Public bfs (Class) LA_BoundaryFaceString «featureType»
Cardinality: [0..*]

Target: Public su (Class) LA_SpatialUnit «featureType»
Cardinality: [0..*]

Association (direction: Unspecified) pointBfs

Source: Public bfs (Class) LA_BoundaryFaceString «featureType»
Cardinality: [0..*]

Target: Public point (Class) LA_Point «featureType»
Cardinality: [0,2..*]

Association (direction: Unspecified)

Source: Public fsID (Class) LA_BoundaryFaceString «featureType»
Cardinality: [1]

Target: Public (Class) QLD_BoundaryConnector
Cardinality: [*]

Association (direction: Unspecified) minus

Source: Public su (Class) LA_SpatialUnit «featureType»
Cardinality: [0..*]

Target: Public bfs (Class) LA_BoundaryFaceString «featureType»
Cardinality: [0..*]

ASSOCIATIONS

Association (direction: Unspecified) bfsSource

Source: Public source (Class) LA_SpatialSource «featureType»
Cardinality: [0..*]

Target: Public bfs (Class) LA_BoundaryFaceString «featureType»
Cardinality: [0..*]

1.3.13 S121 Main Featture Types diagram

Class diagram in package 'S121 Information Structure'

The four high level *abstract* Feature Type objects. From these objects derive all of the other object types in a Feature Catalogue.

S121 Main Featture Types
Version
S121 PT created on 26/03/2015. Last modified 01/12/2016

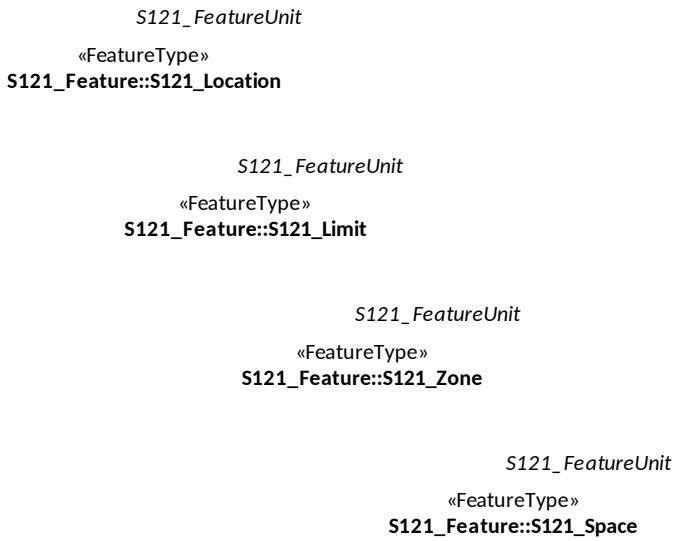

Figure 19: S121 Main Featture Types

1.3.14 S121_Limit

Class «FeatureType» in package 'S121_Feature'

Name: Limit
AlphaCode: MLBLIM
camelCaseCode: Limit
NumericCode:
Use Type: theme
Definition: The MLB_Limit object is an object that defines any limits or boundaries either relating to terrestrial, marine or both environments.
Permitted Primitives: P, L
References:
Remarks:

S121_Limit
Version Phase Proposed
S-121 PT created on 26/03/2015. Last modified 01/12/2016
Extends S121_FeatureUnit

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «FeatureType» S121_Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from «MLB» Exclusive Economic Zone Limit to «FeatureType» S121_Limit
[Direction is 'Source -> Destination'.]

Realization from «MLB» Baseline to «FeatureType» S121_Limit
[Direction is 'Source -> Destination'.]

Realization from «MLB» Contiguous Zone Limit to «FeatureType» S121_Limit
[Direction is 'Source -> Destination'.]

Realization from «MLB» Inland Limit to «FeatureType» S121_Limit
[Direction is 'Source -> Destination'.]

Realization from «MLB» International Boundary to «FeatureType» S121_Limit
[Direction is 'Source -> Destination'.]

Aggregation from «Geometry» S121_Curve to «FeatureType» S121_Limit
[Name is SpatialAttribute. Direction is 'Source -> Destination'.]

Realization from «HYDRO» Straight Baseline to «FeatureType» S121_Limit
[Direction is 'Source -> Destination'.]

Realization from «MLB» Territorial Sea Limit to «FeatureType» S121_Limit
[Direction is 'Source -> Destination'.]

Realization from «MLB» Continental Shelf Limit to «FeatureType» S121_Limit
[Direction is 'Source -> Destination'.]

Realization from «MLB» Normal Baseline to «FeatureType» S121_Limit
[Direction is 'Source -> Destination'.]

ATTRIBUTES

arctyp : S121_LimitArcType Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Definition: Type of computation used to define an arc (line). (Geodesic or loxodrome).
[Is static False. Containment is Not Specified.]

ATTRIBUTES

limtyp : S121_LimitType Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Definition: Type of delineation (Boundary, Limit or Construction).

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified) plus

Source: Public zone (Class) S121_Zone «FeatureType»
Cardinality: [0..*]

Target: Public limit (Class) S121_Limit «FeatureType»
Cardinality: [0..*]

Association (direction: Unspecified) minus

Source: Public zone (Class) S121_Zone «FeatureType»
Cardinality: [0..*]

Target: Public limit (Class) S121_Limit «FeatureType»
Cardinality: [0..*]

Association (direction: Unspecified) points

Source: Public location (Class) S121_Location «FeatureType»
Cardinality: [2..*]

Target: Public limit (Class) S121_Limit «FeatureType»
Cardinality: [0..*]

1.3.15 S121_Location

Class «FeatureType» in package 'S121_Feature'

Name: Location
AlphaCode: MLOCTN
camelCaseCode: Limit
NumericCode:
Use Type: theme
Definition: The Location object is an object that defines the underlying structure of location.
Permitted Primitives: P
Remarks: To portray a geodesic or loxodrome curve correctly, additional vertices may be included in the dataset. These are densified locations. These vertices would not have formed part of the original source information. The loctyp attribute can be used to differentiate between a defined vertex (e.g. declared in a treaty) with a vertex densified to ensure correct GIS depiction. A computed location is also not part of the original source information, but is calculated as the result of the original source guidance, such as the intersection between arcs, geodesics, or loxodromes. A construction vertex is any arbitrary position established to support computation.
References:

S121_Location
Version Phase Proposed
S-121 PT created on 26/03/2015. Last modified 01/12/2016
Extends S121_FeatureUnit

OUTGOING STRUCTURAL RELATIONSHIPS

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «FeatureType» S121_Location to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Realization from «FeatureType» S121_Location to «featureType» LA_Point
[Name is Realize. Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from «MLB» Boundary Point to «FeatureType» S121_Location
[Direction is 'Source -> Destination'.]

Realization from «MLB» Baseline Point to «FeatureType» S121_Location
[Direction is 'Source -> Destination'.]

Aggregation from «Geometry» S121_Point to «FeatureType» S121_Location
[Name is SpatialAttribute. Direction is 'Source -> Destination'.]

Realization from «MLB» Limit Point to «FeatureType» S121_Location
[Direction is 'Source -> Destination'.]

ATTRIBUTES

interpolationRole : LA_InterpolationType Public

the role of point in the structure of a straight line or curve
[Is static False. Containment is Not Specified.]

pointType : S121_LocationType Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Definition: Computational origin of the element (defined, densified, computed or construction)
[Is static False. Containment is Not Specified.]

transAndResult : LA _Transformation Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

transformation and transformed location
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified) points

Source: Public location (Class) S121_Location «FeatureType»
Cardinality: [2..*]

Target: Public limit (Class) S121_Limit «FeatureType»
Cardinality: [0..*]

1.3.16 S121_Zone

Class «FeatureType» in package 'S121_Feature'

Name: Zone
AlphaCode: MZONE
camelCaseCode: Zone
NumericCode:
Use Type: theme
Definition: The Zone object is an object that defines an area which is logically delimited by instances of delineation (limit_boundary) objects.
Permitted Primitives: P,L,A
Remarks: Maritime, terrestrial or inter-tidal zone objects are the three real objects that inherit from this object.
References:

S121_Zone
Version Phase Proposed
S-121 PT created on 26/03/2015. Last modified 01/12/2016
Extends S121_FeatureUnit

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from «FeatureType» S121_Zone to «featureType» LA_SpatialUnit
[Name is Realize. Direction is 'Source -> Destination'.]

Generalization from «FeatureType» S121_Zone to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from «HYDRO» Territorial Sea Area to «FeatureType» S121_Zone
[Direction is 'Source -> Destination'.]

Realization from «HYDRO» Exclusive Economic Zone to «FeatureType» S121_Zone
[Direction is 'Source -> Destination'.]

Aggregation from «Geometry» S121_Surface to «FeatureType» S121_Zone
[Name is SpatialAttribute. Direction is 'Source -> Destination'.]

Realization from «MLB» High sea to «FeatureType» S121_Zone
[Direction is 'Source -> Destination'.]

Realization from «HYDRO» Continental Shelf Area to «FeatureType» S121_Zone
[Direction is 'Source -> Destination'.]

Realization from «MLB» Internal Waters to «FeatureType» S121_Zone
[Direction is 'Source -> Destination'.]

Realization from «HYDRO» Contiguous Zone to «FeatureType» S121_Zone
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from «MLB» The Area to «FeatureType» S121_Zone
[Direction is 'Source -> Destination'.]

Realization from «MLB» Disputed Area to «FeatureType» S121_Zone
[Direction is 'Source -> Destination'.]

Realization from «MLB» Inland Waters to «FeatureType» S121_Zone
[Direction is 'Source -> Destination'.]

ATTRIBUTES

area : LA_AreaValue Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

the area value
[Is static False. Containment is Not Specified.]

referencePoint : GM_Point Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the coordinates of a point inside the spatial unit
[Is static False. Containment is Not Specified.]

surfaceRelation : LA_SurfaceRelationType Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

verdom : S121_VerticalDomainType Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

Definition: verdom - Category of vertical domain of the object delimited. (e.g. airspace, land_surface, water_surface, water_column, seabed_surface, subsoil). Any particular object may span more than one vertical domain.
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified) plus

Source: Public zone (Class) S121_Zone «FeatureType»
Cardinality: [0..*]

Target: Public limit (Class) S121_Limit «FeatureType»
Cardinality: [0..*]

Association (direction: Unspecified) minus

Source: Public zone (Class) S121_Zone «FeatureType»
Cardinality: [0..*]

Target: Public limit (Class) S121_Limit «FeatureType»
Cardinality: [0..*]

Association (direction: Unspecified)

Source: Public (Class) S121_BAUnit

Target: Public (Class) S121_Zone «FeatureType»

ASSOCIATIONS

Association (direction: Unspecified) vertExtent

Source: Public space (Class) S121_Space «FeatureType»
Cardinality: [0..1]

Target: Public zone (Class) S121_Zone «FeatureType»
Cardinality: [0..*]

OPERATIONS

areaClosed () : Boolean Public
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

computeArea () : Area Public
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

createArea () : GM_MultiSurface Public
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

1.3.17 S121_Space

Class «FeatureType» in package 'S121_Feature'

Name: Space
AlphaCode: MSPACE
camelCaseCode: Space
NumericCode:
Use Type: theme
Definition: The Space object is an object that defines an volume which is logically delimited by instances of zone objects.
Permitted Primitives: P,L,A
Remarks: A Space is an objects of 2 dimensions with a height description located in 2 or 3 dimensional space. This is sometimes called 2 1/2 dimensions. A Space has the same geometry as a Zone with the attributes of vertical position. The vertical position may be explicit numerical attributes of height above a reference or a textual description.
References:

S121_Space
Version Phase Proposed
S-121 PT created on 26/03/2015. Last modified 01/12/2016
Extends S121_FeatureUnit

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «FeatureType» S121_Space to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Realization from «FeatureType» S121_Space to «featureType» LA_SpatialUnit
[Name is Realize. Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

INCOMING STRUCTURAL RELATIONSHIPS

Aggregation from «Geometry» S121_Volume to «FeatureType» S121_Space
[Name is SpatialAttribute. Direction is 'Source -> Destination'.]

ATTRIBUTES

referencePoint : GM_Point Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the coordinates of a point inside the spatial unit
[Is static False. Containment is Not Specified.]

verdom : S121_VerticalDomainType Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

Definition: verdom - Category of vertical domain of the object delimited. (e.g. airspace, land_surface, water_surface, water_column, seabed_surface, subsoil). Any particular object may span more than one vertical domain.
[Is static False. Containment is Not Specified.]

volume : LA_VolumeValue Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

the volume value (in case of bounded 3D description)
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified) vertExtent

Source: Public space (Class) S121_Space «FeatureType»
Cardinality: [0..1]

Target: Public zone (Class) S121_Zone «FeatureType»
Cardinality: [0..*]

Association (direction: Unspecified)

Source: Public (Class) S121_BAUnit

Target: Public (Class) S121_Space «FeatureType»

OPERATIONS

computeVolume () : Volume Public
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

createVolume () : GM_MultiSolid Public
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

volumeClosed () : Boolean Public
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

1.3.18 S121 FC Context Attribute diagram

Class diagram in package 'S121 Information Structure'

The contexts in which a feature may be applied may optionally be described in the Feature Concept Dictionary. The Feature Catalogue associated with an Application Schema may define the context in more detail.

S121 FC Context Attribute
Version
CHS created on 27/03/2015. Last modified 01/12/2016

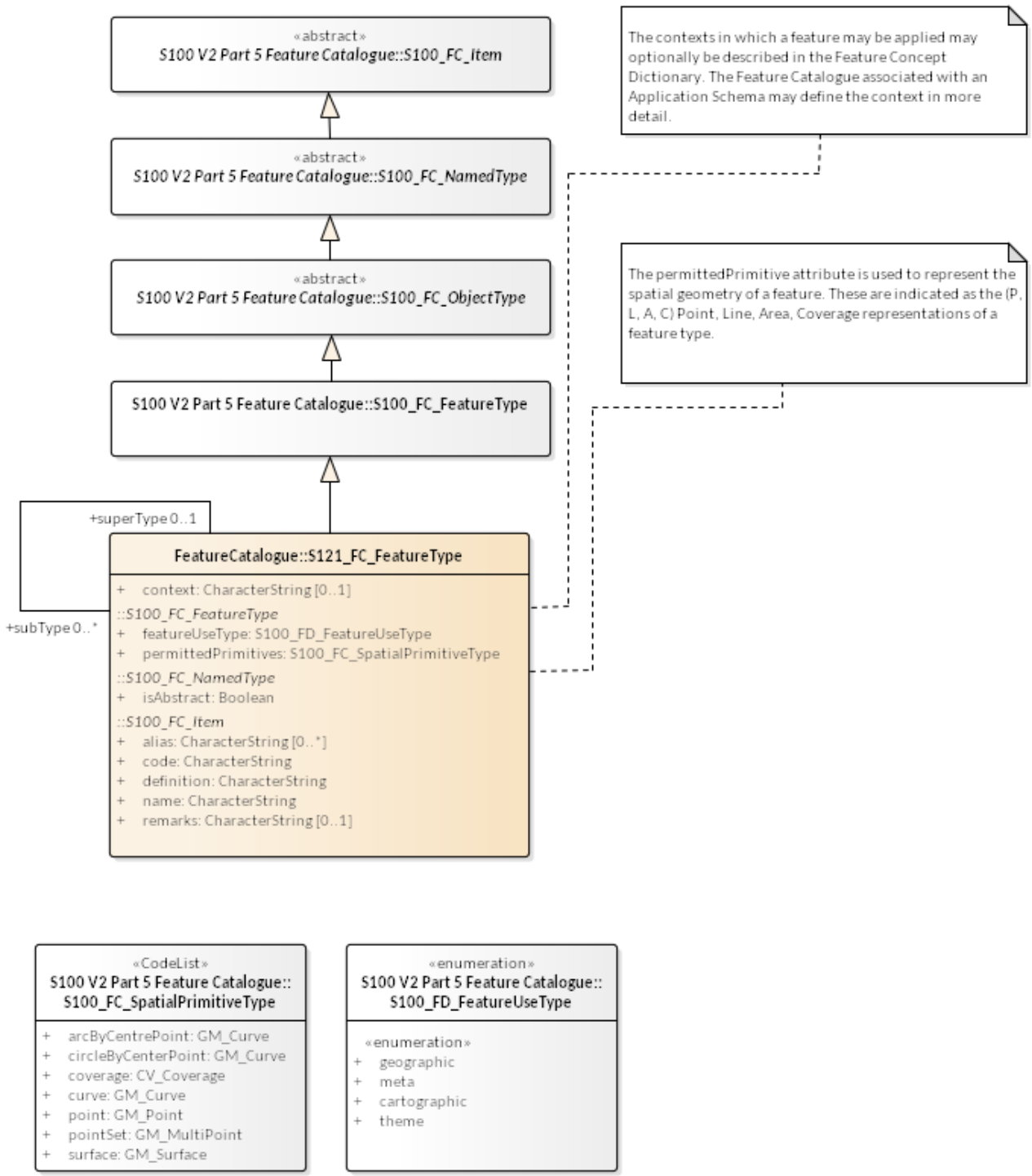

Figure 20: S121 FC Context Attribute

1.3.19 S100_FC_Item

Abstract «abstract» in package 'S100 V2 Part 5 Feature Catalogue'

Abstract base class that defines the common properties of all items in the feature catalogue; items are feature types, information types, feature associations, information associations, attributes and roles.

S100_FC_Item
Version 2.0 Phase 2.0 Proposed
IHO TSMAD created on 11/02/2015. Last modified 27/11/2016

OUTGOING STRUCTURAL RELATIONSHIPS

Aggregation from «abstract» S100_FC_Item to S100_FC_FeatureCatalogue
[Direction is 'Unspecified'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from «abstract» S100_FC_Attribute to «abstract» S100_FC_Item
[Direction is 'Source -> Destination'.]

Generalization from «abstract» S100_FC_NamedType to «abstract» S100_FC_Item
[Direction is 'Source -> Destination'.]

Generalization from S100_FC_Role to «abstract» S100_FC_Item
[Direction is 'Source -> Destination'.]

ATTRIBUTES

alias : CharacterString Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

equivalent name(s) of this item
[Is static False. Containment is Not Specified.]

code : CharacterString Public

code that uniquely identifies the named type within the feature catalogue.
[Is static False. Containment is Not Specified.]

definition : CharacterString Public

definition of the named type in a natural language.
[Is static False. Containment is Not Specified.]

name : CharacterString Public

name of the item
[Is static False. Containment is Not Specified.]

remarks : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

ATTRIBUTES

further explanation about the item

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination)

Source: Public (Abstract) S100_FC_Item «abstract»

Target: Public definitionReference (Class) FC_DefinitionReference «type»
Cardinality: [0..1]

the link to the source of the definition

1.3.20 S100_FC_ObjectType

Abstract «abstract» in package 'S100 V2 Part 5 Feature Catalogue'

Abstract base class that defines the common properties for feature types and information types.

S100_FC_ObjectType
Version 2.0 Phase 2.0 Proposed
IHO TSMAD created on 11/02/2015. Last modified 27/11/2016

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «abstract» S100_FC_ObjectType to «abstract» S100_FC_NamedType
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Aggregation from S100_FC_InformationBinding to «abstract» S100_FC_ObjectType
List of bindings to information types that can be associated to this named type by means of an information association.
[Direction is 'Source -> Destination'.]

Generalization from S100_FC_FeatureType to «abstract» S100_FC_ObjectType
[Direction is 'Source -> Destination'.]

Generalization from S100_FC_InformationType to «abstract» S100_FC_ObjectType
[Direction is 'Source -> Destination'.]

1.3.21 S100_FC_FeatureType

Class in package 'S100 V2 Part 5 Feature Catalogue'

S100_FC_FeatureType
Class that defines all properties of a feature type.

S100_FC_FeatureType
Version 2.0 Phase 2.0 Proposed

IHO TSMAD created on 26/01/2015. Last modified 27/11/2016

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from S100_FC_FeatureType to «abstract» S100_FC_ObjectType

[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Aggregation from S100_FC_FeatureBinding to S100_FC_FeatureType

List of bindings to feature types that can be related to this feature type by means of a feature association.

[Direction is 'Source -> Destination'.]

Generalization from S121_FC_FeatureType to S100_FC_FeatureType

[Direction is 'Source -> Destination'.]

CONNECTORS

Dependency «trace» Source -> Destination

From: S100_FC_FeatureType : Class, Public

To: S100_FC_FeatureType : Class, Public

ATTRIBUTES

featureUseType : S100_FD_FeatureUseType Public

The use type of this feature type.

[Is static False. Containment is Not Specified.]

permittedPrimitives : S100_FC_SpatialPrimitiveType Public

The combination of 0 or more spatial primitives permitted for representation of the spatial geometry of a feature type.

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified)

Source: Public superType (Class) S100_FC_FeatureType
Cardinality: [0..1]

Indicates the feature type from which a feature type is derived. The sub type will inherit all properties from its super type: name, definition and code will usually be overridden by the sub type, although new properties may be added to the sub type.

Target: Public subType (Class) S100_FC_FeatureType
Cardinality: [0..*]

Indicates the feature types which are derived from a feature type.

Association (direction: Unspecified)

Source: Public superType (Class) S100_FC_FeatureType
Cardinality: [0..1]

Indicates the feature type from which a feature type is derived. The sub type will inherit all properties from its super type: name, definition and code will usually be overridden by the sub type, although new properties may be added to the sub type.

Target: Public subType (Class) S100_FC_FeatureType
Cardinality: [0..*]

Indicates the feature types which are derived from a feature type.

ASSOCIATIONS

Association (direction: Source -> Destination)

Source: Public (Class) S100_FC_FeatureBinding

Target: Public featureType (Class) S100_FC_FeatureType
Cardinality: [1]

1.3.22 S100_FC_NamedType

Abstract «abstract» in package 'S100 V2 Part 5 Feature Catalogue'

Abstract base class that defines the common properties for feature types and information types.

S100_FC_NamedType
Version 2.0 Phase 2.0 Proposed
IHO TSMAD created on 26/01/2015. Last modified 27/11/2016

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «abstract» S100_FC_NamedType to «abstract» S100_FC_Item
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from S100_FC_FeatureAssociation to «abstract» S100_FC_NamedType
[Direction is 'Source -> Destination'.]

Aggregation from S100_FC_AttributeBinding to «abstract» S100_FC_NamedType
List of bindings to feature attributes which describe the characteristic of this named type.
[Direction is 'Source -> Destination'.]

Generalization from S100_FC_InformationAssociation to «abstract» S100_FC_NamedType
[Direction is 'Source -> Destination'.]

Generalization from «abstract» S100_FC_ObjectType to «abstract» S100_FC_NamedType
[Direction is 'Source -> Destination'.]

CONNECTORS

Dependency «trace» Source -> Destination
From: S100_FC_NamedType : Abstract, Public
To: S100_FC_NamedType : Class, Public

ATTRIBUTES

isAbstract : Boolean Public

Indicates if instances of this named type can exists in a geographic data set. Abstract types cannot be instantiated but serve as base classes for other (non-abstract) types.
[Is static False. Containment is Not Specified.]

ATTRIBUTES

1.3.23 S100_FC_SpatialPrimitiveType

Class «CodeList» in package 'S100 V2 Part 5 Feature Catalogue'

Code List which specifies the spatial primitives permitted for use with a feature instance.

S100_FC_SpatialPrimitiveType
Version 2.0 Phase 2.0 Proposed
IHO TSMAD created on 26/01/2015. Last modified 27/11/2016

CONNECTORS

Dependency «trace» Source -> Destination
From: S100_FC_SpatialPrimitiveType : Class, Public
To: S100_FC_SpatialPrimitiveType : Class, Public

ATTRIBUTES

arcByCentrePoint : GM_Curve Public

Curve spatial primitive with arc described by centre, radius, and angle geometry. **GM_Curve with only S100_ArcByCenterPoint curve segments.**

Constraints:
S100_ArcByCenterPoint :
[Is static False. Containment is Not Specified.]

circleByCenterPoint : GM_Curve Public

Curve spatial primitive with circle described by centre and radius geometry.

Constraints:
S100_CircleByCenterPoint :
[Is static False. Containment is Not Specified.]

coverage : CV_Coverage Public

Coverage spatial primitive
[Is static False. Containment is Not Specified.]

curve : GM_Curve Public

Curve spatial primitive
[Is static False. Containment is Not Specified.]

point : GM_Point Public

Point spatial primitive
[Is static False. Containment is Not Specified.]

pointSet : GM_MultiPoint Public

ATTRIBUTES

Point set spatial primitive

[Is static False. Containment is Not Specified.]

surface : GM_Surface Public

Surface spatial primitive

[Is static False. Containment is Not Specified.]

1.3.24 S100_FD_FeatureUseType

Enumeration «enumeration» in package 'S100 V2 Part 5 Feature Catalogue'

Code List that identifies the intended use of a feature type.

S100_FD_FeatureUseType
Version 2.0 Phase 2.0 Proposed
IHO TSMAD created on 26/01/2015. Last modified 27/11/2016

CONNECTORS

Dependency «trace» Source -> Destination
From: S100_FD_FeatureUseType : Enumeration, Public
To: S100_FD_FeatureUseType : Class, Public

ATTRIBUTES

geographic : Public

A feature which carries the descriptive characteristics of a real world entity.

[Stereotype is «enumeration». Is static False. Containment is Not Specified.]

meta : Public

A feature which contains information about other features.

[Stereotype is «enumeration». Is static False. Containment is Not Specified.]

cartographic : Public

A feature which carries information about the cartographic representation (including text) of a real world entity.

[Stereotype is «enumeration». Is static False. Containment is Not Specified.]

theme : Public

A collection of instances of feature types except other “Theme” instances. Can be used to define thematic groups in a data set.

[Stereotype is «enumeration». Is static False. Containment is Not Specified.]

1.3.25 S121_FC_FeatureType

Class in package 'FeatureCatalogue'

Derived from S100_FC_FeatureType.

Class that defines all properties of a feature type in the S121. This is the Feature type as stored in the Feature Catalogue.

S121_FC_FeatureType
Version Phase Proposed
CHS created on 16/02/2015. Last modified 27/11/2016
Extends S100_FC_FeatureType

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from S121_FC_FeatureType to S100_FC_FeatureType
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from S121_FC_FeatureType_RI to S121_FC_FeatureType
[Direction is 'Source -> Destination'.]

Realization from FC_Dictionary_Feature_Entry to S121_FC_FeatureType
[Name is Instance. Direction is 'Source -> Destination'.]

ATTRIBUTES

context : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Categorization of the context of the Feature Type (topic area).
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

DirectedLine (direction: Source -> Destination) «directedLine»

Source: Public (Class) S121_FC_FeatureType

Target: Public (Boundary) Boundary

Association (direction: Unspecified)

Source: Public superType (Class) S121_FC_FeatureType
Cardinality: [0..1]

Indicates the feature type from which a feature type is derived. The sub type will inherit all properties from its super type: name, definition and code will usually be overridden by the sub type, although new properties may be added to the sub type.

Target: Public subType (Class) S121_FC_FeatureType
Cardinality: [0..*]

Indicates the feature types which are derived from a feature type.

Association (direction: Source -> Destination) Usage of registered definityon etc

Source: Public (Metaclass) S121_GF_FeatureType «metaclass»
Cardinality: [1]

Target: Public (Class) S121_FC_FeatureType
Cardinality: [0..*]

ASSOCIATIONS

Association (direction: Unspecified)

Source: Public superType (Class) S121_FC_FeatureType
Cardinality: [0..1]

Indicates the feature type from which a feature type is derived. The sub type will inherit all properties from its super type: name, definition and code will usually be overridden by the sub type, although new properties may be added to the sub type.

Target: Public subType (Class) S121_FC_FeatureType
Cardinality: [0..*]

Indicates the feature types which are derived from a feature type.

1.3.26 S121 General Feature Model diagram

Class diagram in package 'S121 Information Structure'

S121 General Feature Model
Version
CHS created on 25/06/2015. Last modified 27/11/2016

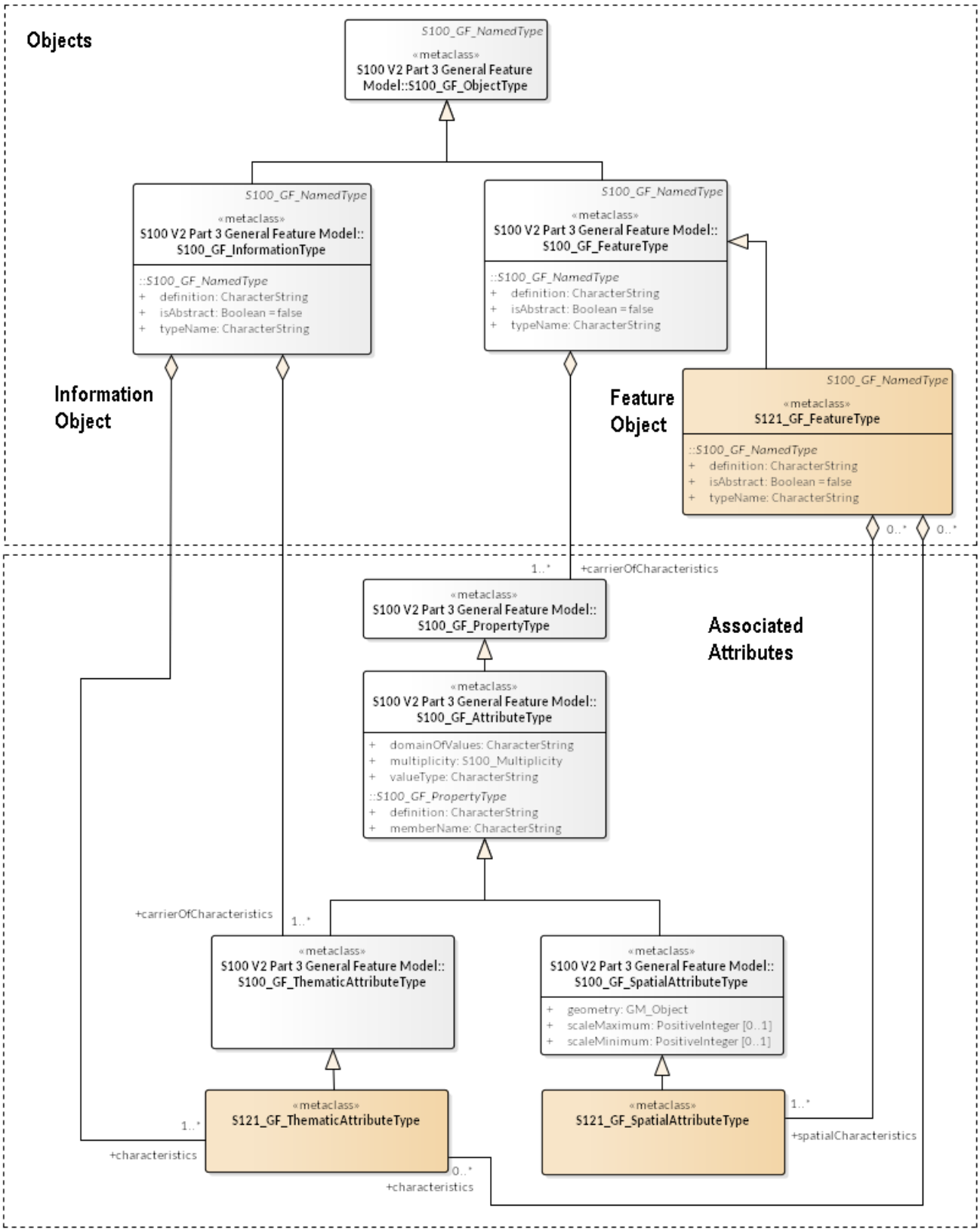

Figure 21: S121 General Feature Model

1.3.27 S100_GF_ObjectType

Metaclass «metaclass» in package 'S100 V2 Part 3 General Feature Model'

The class S100_GF_ObjectType is not realised from ISO 19109 but is introduced specifically for the S-100 GFM. It is an abstract super-class of the classes S100_GF_FeatureType and S100_GF_InformationType. The intention in introducing this class is to show the commonality between feature types and information types in particular the ability of these

classes to be linked to information types by means of a information association.

S100_GF_ObjectType
Version 2.0 Phase 2.0 Proposed
TSMAD created on 03/02/2015. Last modified 23/11/2016

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «metaclass» S100_GF_ObjectType to «metaclass» S100_GF_NamedType
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from «metaclass» S100_GF_InformationType to «metaclass» S100_GF_ObjectType
[Direction is 'Source -> Destination'.]

Generalization from «metaclass» S100_GF_FeatureType to «metaclass» S100_GF_ObjectType
[Direction is 'Source -> Destination'.]

1.3.28 S100_GF_AttributeType

Metaclass «metaclass» in package 'S100 V2 Part 3 General Feature Model'

The class S100_GF_AttributeType is the S-100 realisation of GF_AttributeType. It is largely identical to the ISO 19109 class but differs in the following way:
1) The association attributeOfAttribute is not realised in the S-100 GFM. S-100 introduces, instead, the concept of complex attributes. Complex attributes are described further in ISO 19109 subclause 7.4

S100_GF_AttributeType
Version 1.0 Phase 2.0 Proposed
IHO TSMAD created on 22/12/2014. Last modified 23/11/2016

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «metaclass» S100_GF_AttributeType to «metaclass» S100_GF_PropertyType
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from «metaclass» S100_GF_SpatialAttributeType to «metaclass» S100_GF_AttributeType
[Direction is 'Source -> Destination'.]

Generalization from «metaclass» S100_GF_ThematicAttributeType to «metaclass» S100_GF_AttributeType
[Direction is 'Source -> Destination'.]

CONNECTORS

Dependency «trace» Source -> Destination
From: S100_GF_AttributeType : Metaclass, Public
To: S100_GF_AttributeType : Metaclass, Public

ATTRIBUTES
domainOfValues : CharacterString Public [Is static False. Containment is Not Specified.]
multiplicity : S100_Multiplicity Public [Is static False. Containment is Not Specified.]
valueType : CharacterString Public [Is static False. Containment is Not Specified.]

1.3.29 S100_GF_FeatureType

Metaclass «metaclass» in package 'S100 V2 Part 3 General Feature Model'

The class S100_GF_FeatureType is a realisation of the ISO 19109 class GF_FeatureType. It differs from the ISO class in the following ways:
1. It is a sub-type of the class S100_GF_NamedType;
2. It does not realise the Generalization and Specialization associations with the class GF_InheritanceRelation. Instead, the class has an association with itself with the roles subType and superType. GF_InheritanceRelation is not realised in the S-100 GFM;
3. The multiplicity of the superType is 0..1 to represent the concept that a feature may have a maximum of one superType. This is in order to prevent multiple-inheritance in S-100;
4. The multiplicity of the role carrierOfCharacteristics with S100_GF_PropertyType (the S-100 realisation of GF_PropertyType) is changed from 0..* to 1..*. An S-100 feature must have properties.

S100_GF_FeatureType
Version 2.0 Phase 2.0 Proposed
IHO TSMAD created on 22/12/2014. Last modified 23/11/2016

OUTGOING STRUCTURAL RELATIONSHIPS
Generalization from «metaclass» S100_GF_FeatureType to «metaclass» S100_GF_NamedType [Direction is 'Source -> Destination'.]
Generalization from «metaclass» S100_GF_FeatureType to «metaclass» S100_GF_ObjectType [Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS
Aggregation from «metaclass» S100_GF_PropertyType to «metaclass» S100_GF_FeatureType Role: linkBetween - The association role linkBetween specifies that a GF_AssociationType will be a link from one instance of a feature type to another instance of a feature type. Role: carrierOfCharacteristics - The association role carrierOfCharacteristics specifies that any attribute type and any feature association role carries characteristics of a feature type. [Direction is 'Source -> Destination'.]
Generalization from «metaclass» S121_GF_FeatureType to «metaclass» S100_GF_FeatureType [Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from «metaclass» S121_GF_FeatureType to «metaclass» S100_GF_FeatureType
[Direction is 'Source -> Destination'.]

CONNECTORS

Dependency «trace» Source -> Destination
From: S100_GF_FeatureType : Metaclass, Public
To: S100_GF_FeatureType : Metaclass, Public

ASSOCIATIONS

Association (direction: Unspecified) inheritance

Role: superType - The more generic feature type from which this feature type is derived.
Role: subType - The more specific feature types which are derived from this feature type.

Source: Public subType (Metaclass) S100_GF_FeatureType «metaclass»
Cardinality: [0..*]

Target: Public superType (Metaclass) S100_GF_FeatureType «metaclass»
Cardinality: [0..1]

Association (direction: Unspecified)

A link to a feature association that specify the relationship between one feature type and the same or another feature type.

Source: Public includes (Metaclass) S100_GF_FeatureType «metaclass»
Cardinality: [1..*]

Target: Public linkBetween (Metaclass) S100_GF_FeatureAssociationType «metaclass»
Cardinality: [0..*]

The association role includes specifies that an instance of an association may include any number of feature types.

Association (direction: Unspecified) inheritance

Role: superType - The more generic feature type from which this feature type is derived.
Role: subType - The more specific feature types which are derived from this feature type.

Source: Public subType (Metaclass) S100_GF_FeatureType «metaclass»
Cardinality: [0..*]

Target: Public superType (Metaclass) S100_GF_FeatureType «metaclass»
Cardinality: [0..1]

1.3.30 S100_GF_InformationType

Metaclass «metaclass» in package 'S100 V2 Part 3 General Feature Model'

S100_GF_InformationType is the class for information types within S-100. An information type is an identifiable object that can be associated with features in order to carry information particular to the associated features. An example of an information type might be a Chart Note. Information types can also be associated with each other. This could be done where there is further supplementary information that is relevant to the information type or where there is a need to translate the information. For example a primary information object carrying a Chart Note may contain text in English and an associated supplementary information object may carry the same text in German.

The characteristics of information types shall be carried by thematic attribute types only.Therefore, S100_GF_InformationType is associated with only S100_GF_ThematicAttributeType rather than the more generic class

S100_GF_PropertyType. The associations to information types are modelled by means of the type S100_InformationAssociationType.

S100_GF_InformationType
Version 2.0 Phase 2.0 Proposed
IHO TSMAD created on 22/12/2014. Last modified 27/11/2016

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «metaclass» S100_GF_InformationType to «metaclass» S100_GF_ObjectType
[Direction is 'Source -> Destination'.]

Generalization from «metaclass» S100_GF_InformationType to «metaclass» S100_GF_NamedType
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from S121_AdministrativeSource to «metaclass» S100_GF_InformationType
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from S121_Source to «metaclass» S100_GF_InformationType
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from S121_Party to «metaclass» S100_GF_InformationType
[Direction is 'Source -> Destination'.]

Aggregation from «metaclass» S121_GF_ThematicAttributeType to «metaclass» S100_GF_InformationType
[Direction is 'Source -> Destination'.]

Realization from S121_BAUnit to «metaclass» S100_GF_InformationType
[Name is Realize. Direction is 'Source -> Destination'.]

Aggregation from «metaclass» S100_GF_ThematicAttributeType to «metaclass» S100_GF_InformationType
[Direction is 'Source -> Destination'.]

Realization from S121_RRR to «metaclass» S100_GF_InformationType
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from S121_BAUnit to «metaclass» S100_GF_InformationType
[Direction is 'Source -> Destination'.]

Realization from S121_AdministrativeSource to «metaclass» S100_GF_InformationType
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from «abstract» S121_RRR to «metaclass» S100_GF_InformationType
[Direction is 'Source -> Destination'.]

Aggregation from «metaclass» S121_GF_ThematicAttributeType to «metaclass» S100_GF_InformationType
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from S121_Source to «metaclass» S100_GF_InformationType
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from S121_Party to «metaclass» S100_GF_InformationType
[Name is Realize. Direction is 'Source -> Destination'.]

Aggregation from «metaclass» S100_GF_AssociationRole to «metaclass» S100_GF_InformationType
[Direction is 'Source -> Destination'.]

CONNECTORS

Dependency «trace» Source -> Destination
From: S100_GF_InformationType : Metaclass, Public
To: S100_GF_InformationType : Metaclass, Public

ASSOCIATIONS

Association (direction: Unspecified)

Source: Public includes (Metaclass) S100_GF_InformationType «metaclass»
Cardinality: [1..*]

Target: Public linkBetween (Metaclass) S100_GF_InformationAssociationType «metaclass»
Cardinality: [1..*]

The information type that is included in the relationship.

Association (direction: Unspecified) inheritance

Role: superType - The more generic feature type from which this feature type is derived.
Role: subType - The more specific feature types which are derived from this feature type.

Source: Public subType (Metaclass) S100_GF_InformationType «metaclass»
Cardinality: [0..*]

Target: Public superType (Metaclass) S100_GF_InformationType «metaclass»
Cardinality: [0..1]

Association (direction: Unspecified) inheritance

Role: superType - The more generic feature type from which this feature type is derived.
Role: subType - The more specific feature types which are derived from this feature type.

Source: Public subType (Metaclass) S100_GF_InformationType «metaclass»
Cardinality: [0..*]

Target: Public superType (Metaclass) S100_GF_InformationType «metaclass»
Cardinality: [0..1]

1.3.31 S100_GF_PropertyType

Metaclass «metaclass» in package 'S100 V2 Part 3 General Feature Model'

The class S100_GF_PropertyType is a realisation of the ISO 19109 class GF_PropertyType. It differs from the ISO class in the following ways:
1. The multiplicity of the association with S100_GF_FeatureType is changed from 1 to 1..*. This change represents the way that features and properties are described in the S-100 Feature Catalogue. Property type definitions can be used in

one or more feature type definitions;
2. The association type of the association with S100_GF_FeatureType is changed from composition to aggregation as a result of the change in multiplicity described above.

S100_GF_PropertyType
Version 1.0 Phase 2.0 Proposed
IHO TSMAD created on 22/12/2014. Last modified 23/11/2016

OUTGOING STRUCTURAL RELATIONSHIPS

Aggregation from «metaclass» S100_GF_PropertyType to «metaclass» S100_GF_FeatureType
Role: linkBetween - The association role linkBetween specifies that a GF_AssociationType will be a link from one instance of a feature type to another instance of a feature type.
Role: carrierOfCharacteristics - The association role carrierOfCharacteristics specifies that any attribute type and any feature association role carries characteristics of a feature type.
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from «metaclass» S100_GF_AttributeType to «metaclass» S100_GF_PropertyType
[Direction is 'Source -> Destination'.]

Generalization from «metaclass» S100_GF_AssociationRole to «metaclass» S100_GF_PropertyType
[Direction is 'Source -> Destination'.]

CONNECTORS

Dependency «trace» Source -> Destination
From: S100_GF_PropertyType : Metaclass, Public
To: S100_GF_PropertyType : Metaclass, Public

ATTRIBUTES

definition : CharacterString Public

Description of the attribute or role of a feature type
[Is static False. Containment is Not Specified.]

memberName : CharacterString Public

Name of the attribute or role.
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination)

Role: constrainedBy - The role specifies that a constraint is made on the property.

Source: Public (Metaclass) S100_GF_PropertyType «metaclass»

Target: Public constrainedBy (Metaclass)
S100_GF_Constraint «metaclass»
Cardinality: [0..*]

1.3.32 S100_GF_SpatialAttributeType

Metaclass «metaclass» in package 'S100 V2 Part 3 General Feature Model'

The class S100_GF_SpatialAttributeType is a realisation of the ISO 19109 class GF_SpatialAttributeType. A spatial attribute type shall have a GM_Object as its value type. GM_Object and its sub-types are defined in the Spatial Schema, S-100 Part 7.

S100_GF_SpatialAttributeType
Version 1.0 Phase 2.0 Proposed
IHO TSMAD created on 22/12/2014. Last modified 23/11/2016

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «metaclass» S100_GF_SpatialAttributeType to «metaclass» S100_GF_AttributeType
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from «metaclass» S121_GF_SpatialAttributeType to «metaclass» S100_GF_SpatialAttributeType
[Direction is 'Source -> Destination'.]

CONNECTORS

Dependency «trace» Source -> Destination
From: S100_GF_SpatialAttributeType : Metaclass, Public
To: S100_GF_SpatialAttributeType : Metaclass, Public

ATTRIBUTES

geometry : GM_Object Public
[Is static False. Containment is Not Specified.]

scaleMaximum : PositiveInteger Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

scaleMinimum : PositiveInteger Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

1.3.33 S100_GF_ThematicAttributeType

Metaclass «metaclass» in package 'S100 V2 Part 3 General Feature Model'

The class S100_GF_ThematicAttributeType is a realisation of the ISO 19109 class GF_ThematicAttributeType. Thematic attribute types carry descriptive characteristics of objects other than those specified in ISO 19109 clauses 7.4.3 – 7.4.7. This class differs from the ISO 19109 class in the following ways:
1) GF_ThematicAttributeType is defined in ISO 19109 as a concrete class. The S-100 GFM realisation is an abstract class with two concrete subclasses – S100_GF_SimpleAttributeType and S100_GF_ComplexAttributeType.
2) Temporal information shall have their value type defined by the types Date, Time, DateTime or complex structures

using combinations of the primitive temporal types.

S100_GF_ThematicAttributeType
Version 2.0 Phase 2.0 Proposed
IHO TSMAD created on 22/12/2014. Last modified 23/11/2016

OUTGOING STRUCTURAL RELATIONSHIPS

Aggregation from «metaclass» S100_GF_ThematicAttributeType to «metaclass» S100_GF_AssociationType
The association role carrierOfCharacteristics specifies that a thematic attribute type carries information for the information type.
[Direction is 'Source -> Destination'.]

Aggregation from «metaclass» S100_GF_ThematicAttributeType to «metaclass» S100_GF_InformationType
[Direction is 'Source -> Destination'.]

Aggregation from «metaclass» S100_GF_ThematicAttributeType to «metaclass» S100_GF_ComplexAttributeType
[Direction is 'Source -> Destination'.]

Generalization from «metaclass» S100_GF_ThematicAttributeType to «metaclass» S100_GF_AttributeType
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from «metaclass» S100_GF_SimpleAttributeType to «metaclass» S100_GF_ThematicAttributeType
[Direction is 'Source -> Destination'.]

Generalization from «metaclass» S100_GF_ComplexAttributeType to «metaclass» S100_GF_ThematicAttributeType
[Direction is 'Source -> Destination'.]

Generalization from «metaclass» S121_GF_ThematicAttributeType to «metaclass» S100_GF_ThematicAttributeType
[Direction is 'Source -> Destination'.]

Generalization from «metaclass» S121_GF_ThematicAttributeType to «metaclass» S100_GF_ThematicAttributeType
[Direction is 'Source -> Destination'.]

CONNECTORS

Dependency «trace» Source -> Destination
From: S100_GF_ThematicAttributeType : Metaclass, Public
To: S100_GF_ThematicAttributeType : Metaclass, Public

1.3.34 S121 Feature Catalogue diagram

Class diagram in package 'S121 Information Structure'

S121 Feature Catalogue

Version 1.0
CDO'Brien created on 07/07/2015. Last modified 27/11/2016

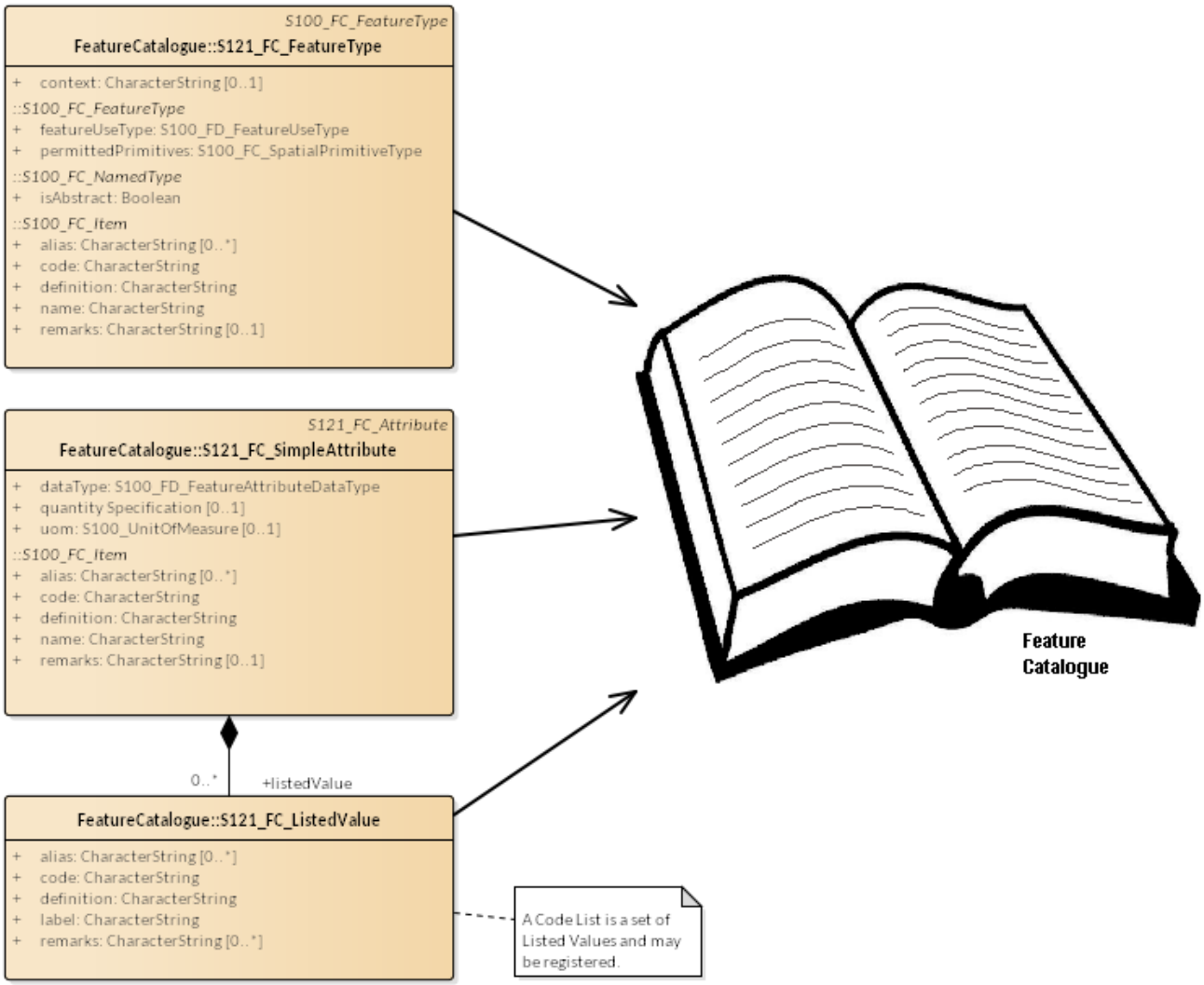

Figure 22: S121 Feature Catalogue

1.3.35 S121_FC_FeatureType

Class in package 'FeatureCatalogue'

Derived from S100_FC_FeatureType.

Class that defines all properties of a feature type in the S121. This is the Feature type as stored in the Feature Catalogue.

S121_FC_FeatureType
Version Phase Proposed
CHS created on 16/02/2015. Last modified 27/11/2016
Extends S100_FC_FeatureType

OUTGOING STRUCTURAL RELATIONSHIPS
⇦ Generalization from S121_FC_FeatureType to S100_FC_FeatureType [Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from S121_FC_FeatureType_RI to S121_FC_FeatureType
[Direction is 'Source -> Destination'.]

Realization from FC_Dictionary_Feature_Entry to S121_FC_FeatureType
[Name is Instance. Direction is 'Source -> Destination'.]

ATTRIBUTES

context : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Categorization of the context of the Feature Type (topic area).
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

DirectedLine (direction: Source -> Destination) «directedLine»

Source: Public (Class) S121_FC_FeatureType

Target: Public (Boundary) Boundary

Association (direction: Unspecified)

Source: Public superType (Class) S121_FC_FeatureType
Cardinality: [0..1]

Indicates the feature type from which a feature type is derived. The sub type will inherit all properties from its super type: name, definition and code will usually be overridden by the sub type, although new properties may be added to the sub type.

Target: Public subType (Class) S121_FC_FeatureType
Cardinality: [0..*]

Indicates the feature types which are derived from a feature type.

Association (direction: Source -> Destination) Usage of registered definityon etc

Source: Public (Metaclass) S121_GF_FeatureType «metaclass»
Cardinality: [1]

Target: Public (Class) S121_FC_FeatureType
Cardinality: [0..*]

Association (direction: Unspecified)

Source: Public superType (Class) S121_FC_FeatureType
Cardinality: [0..1]

Indicates the feature type from which a feature type is derived. The sub type will inherit all properties from its super type: name, definition and code will usually be overridden by the sub type, although new properties may be added to the sub type.

Target: Public subType (Class) S121_FC_FeatureType
Cardinality: [0..*]

Indicates the feature types which are derived from a feature type.

1.3.36 S121_FC_ListedValue

Class in package 'FeatureCatalogue'

S121_FC_ListedValue derived from S100_FC_ListedValue

Value of an enumerated attribute domain, including its codes and definition.

S121_FC_ListedValue
Version Phase Proposed
CHS created on 25/06/2015. Last modified 27/11/2016

OUTGOING STRUCTURAL RELATIONSHIPS

Aggregation from S121_FC_ListedValue to S121_FC_SimpleAttribute
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from S121_FC_ListedValue_RI to S121_FC_ListedValue
[Direction is 'Source -> Destination'.]

ATTRIBUTES

alias : CharacterString Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

Equivalent name(s) of this listed value.
[Is static False. Containment is Not Specified.]

code : CharacterString Public

Code that uniquely identifies the listed value for the corresponding feature.
[Is static False. Containment is Not Specified.]

definition : CharacterString Public

Definition of the listed value in a natural language.
[Is static False. Containment is Not Specified.]

label : CharacterString Public

Descriptive label that uniquely identifies one value of the feature attribute.
[Is static False. Containment is Not Specified.]

remarks : CharacterString Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

Further explanations about the listed value.
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

DirectedLine (direction: Source -> Destination) «directedLine»

Source: Public (Class) S121_FC_ListedValue Target: Public (Boundary) Boundary

Association (direction: Source -> Destination)

Source: Public (Class) S121_FC_AttributeBinding Target: Public permittedValues (Class)

ASSOCIATIONS
S121_FC_ListedValue Cardinality: [0..*]

1.3.37 S121_FC_SimpleAttribute

Class in package 'FeatureCatalogue'

S121_FC_SimpleAttribute: derived from S100_FC_SimpleAttribute:.

S100_FC_SimpleAttribute: Attribute that carries a value.

S121_FC_SimpleAttribute
Version Phase Proposed
CHS created on 25/06/2015. Last modified 27/11/2016
Extends S121_FC_Attribute

OUTGOING STRUCTURAL RELATIONSHIPS
Generalization from S121_FC_SimpleAttribute to «abstract» S121_FC_Attribute [Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS
Realization from S121_FC_AttributeType_RI to S121_FC_SimpleAttribute [Direction is 'Source -> Destination'.]
Realization from FC_Dictionary_Attribute_Entry to S121_FC_SimpleAttribute [Name is Instance. Direction is 'Source -> Destination'.]
Aggregation from S121_FC_ListedValue to S121_FC_SimpleAttribute [Direction is 'Source -> Destination'.]

ATTRIBUTES
dataType : S100_FD_FeatureAttributeDataType Public The data type of this feature attribute. [Is static False. Containment is Not Specified.]
quantity Specification : Public Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False) specification of the quantity [Is static False. Containment is Not Specified.]
uom : S100_UnitOfMeasure Public Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False) Unit of measure used for values of this feature attribute. [Is static False. Containment is Not Specified.]

ASSOCIATIONS

DirectedLine (direction: Source -> Destination) «directedLine»

Source: Public (Class) S121_FC_SimpleAttribute

Target: Public (Boundary) Boundary

Association (direction: Source -> Destination) Usage of registered definition etc

Source: Public (Metaclass) S121_GF_ThematicAttributeType «metaclass»
Cardinality: [1]

Target: Public (Class) S121_FC_SimpleAttribute
Cardinality: [0..*]

1.3.38 S121 FC Attributes diagram

Class diagram in package 'S121 Information Structure'

S121 FC Attributes
Version
CHS created on 25/06/2015. Last modified 27/11/2016

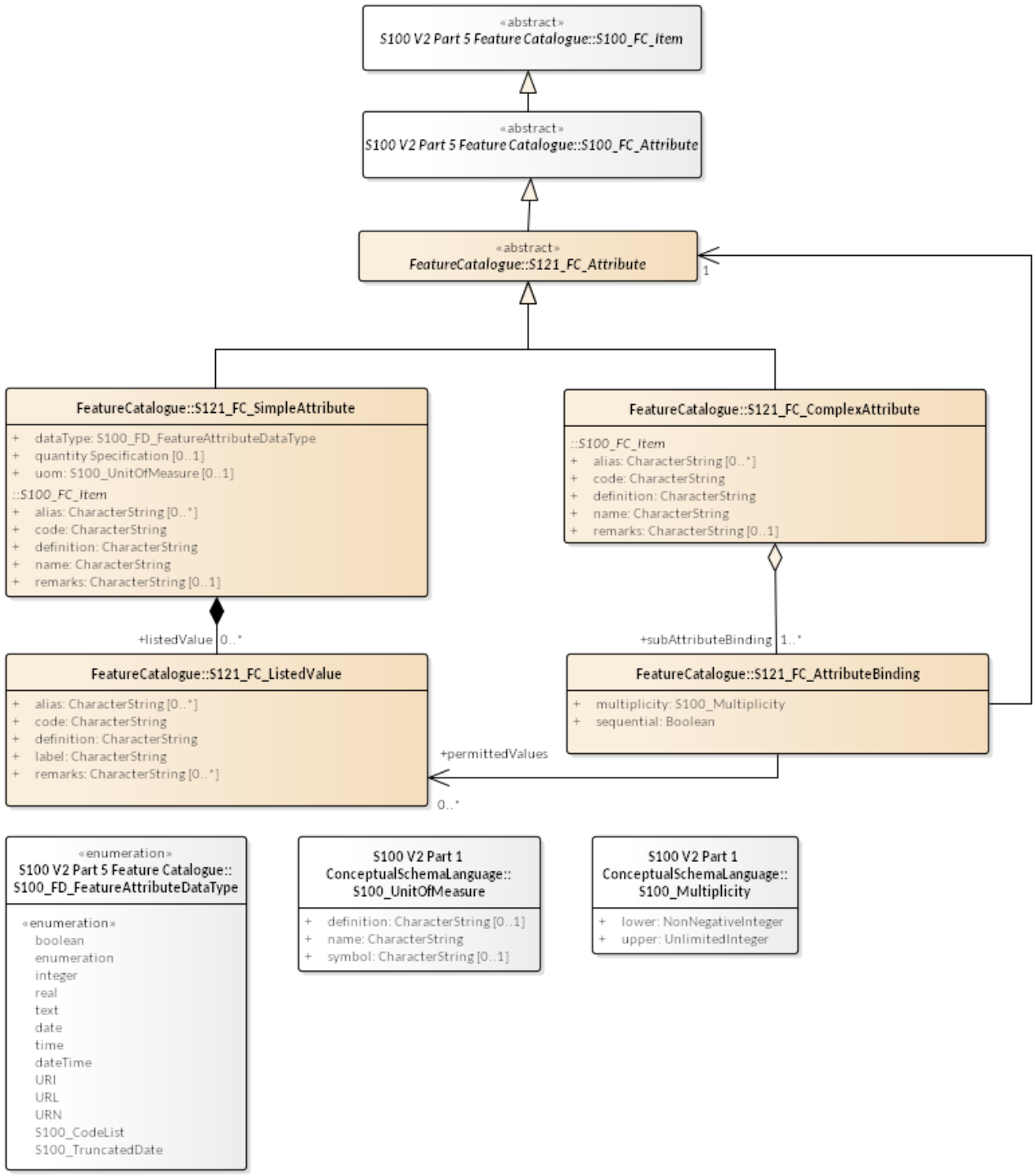

Figure 23: S121 FC Attributes

1.3.39 S100_Multiplicity

Class in package 'S100 V2 Part 1 ConceptualSchemaLanguage'

Defines a multiplicity range from lower to upper. The upper boundary may be infinite.

S100_Multiplicity
Version 1.0 Phase 2.0 Proposed
IHO TSMAD created on 18/12/2014. Last modified 27/11/2016

CONSTRAINTS

Invariant. {lower <= upper}
[Proposed, Weight is 0.]

CONNECTORS

Dependency «trace» Source -> Destination
From: S100_Multiplicity : Class, Public
To: S100_Multiplicity : Class, Public

ATTRIBUTES

lower : NonNegativeInteger Public
[Is static False. Containment is Not Specified.]

upper : UnlimitedInteger Public
[Is static False. Containment is Not Specified.]

1.3.40 S100_UnitOfMeasure

Class in package 'S100 V2 Part 1 ConceptualSchemaLanguage'

A unit of measurement is a well defined comparator for a magnitude.
In S-100 a unit of measure is comprised of a name and optionally of a definition and a symbol.

S100_UnitOfMeasure
Version 1.0 Phase 2.0 Proposed
IHO TSMAD created on 19/12/2014. Last modified 27/11/2016

CONNECTORS

Dependency «trace» Source -> Destination
From: S100_UnitOfMeasure : Class, Public
To: S100_UnitOfMeasure : Class, Public

ATTRIBUTES

definition : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

name : CharacterString Public
[Is static False. Containment is Not Specified.]

symbol : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

ASSOCIATIONS

Association (direction: Source -> Destination)

Source: Public (Class) S100_Measure

Target: Public unitOfMeasure (Class) S100_UnitOfMeasure
Cardinality: [1]

1.3.41 S100_FC_Item

Abstract «abstract» in package 'S100 V2 Part 5 Feature Catalogue'

Abstract base class that defines the common properties of all items in the feature catalogue; items are feature types, information types, feature associations, information associations, attributes and roles.

S100_FC_Item
Version 2.0 Phase 2.0 Proposed
IHO TSMAD created on 11/02/2015. Last modified 27/11/2016

OUTGOING STRUCTURAL RELATIONSHIPS

Aggregation from «abstract» S100_FC_Item to S100_FC_FeatureCatalogue
[Direction is 'Unspecified'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from «abstract» S100_FC_Attribute to «abstract» S100_FC_Item
[Direction is 'Source -> Destination'.]

Generalization from «abstract» S100_FC_NamedType to «abstract» S100_FC_Item
[Direction is 'Source -> Destination'.]

Generalization from S100_FC_Role to «abstract» S100_FC_Item
[Direction is 'Source -> Destination'.]

ATTRIBUTES

alias : CharacterString Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

equivalent name(s) of this item
[Is static False. Containment is Not Specified.]

code : CharacterString Public

code that uniquely identifies the named type within the feature catalogue.
[Is static False. Containment is Not Specified.]

definition : CharacterString Public

definition of the named type in a natural language.
[Is static False. Containment is Not Specified.]

ATTRIBUTES

name : CharacterString Public

name of the item

[Is static False. Containment is Not Specified.]

remarks : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

further explanation about the item

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination)

Source: Public (Abstract) S100_FC_Item «abstract»

Target: Public definitionReference (Class) FC_DefinitionReference «type»
Cardinality: [0..1]

the link to the source of the definition

1.3.42 S100_FC_Attribute

Abstract «abstract» in package 'S100 V2 Part 5 Feature Catalogue'

Abstract base class for the two kinds of attributes: simple attributes and complex attributes. Attributes carry the characteristics of named types.

S100_FC_Attribute
Version 2.0 Phase 2.0 Proposed
TSMAD created on 26/01/2015. Last modified 23/11/2016

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «abstract» S100_FC_Attribute to «abstract» S100_FC_Item

[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from S100_FC_ComplexAttribute to «abstract» S100_FC_Attribute

[Direction is 'Source -> Destination'.]

Generalization from «abstract» S121_FC_Attribute to «abstract» S100_FC_Attribute

[Direction is 'Source -> Destination'.]

Generalization from S100_FC_SimpleAttribute to «abstract» S100_FC_Attribute

[Direction is 'Source -> Destination'.]

CONNECTORS

CONNECTORS

Dependency «trace» Source -> Destination
From: S100_FC_Attribute : Abstract, Public
To: S100_FC_Attribute : Class, Public

ASSOCIATIONS

Association (direction: Source -> Destination)

Source: Public (Abstract) S100_FC_Attribute «abstract»

Target: Public (Class) CV_DiscretePointCoverage «type»

Association (direction: Source -> Destination)

The attribute that is bound to the named type or the complex attribute.

Source: Public (Class) S100_FC_AttributeBinding

Target: Public attribute (Abstract) S100_FC_Attribute «abstract»
Cardinality: [1]

1.3.43 S100_FD_FeatureAttributeDataType

Enumeration «enumeration» in package 'S100 V2 Part 5 Feature Catalogue'

Specifies the domain of attribute values.

S100_FD_FeatureAttributeDataType
Version 2.0 Phase 2.0 Proposed
IHO TSMAD created on 26/01/2015. Last modified 27/11/2016

CONNECTORS

Dependency «trace» Source -> Destination
From: S100_FD_FeatureAttributeDataType : Enumeration, Public
To: S100_FD_FeatureAttributeDataType : Enumeration, Public

ATTRIBUTES

boolean : Public

The value is a logical value either ‘True’ or ‘False’.
[Stereotype is «enumeration». Is static False. Containment is Not Specified.]

enumeration : Public

The value is one of a list of predefined values.
[Stereotype is «enumeration». Is static False. Containment is Not Specified.]

integer : Public

The value is an integer number.
[Stereotype is «enumeration». Is static False. Containment is Not Specified.]

ATTRIBUTES

real : Public

The value is a floating point number.

[Stereotype is «enumeration». Is static False. Containment is Not Specified.]

text : Public

The value is general text.

[Stereotype is «enumeration». Is static False. Containment is Not Specified.]

date : Public

The value is a date according to the Gregorian calendar.

[Stereotype is «enumeration». Is static False. Containment is Not Specified.]

time : Public

The value is a 24 hour time, It may contain a time zone.

[Stereotype is «enumeration». Is static False. Containment is Not Specified.]

dateTime : Public

The value marks a point in time, consisting of a date in the Gregorian calendar and a 24 hour time. The time may contain a time zone.

[Stereotype is «enumeration». Is static False. Containment is Not Specified.]

URI : Public

URI A uniform resource identifier as defined in RFC 3986. Character encoding of a URI shall follow the syntax rules defined in RFC 3986.

[Stereotype is «enumeration». Is static False. Containment is Not Specified.]

URL : Public

URL A uniform resource locator (URL) is a URI that provides a means of locating the resource by describing its primary access mechanism (RFC 3986).

[Stereotype is «enumeration». Is static False. Containment is Not Specified.]

URN : Public

URN A persistent, location-independent, resource identifier that follows the syntax and semantics for URNs specified in RFC 2141.

[Stereotype is «enumeration». Is static False. Containment is Not Specified.]

S100_CodeList : Public

S100_CodeList Code lists are modelled as classes that are stereotyped as <<S100_Codelist>>. CodeList types may be used for open enumerations whose membership cannot be known at the level of the product specification, for reuse of information model fragments, or for more efficient catalogue management.

[Stereotype is «enumeration». Is static False. Containment is Not Specified.]

S100_TruncatedDate : Public

ATTRIBUTES

S100_TruncatedDate Truncated format for date modelled as date values with one or more of the more significant components omitted. This allows partial dates to be used.
[Stereotype is «enumeration». Is static False. Containment is Not Specified.]

1.3.44 S121_FC_Attribute

Abstract «abstract» in package 'FeatureCatalogue'

S121_FC_Attribute derived from S100_FC_Attribute

Abstract base class for the two kinds of attributes: simple attributes and complex attributes. Attributes carry the characteristics of named types.

S121_FC_Attribute
Version Phase Proposed
CHS created on 16/09/2015. Last modified 27/11/2016
Extends S100_FC_Attribute

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «abstract» S121_FC_Attribute to «abstract» S100_FC_Attribute
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from S121_FC_SimpleAttribute to «abstract» S121_FC_Attribute
[Direction is 'Source -> Destination'.]

Generalization from S121_FC_ComplexAttribute to «abstract» S121_FC_Attribute
[Direction is 'Source -> Destination'.]

ASSOCIATIONS

Association (direction: Source -> Destination)

Source: Public (Class) S121_FC_AttributeBinding

Target: Public (Abstract) S121_FC_Attribute «abstract»
Cardinality: [1]

1.3.45 S121_FC_AttributeBinding

Class in package 'FeatureCatalogue'

S121_FC_AttributeBinding derived from S100_FC_AttributeBinding

Class that is used to describe the specifics of how an attribute is bound to a particular named type or a complex attribute.

S121_FC_AttributeBinding

Version Phase Proposed
CHS created on 25/06/2015. Last modified 27/11/2016

OUTGOING STRUCTURAL RELATIONSHIPS

Aggregation from S121_FC_AttributeBinding to S121_FC_ComplexAttribute
[Direction is 'Source -> Destination'.]

ATTRIBUTES

multiplicity : S100_Multiplicity Public

Multiplicity defining how many instances of the attribute can be part of the named type or complex attribute
[Is static False. Containment is Not Specified.]

sequential : Boolean Public

Describes if the sequence of the attributes is meaningful or not. Applies only to attributes which may occur more than once.
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination)

Source: Public (Class) S121_FC_AttributeBinding

Target: Public (Abstract) S121_FC_Attribute «abstract»
Cardinality: [1]

Association (direction: Source -> Destination)

Source: Public (Class) S121_FC_AttributeBinding

Target: Public permittedValues (Class) S121_FC_ListedValue
Cardinality: [0..*]

1.3.46 S121_FC_ComplexAttribute

Class in package 'FeatureCatalogue'

S121_FC_ComplexAttribute derived from S100_FC_ComplexAttribute

A complex attribute consists of a list of subattributes which can be both simple and complex attributes.

S121_FC_ComplexAttribute
Version Phase Proposed
CHS created on 25/06/2015. Last modified 27/11/2016
Extends S121_FC_Attribute

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from S121_FC_ComplexAttribute to «abstract» S121_FC_Attribute
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Aggregation from S121_FC_AttributeBinding to S121_FC_ComplexAttribute
[Direction is 'Source -> Destination'.]

1.3.47 S121_FC_ListedValue

Class in package 'FeatureCatalogue'

S121_FC_ListedValue derived from S100_FC_ListedValue

Value of an enumerated attribute domain, including its codes and definition.

S121_FC_ListedValue
Version Phase Proposed
CHS created on 25/06/2015. Last modified 27/11/2016

OUTGOING STRUCTURAL RELATIONSHIPS

Aggregation from S121_FC_ListedValue to S121_FC_SimpleAttribute
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from S121_FC_ListedValue_RI to S121_FC_ListedValue
[Direction is 'Source -> Destination'.]

ATTRIBUTES

alias : CharacterString Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

Equivalent name(s) of this listed value.
[Is static False. Containment is Not Specified.]

code : CharacterString Public

Code that uniquely identifies the listed value for the corresponding feature.
[Is static False. Containment is Not Specified.]

definition : CharacterString Public

Definition of the listed value in a natural language.
[Is static False. Containment is Not Specified.]

label : CharacterString Public

Descriptive label that uniquely identifies one value of the feature attribute.
[Is static False. Containment is Not Specified.]

remarks : CharacterString Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

ATTRIBUTES

Further explanations about the listed value.

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

DirectedLine (direction: Source -> Destination) «directedLine»

Source: Public (Class) S121_FC_ListedValue

Target: Public (Boundary) Boundary

Association (direction: Source -> Destination)

Source: Public (Class) S121_FC_AttributeBinding

Target: Public permittedValues (Class) S121_FC_ListedValue
Cardinality: [0..*]

1.3.48 S121_FC_SimpleAttribute

Class in package 'FeatureCatalogue'

S121_FC_SimpleAttribute: derived from S100_FC_SimpleAttribute:.

S100_FC_SimpleAttribute: Attribute that carries a value.

S121_FC_SimpleAttribute
Version Phase Proposed
CHS created on 25/06/2015. Last modified 27/11/2016
Extends S121_FC_Attribute

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from S121_FC_SimpleAttribute to «abstract» S121_FC_Attribute

[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from S121_FC_AttributeType_RI to S121_FC_SimpleAttribute

[Direction is 'Source -> Destination'.]

Realization from FC_Dictionary_Attribute_Entry to S121_FC_SimpleAttribute

[Name is Instance. Direction is 'Source -> Destination'.]

Aggregation from S121_FC_ListedValue to S121_FC_SimpleAttribute

[Direction is 'Source -> Destination'.]

ATTRIBUTES

dataType : S100_FD_FeatureAttributeDataType Public

The data type of this feature attribute.

ATTRIBUTES

[Is static False. Containment is Not Specified.]

quantity Specification : Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

specification of the quantity

[Is static False. Containment is Not Specified.]

uom : S100_UnitOfMeasure Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Unit of measure used for values of this feature attribute.

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

DirectedLine (direction: Source -> Destination) «directedLine»

Source: Public (Class) S121_FC_SimpleAttribute

Target: Public (Boundary) Boundary

Association (direction: Source -> Destination) Usage of registered definition etc

Source: Public (Metaclass) S121_GF_ThematicAttributeType «metaclass»
Cardinality: [1]

Target: Public (Class) S121_FC_SimpleAttribute
Cardinality: [0..*]

1.3.49 Domain Administrative Area Classes of ISO 19152 diagram

Class diagram in package 'S121 Information Structure'

Domain Administrative Area Classes of ISO 19152
Version
ISO TC211 created on 27/03/2015. Last modified 27/11/2016

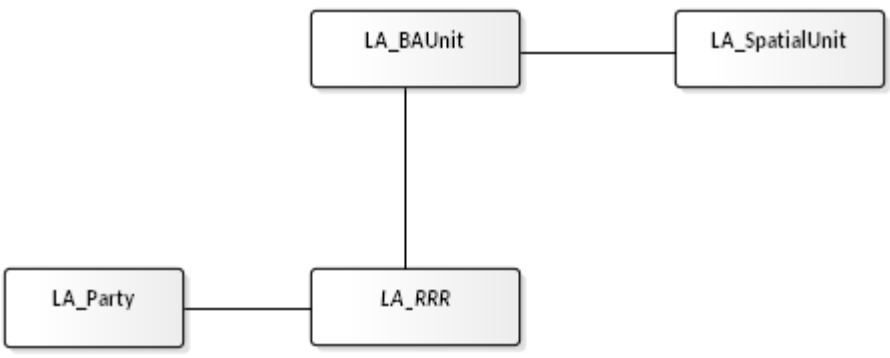

Figure 24: Domain Administrative Area Classes of ISO 19152

1.3.50 LA_Party

Class «featureType» in package 'Party'

a person or organisation that plays a role in a **rights** transaction

LA_Party
Version 1.0 Phase Mandatory
ISO 19152 created on 20/05/2008. Last modified 23/11/2016

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «featureType» LA_Party to «featureType» VersionedObject
[Direction is 'Source -> Destination'.]

Aggregation from «featureType» LA_Party to «interface» LA_SpatialUnitOverview
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from «featureType» LA_GroupParty to «featureType» LA_Party
[Direction is 'Source -> Destination'.]

Realization from S121_Party to «featureType» LA_Party
[Name is Realize. Direction is 'Source -> Destination'.]

Generalization from «featureType» KR_OwnerInformation to «featureType» LA_Party
[Direction is 'Source -> Destination'.]

Realization from S121_Party to «featureType» LA_Party
[Name is Realize. Direction is 'Source -> Destination'.]

Generalization from «featureType» Farmer to «featureType» LA_Party
[Direction is 'Source -> Destination'.]

Generalization from QLD_Party to «featureType» LA_Party
[Direction is 'Source -> Destination'.]

Generalization from NL_Party to «featureType» LA_Party
[Direction is 'Source -> Destination'.]

ATTRIBUTES

extPID : Oid Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the identifier of the party in an external registration
[Is static False. Containment is Not Specified.]

name : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

ATTRIBUTES

the name of the party

[Is static False. Containment is Not Specified.]

pID : Oid Public

the identifier of the party

[Is static False. Containment is Not Specified.]

role : LA_PartyRoleType Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

the role of a party in the data update and maintenance process

[Is static False. Containment is Not Specified.]

type : LA_PartyType Public

the type of the party

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified) conveyancerSource

Source: Public conveyancer (Class) LA_Party «featureType»
Cardinality: [1..*]

Target: Public source (Class) LA_AdministrativeSource «featureType»
Cardinality: [0..*]

Association (direction: Unspecified) surveyorSource

Source: Public surveyor (Class) LA_Party «featureType»
Cardinality: [1..*]

Target: Public source (Class) LA_SpatialSource «featureType»
Cardinality: [0..*]

Association (direction: Unspecified) rrrParty

Source: Public party (Class) LA_Party «featureType»
Cardinality: [0..1]

Target: Public rrr (Class) LA_RRR «featureType»
Cardinality: [0..*]

AssociationClass (direction: Unspecified) members

Source: Public group (Class) LA_GroupParty «featureType»
Cardinality: [0..1]

Target: Public parties (Class) LA_Party «featureType»
Cardinality: [2..*]

Association (direction: Unspecified) baunitAsParty

Source: Public unit (Class) LA_BAUnit «featureType»
Cardinality: [0..*]

Target: Public party (Class) LA_Party «featureType»
Cardinality: [0..*]

Association (direction: Unspecified)

Source: Public folio (Class) LA_PartyPortfolio «interface»
Cardinality: [0..*]

Target: Public party (Class) LA_Party «featureType»
Cardinality: [1]

ASSOCIATIONS
Association (direction: Unspecified) Source: Public (Class) LA_AdministrativeSource «featureType» Cardinality: [0..*] Target: Public represented by (Class) LA_Party «featureType» Cardinality: [0..1]

1.3.51 LA_RRR

Class «featureType» in package 'Administrative'

An instance of a subclass of LA_RRR is a **right** (or social tenure relationship), a **restriction**, or a **responsibility**

LA_RRR
Version 1.0 Phase 1.0 Proposed
ISO 19152 created on 27/05/2008. Last modified 23/11/2016
Alias LA_SocialTenureRelationship

OUTGOING STRUCTURAL RELATIONSHIPS
Aggregation from «featureType» LA_RRR to «interface» LA_SpatialUnitOverview [Direction is 'Source -> Destination'.]
Aggregation from «featureType» LA_RRR to «interface» LA_PartyPortfolio [Direction is 'Source -> Destination'.]
Generalization from «featureType» LA_RRR to «featureType» VersionedObject [Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS
Realization from S121_RRR to «featureType» LA_RRR [Name is Realize. Direction is 'Source -> Destination'.]
Generalization from «featureType» LA_Restriction to «featureType» LA_RRR [Direction is 'Source -> Destination'.]
Realization from «abstract» S121_RRR to «featureType» LA_RRR [Name is Realize. Direction is 'Source -> Destination'.]
Generalization from «featureType» KR_ParcelPrice to «featureType» LA_RRR [Direction is 'Source -> Destination'.]
Generalization from QLD_RRR to «featureType» LA_RRR [Direction is 'Source -> Destination'.]
Generalization from NL_RRR to «featureType» LA_RRR [Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from «featureType» LA_Responsibility to «featureType» LA_RRR
[Direction is 'Source -> Destination'.]

Generalization from «featureType» LA_Right to «featureType» LA_RRR
[Direction is 'Source -> Destination'.]

CONNECTORS

Dependency Source -> Destination
From: Legal Profiles : Package, Public
To: LA_RRR : Class, Public

ATTRIBUTES

description : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

description regarding the right, restriction or responsibility
[Is static False. Containment is Not Specified.]

rID : Oid Public

The RRR identifier
[Is static False. Containment is Not Specified.]

share : Fraction Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

a share in an instance of a subclass of LA_RRR
[Is static False. Containment is Not Specified.]

shareCheck : Boolean Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

boolean indicating whether the constraint is applicable
[Is static False. Containment is Not Specified.]

timeSpec : ISO8601_ISO14825_Type Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

operational use of a right in time sharing
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified) unitRrr

Source: Public rrr (Class) LA_RRR «featureType»
Cardinality: [1..*]

Target: Public unit (Class) LA_BAUnit «featureType»
Cardinality: [1]

ASSOCIATIONS

Association (direction: Unspecified) rrrSource

Source: Public rrr (Class) LA_RRR «featureType»
Cardinality: [0..*]

Target: Public source (Class) LA_AdministrativeSource «featureType»
Cardinality: [1..*]

Association (direction: Unspecified) rrrParty

Source: Public party (Class) LA_Party «featureType»
Cardinality: [0..1]

Target: Public rrr (Class) LA_RRR «featureType»
Cardinality: [0..*]

1.3.52 LA_BAUnit

Class «featureType» in package 'Administrative'

administrative entity consisting of zero or more **spatial units** against which (one or more) unique and homogeneous **rights** (e.g. ownership right or land use right), **responsibilities** or **restrictions** are associated to the whole entity, as included in a **Land Administration** system

LA_BAUnit
Version 1.0 Phase 1.0 Proposed
ISO 19152 created on 26/05/2008. Last modified 27/11/2016

CONSTRAINTS

Invariant. sum(RRR.share)=1 per type if RRR.shareCheck

[Approved, Weight is 0.]

Invariant. no overlap RRR.timeSpec per summed type

[Approved, Weight is 1.]

OUTGOING STRUCTURAL RELATIONSHIPS

Aggregation from «featureType» LA_BAUnit to «interface» LA_SpatialUnitOverview

[Direction is 'Source -> Destination'.]

Generalization from «featureType» LA_BAUnit to «featureType» VersionedObject

[Direction is 'Source -> Destination'.]

Aggregation from «featureType» LA_BAUnit to «interface» LA_PartyPortfolio

[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from S121_BAUnit to «featureType» LA_BAUnit

[Name is Realize. Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from «featureType» BasicPropertyUnit to «featureType» LA_BAUnit
[Direction is 'Source -> Destination'.]

Generalization from «featureType» KR_ParcelPrice to «featureType» LA_BAUnit
[Direction is 'Source -> Destination'.]

Generalization from Parcel to «featureType» LA_BAUnit
[Direction is 'Source -> Destination'.]

Generalization from NL_BAUnit to «featureType» LA_BAUnit
[Direction is 'Source -> Destination'.]

Generalization from QLD_BAUnit to «featureType» LA_BAUnit
[Direction is 'Source -> Destination'.]

Realization from S121_BAUnit to «featureType» LA_BAUnit
[Name is Realize. Direction is 'Source -> Destination'.]

ATTRIBUTES

name : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the name of the basic administrative unit
[Is static False. Containment is Not Specified.]

type : LA_BAUnitType Public

the type of the basic administrative unit
[Is static False. Containment is Not Specified.]

uID : Oid Public

the identifier of the basic administrative unit
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified) baunitSource

Source: Public unit (Class) LA_BAUnit «featureType»
Cardinality: [0..*]

Target: Public source (Class) LA_SpatialSource «featureType»
Cardinality: [0..*]

Association (direction: Unspecified) unitSource

Source: Public unit (Class) LA_BAUnit «featureType»
Cardinality: [0..*]

Target: Public source (Class) LA_AdministrativeSource «featureType»
Cardinality: [0..*]

ASSOCIATIONS

Association (direction: Unspecified) baunitAsParty

Source: Public unit (Class) LA_BAUnit «featureType»
Cardinality: [0..*]

Target: Public party (Class) LA_Party «featureType»
Cardinality: [0..*]

AssociationClass (direction: Unspecified) relationBaunit

Source: Public unit1 (Class) LA_BAUnit «featureType»
Cardinality: [0..*]

Target: Public unit2 (Class) LA_BAUnit «featureType»
Cardinality: [0..*]

Association (direction: Unspecified)

Source: Public value (Class) ExtValuation «blueprint»
Cardinality: [0..*]

Target: Public unit (Class) LA_BAUnit «featureType»
Cardinality: [1]

Association (direction: Unspecified) suBaunit

Source: Public su (Class) LA_SpatialUnit «featureType»
Cardinality: [0..*]

Target: Public baunit (Class) LA_BAUnit «featureType»
Cardinality: [0..*]

Association (direction: Unspecified) unitRrr

Source: Public rrr (Class) LA_RRR «featureType»
Cardinality: [1..*]

Target: Public unit (Class) LA_BAUnit «featureType»
Cardinality: [1]

Association (direction: Unspecified)

Source: Public tax (Class) ExtTaxation «blueprint»
Cardinality: [0..*]

Target: Public unit (Class) LA_BAUnit «featureType»
Cardinality: [1]

AssociationClass (direction: Unspecified) relationBaunit

Source: Public unit1 (Class) LA_BAUnit «featureType»
Cardinality: [0..*]

Target: Public unit2 (Class) LA_BAUnit «featureType»
Cardinality: [0..*]

1.3.53 LA_SpatialUnit

Class «featureType» in package 'Spatial Unit'

single area (or multiple areas) of land or water, or a single volume (or multiple volumes) of space

LA_SpatialUnit
Version 1.0 Phase 1.0 Proposed
ISO 19152 created on 12/09/2008. Last modified 23/11/2016
Alias LA_Parcel

OUTGOING STRUCTURAL RELATIONSHIPS

OUTGOING STRUCTURAL RELATIONSHIPS

Aggregation from «featureType» LA_SpatialUnit to «interface» LA_PartyPortfolio
[Direction is 'Source -> Destination'.]

Aggregation from «featureType» LA_SpatialUnit to «interface» LA_RegionMap
[Direction is 'Source -> Destination'.]

Aggregation from «featureType» LA_SpatialUnit to «featureType» LA_SpatialUnit
[Name is suHierarchy. Direction is 'Source -> Destination'.]

Generalization from «featureType» LA_SpatialUnit to «featureType» VersionedObject
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from Text_SpatialUnit to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

Generalization from QLD_AdminArea to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

Generalization from SurfacewHoles_SpatialUnit to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

Generalization from «featureType» JP_LASpatialUnit to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

Realization from «FeatureType» S121_Space to «featureType» LA_SpatialUnit
[Name is Realize. Direction is 'Source -> Destination'.]

Generalization from Unstructured_SpatialUnit to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

Generalization from «featureType» LA_LegalSpaceBuildingUnit to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

Generalization from «featureType» LA_LegalSpaceUtilityNetwork to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

Generalization from Topological_SpatialUnit to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

Realization from «FeatureType» S121_FeatureUnit to «featureType» LA_SpatialUnit
[Name is Realize. Direction is 'Source -> Destination'.]

Generalization from «featureType» KR_Parcel to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from «FeatureType» S121_Zone to «featureType» LA_SpatialUnit
[Name is Realize. Direction is 'Source -> Destination'.]

Generalization from Polygon_SpatialUnit to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

Aggregation from «featureType» SubParcel to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

Generalization from «featureType» RF_LegalSpaceBuilding to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

Generalization from «featureType» RF_LegalSpaceUnfinshed to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

Generalization from 3D_SpatialUnit to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

Generalization from «Feature Type» HUN_SpatialUnit to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

Generalization from «featureType» RF_LandParcel to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

Generalization from «featureType» RF_LegalSpaceOtherConstruction to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

Generalization from QLD_SpatialUnit to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

Generalization from Point_SpatialUnit to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

Realization from «FeatureAttribute» S121_SpatialAttributeType to «featureType» LA_SpatialUnit
[Name is Realize. Direction is 'Source -> Destination'.]

Generalization from «featureType» CadastralParcel to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

Aggregation from «featureType» LA_SpatialUnit to «featureType» LA_SpatialUnit
[Name is suHierarchy. Direction is 'Source -> Destination'.]

Generalization from NL_SpatialUnit to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from «featureType» RF_LegalSpaceBuildingUnit to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

CONNECTORS

Dependency Source -> Destination
From: WithHoles not separate option : Package, Public
To: LA_SpatialUnit : Class, Public

Dependency Source -> Destination
From: Topological_Profile : Package, Public
To: LA_SpatialUnit : Class, Public

ATTRIBUTES

area : LA_AreaValue Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

the area value

[Is static False. Containment is Not Specified.]

dimension : LA_DimensionType Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the dimension of the spatial unit

[Is static False. Containment is Not Specified.]

extAddressID : ExtAddress Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

the link to external address(es) of the spatial unit

[Is static False. Containment is Not Specified.]

label : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

short textual description of the spatial unit

[Is static False. Containment is Not Specified.]

referencePoint : GM_Point Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the coordinates of a point inside the spatial unit

[Is static False. Containment is Not Specified.]

suID : Oid Public
Alias: nationalCadastralReference

the spatial unit identifier

[Is static False. Containment is Not Specified.]

surfaceRelation : LA_SurfaceRelationType Public

ATTRIBUTES

Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

[Is static False. Containment is Not Specified.]

volume : LA_VolumeValue Public

Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

the volume value (in case of bounded 3D description)

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

AssociationClass (direction: Unspecified) relationSu

Source: Public su1 (Class) LA_SpatialUnit «featureType»
Cardinality: [0..*]

Target: Public su2 (Class) LA_SpatialUnit «featureType»
Cardinality: [0..*]

Association (direction: Unspecified) suBaunit

Source: Public su (Class) LA_SpatialUnit «featureType»
Cardinality: [0..*]

Target: Public baunit (Class) LA_BAUnit «featureType»
Cardinality: [0..*]

Association (direction: Unspecified)

Source: Public suID (Class) LA_SpatialUnit «featureType»
Cardinality: [1]

Target: Public (Class) QLD_BoundaryConnector
Cardinality: [*]

Association (direction: Unspecified) plus

Source: Public su (Class) LA_SpatialUnit «featureType»
Cardinality: [0..*]

Target: Public bf (Class) LA_BoundaryFace «featureType»
Cardinality: [0..*]

Association (direction: Unspecified) minus

Source: Public su (Class) LA_SpatialUnit «featureType»
Cardinality: [0..*]

Target: Public bfs (Class) LA_BoundaryFaceString «featureType»
Cardinality: [0..*]

AssociationClass (direction: Unspecified) relationSu

Source: Public su1 (Class) LA_SpatialUnit «featureType»
Cardinality: [0..*]

Target: Public su2 (Class) LA_SpatialUnit «featureType»
Cardinality: [0..*]

Association (direction: Unspecified)

Source: Public overview (Class) LA_SpatialUnitOverview «interface»
Cardinality: [0..*]

Target: Public spatialUnit (Class) LA_SpatialUnit «featureType»
Cardinality: [1]

Association (direction: Unspecified) minus

ASSOCIATIONS

Source: Public bf (Class) LA_BoundaryFace «featureType»
Cardinality: [0..*]

Target: Public su (Class) LA_SpatialUnit «featureType»
Cardinality: [0..*]

Association (direction: Unspecified) suSuGroup

Source: Public whole (Class) LA_SpatialUnitGroup «featureType»
Cardinality: [0..*]

Target: Public part (Class) LA_SpatialUnit «featureType»
Cardinality: [0..*]

Association (direction: Unspecified) plus

Source: Public bfs (Class) LA_BoundaryFaceString «featureType»
Cardinality: [0..*]

Target: Public su (Class) LA_SpatialUnit «featureType»
Cardinality: [0..*]

Association (direction: Unspecified)

Source: Public use (Class) ExtLandUse «blueprint»
Cardinality: [0..*]

Target: Public su (Class) LA_SpatialUnit «featureType»
Cardinality: [1]

Association (direction: Unspecified) suSource

Source: Public source (Class) LA_SpatialSource «featureType»
Cardinality: [0..*]

Target: Public su (Class) LA_SpatialUnit «featureType»
Cardinality: [0..*]

Association (direction: Unspecified) referencePoint

Source: Public point (Class) LA_Point «featureType»
Cardinality: [0..1]

Target: Public su (Class) LA_SpatialUnit «featureType»
Cardinality: [0..1]

Association (direction: Unspecified)

Source: Public (Class) QLD_NonPropertyDetail
Cardinality: [0..*]

Target: Public (Class) LA_SpatialUnit «featureType»
Cardinality: [0..1]

Association (direction: Unspecified)

Source: Public cov (Class) ExtLandCover «blueprint»
Cardinality: [0..*]

Target: Public su (Class) LA_SpatialUnit «featureType»
Cardinality: [1]

Association (direction: Unspecified) suLevel

Source: Public level (Class) LA_Level «featureType»
Cardinality: [0..1]

Target: Public su (Class) LA_SpatialUnit «featureType»
Cardinality: [0..*]

OPERATIONS

areaClosed () : Boolean Public

OPERATIONS
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]
computeArea () : Area Public [Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]
computeVolume () : Volume Public [Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]
createArea () : GM_MultiSurface Public [Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]
createVolume () : GM_MultiSolid Public [Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]
volumeClosed () : Boolean Public [Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

1.3.54 S121 Basic Administrative Unit diagram

Class diagram in package 'S121 Information Structure'

S121 Basic Administrative Unit
Version
CHS created on 27/03/2015. Last modified 27/11/2016

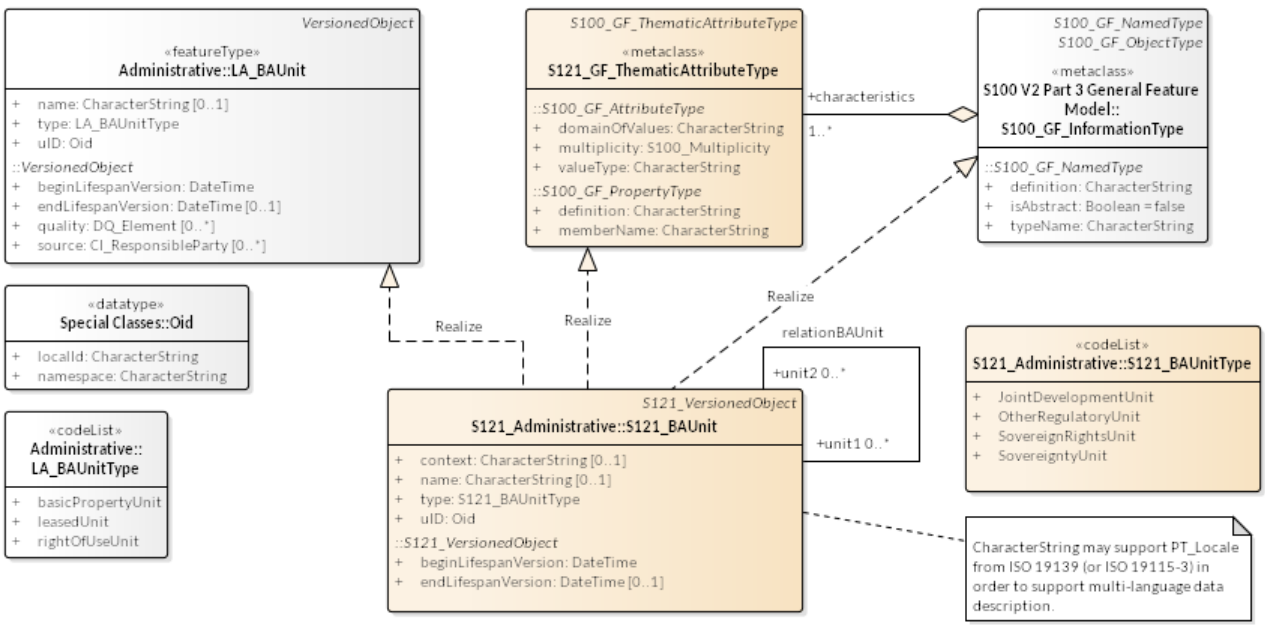

Figure 25: S121 Basic Administrative Unit

1.3.55 LA_BAUnit

Class «featureType» in package 'Administrative'

administrative entity consisting of zero or more **spatial units** against which (one or more) unique and homogeneous **rights** (e.g. ownership right or land use right), **responsibilities** or **restrictions** are associated to the whole entity, as included in a **Land Administration** system

LA_BAUnit
Version 1.0 Phase 1.0 Proposed
ISO 19152 created on 26/05/2008. Last modified 27/11/2016

CONSTRAINTS

Invariant. sum(RRR.share)=1 per type if RRR.shareCheck

[Approved, Weight is 0.]

Invariant. no overlap RRR.timeSpec per summed type

[Approved, Weight is 1.]

OUTGOING STRUCTURAL RELATIONSHIPS

Aggregation from «featureType» LA_BAUnit to «interface» LA_SpatialUnitOverview

[Direction is 'Source -> Destination'.]

Generalization from «featureType» LA_BAUnit to «featureType» VersionedObject

[Direction is 'Source -> Destination'.]

Aggregation from «featureType» LA_BAUnit to «interface» LA_PartyPortfolio

[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from S121_BAUnit to «featureType» LA_BAUnit

[Name is Realize. Direction is 'Source -> Destination'.]

Generalization from «featureType» BasicPropertyUnit to «featureType» LA_BAUnit

[Direction is 'Source -> Destination'.]

Generalization from «featureType» KR_ParcelPrice to «featureType» LA_BAUnit

[Direction is 'Source -> Destination'.]

Generalization from Parcel to «featureType» LA_BAUnit

[Direction is 'Source -> Destination'.]

Generalization from NL_BAUnit to «featureType» LA_BAUnit

[Direction is 'Source -> Destination'.]

Generalization from QLD_BAUnit to «featureType» LA_BAUnit

[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from S121_BAUnit to «featureType» LA_BAUnit

[Name is Realize. Direction is 'Source -> Destination'.]

ATTRIBUTES

name : CharacterString Public

Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the name of the basic administrative unit

[Is static False. Containment is Not Specified.]

type : LA_BAUnitType Public

the type of the basic administrative unit

[Is static False. Containment is Not Specified.]

uID : Oid Public

the identifier of the basic administrative unit

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified) baunitSource

Source: Public unit (Class) LA_BAUnit «featureType»
Cardinality: [0..*]

Target: Public source (Class) LA_SpatialSource «featureType»
Cardinality: [0..*]

Association (direction: Unspecified) unitSource

Source: Public unit (Class) LA_BAUnit «featureType»
Cardinality: [0..*]

Target: Public source (Class) LA_AdministrativeSource «featureType»
Cardinality: [0..*]

Association (direction: Unspecified) baunitAsParty

Source: Public unit (Class) LA_BAUnit «featureType»
Cardinality: [0..*]

Target: Public party (Class) LA_Party «featureType»
Cardinality: [0..*]

AssociationClass (direction: Unspecified) relationBaunit

Source: Public unit1 (Class) LA_BAUnit «featureType»
Cardinality: [0..*]

Target: Public unit2 (Class) LA_BAUnit «featureType»
Cardinality: [0..*]

Association (direction: Unspecified)

Source: Public value (Class) ExtValuation «blueprint»
Cardinality: [0..*]

Target: Public unit (Class) LA_BAUnit «featureType»
Cardinality: [1]

ASSOCIATIONS

Association (direction: Unspecified) suBaunit

Source: Public su (Class) LA_SpatialUnit «featureType»
Cardinality: [0..*]

Target: Public baunit (Class) LA_BAUnit «featureType»
Cardinality: [0..*]

Association (direction: Unspecified) unitRrr

Source: Public rrr (Class) LA_RRR «featureType»
Cardinality: [1..*]

Target: Public unit (Class) LA_BAUnit «featureType»
Cardinality: [1]

Association (direction: Unspecified)

Source: Public tax (Class) ExtTaxation «blueprint»
Cardinality: [0..*]

Target: Public unit (Class) LA_BAUnit «featureType»
Cardinality: [1]

AssociationClass (direction: Unspecified) relationBaunit

Source: Public unit1 (Class) LA_BAUnit «featureType»
Cardinality: [0..*]

Target: Public unit2 (Class) LA_BAUnit «featureType»
Cardinality: [0..*]

1.3.56 S100_GF_InformationType

Metaclass «metaclass» in package 'S100 V2 Part 3 General Feature Model'

S100_GF_InformationType is the class for information types within S-100. An information type is an identifiable object that can be associated with features in order to carry information particular to the associated features. An example of an information type might be a Chart Note. Information types can also be associated with each other. This could be done where there is further supplementary information that is relevant to the information type or where there is a need to translate the information. For example a primary information object carrying a Chart Note may contain text in English and an associated supplementary information object may carry the same text in German.

The characteristics of information types shall be carried by thematic attribute types only.Therefore, S100_GF_InformationType is associated with only S100_GF_ThematicAttributeType rather than the more generic class S100_GF_PropertyType. The associations to information types are modelled by means of the type S100_InformationAssociationType.

S100_GF_InformationType
Version 2.0 Phase 2.0 Proposed
IHO TSMAD created on 22/12/2014. Last modified 27/11/2016

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «metaclass» S100_GF_InformationType to «metaclass» S100_GF_ObjectType
[Direction is 'Source -> Destination'.]

Generalization from «metaclass» S100_GF_InformationType to «metaclass» S100_GF_NamedType
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from S121_AdministrativeSource to «metaclass» S100_GF_InformationType
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from S121_Source to «metaclass» S100_GF_InformationType
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from S121_Party to «metaclass» S100_GF_InformationType
[Direction is 'Source -> Destination'.]

Aggregation from «metaclass» S121_GF_ThematicAttributeType to «metaclass» S100_GF_InformationType
[Direction is 'Source -> Destination'.]

Realization from S121_BAUnit to «metaclass» S100_GF_InformationType
[Name is Realize. Direction is 'Source -> Destination'.]

Aggregation from «metaclass» S100_GF_ThematicAttributeType to «metaclass» S100_GF_InformationType
[Direction is 'Source -> Destination'.]

Realization from S121_RRR to «metaclass» S100_GF_InformationType
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from S121_BAUnit to «metaclass» S100_GF_InformationType
[Direction is 'Source -> Destination'.]

Realization from S121_AdministrativeSource to «metaclass» S100_GF_InformationType
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from «abstract» S121_RRR to «metaclass» S100_GF_InformationType
[Direction is 'Source -> Destination'.]

Aggregation from «metaclass» S121_GF_ThematicAttributeType to «metaclass» S100_GF_InformationType
[Direction is 'Source -> Destination'.]

Realization from S121_Source to «metaclass» S100_GF_InformationType
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from S121_Party to «metaclass» S100_GF_InformationType
[Name is Realize. Direction is 'Source -> Destination'.]

Aggregation from «metaclass» S100_GF_AssociationRole to «metaclass» S100_GF_InformationType
[Direction is 'Source -> Destination'.]

CONNECTORS

CONNECTORS

Dependency «trace» Source -> Destination
From: S100_GF_InformationType : Metaclass, Public
To: S100_GF_InformationType : Metaclass, Public

ASSOCIATIONS

Association (direction: Unspecified)

Source: Public includes (Metaclass) S100_GF_InformationType «metaclass»
Cardinality: [1..*]

Target: Public linkBetween (Metaclass) S100_GF_InformationAssociationType «metaclass»
Cardinality: [1..*]

The information type that is included in the relationship.

Association (direction: Unspecified) inheritance

Role: superType - The more generic feature type from which this feature type is derived.
Role: subType - The more specific feature types which are derived from this feature type.

Source: Public subType (Metaclass) S100_GF_InformationType «metaclass»
Cardinality: [0..*]

Target: Public superType (Metaclass) S100_GF_InformationType «metaclass»
Cardinality: [0..1]

Association (direction: Unspecified) inheritance

Role: superType - The more generic feature type from which this feature type is derived.
Role: subType - The more specific feature types which are derived from this feature type.

Source: Public subType (Metaclass) S100_GF_InformationType «metaclass»
Cardinality: [0..*]

Target: Public superType (Metaclass) S100_GF_InformationType «metaclass»
Cardinality: [0..1]

1.3.57 S121_BAUnit

Class in package 'S121_Administrative'

The Basic Administrative Unit is an information object to “which (one or more) unique and homogeneous rights, responsibilities or restrictions are associated”. It is an information object since it does not directly take on spatial attributes. The S121_BAUnit is derived from both the S121_GF_ThematicAttributeType and the LA_BAUnit defined in ISO 19152.

S121_BAUnit
Version Phase Proposed
CHS created on 27/03/2015. Last modified 27/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from S121_BAUnit to S121_VersionedObject
[Direction is 'Source -> Destination'.]

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_BAUnit to «metaclass» S100_GF_InformationType
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from S121_BAUnit to «metaclass» S121_GF_ThematicAttributeType
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from S121_BAUnit to «featureType» LA_BAUnit
[Name is Realize. Direction is 'Source -> Destination'.]

ATTRIBUTES

context : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

name : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

type : S121_BAUnitType Public

the use type of the basic administrative unit
[Is static False. Containment is Not Specified.]

uID : Oid Public

An ID used in relationships between elements of the RRR structure and the Basic Administrative Unit.
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified)

Source: Public (Class) S121_BAUnit
Target: Public (Class) S121_Zone «FeatureType»

Association (direction: Unspecified)

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]
Target: Public rrr (Class) S121_RRR
Cardinality: [1..*]

Association (direction: Unspecified)

Source: Public (Class) S121_BAUnit
Target: Public (Class) S121_Space «FeatureType»

Association (direction: Unspecified) relationBAUnit

Source: Public unit1 (Class) S121_BAUnit
Cardinality: [0..*]
Target: Public unit2 (Class) S121_BAUnit
Cardinality: [0..*]

Association (direction: Unspecified) baunitAsParty

ASSOCIATIONS

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Target: Public party (Class) S121_Party
Cardinality: [0..*]

Association (direction: Unspecified)

Source: Public (Abstract) S121_FeatureUnit «FeatureType»
Cardinality: [0..*]

Target: Public (Class) S121_BAUnit
Cardinality: [1..*]

Association (direction: Unspecified) unitSource

Source: Public source (Class) S121_Source
Cardinality: [0..*]

Target: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Association (direction: Unspecified) relationBAUnit

Source: Public unit1 (Class) S121_BAUnit
Cardinality: [0..*]

Target: Public unit2 (Class) S121_BAUnit
Cardinality: [0..*]

1.3.58 S121_BAUnitType

Class «codeList» in package 'S121_Administrative'

This code list describes the basic administrative unit domains in the realm of Maritime Limit and Boundaries which includes:
Sovereignty Unit,
Sovereign Rights Unit,
Joint Development Unit,
Other Jurisdiction and Regulatory Units.

S121_BAUnitType
Version 1.0 Phase 1.0 Proposed
created on 18/11/2016. Last modified 27/11/2016

ATTRIBUTES

JointDevelopmentUnit : Public
[Is static False. Containment is Not Specified.]

OtherRegulatoryUnit : Public

Other Jurisdiction and Regulatory Areas.
[Is static False. Containment is Not Specified.]

SovereignRightsUnit : Public
[Is static False. Containment is Not Specified.]

SovereigntyUnit : Public
[Is static False. Containment is Not Specified.]

1.3.59 S121 Feature Unit diagram

Class diagram in package 'S121 Information Structure'

S121 Feature Unit
Version
CHS created on 27/03/2015. Last modified 27/11/2016

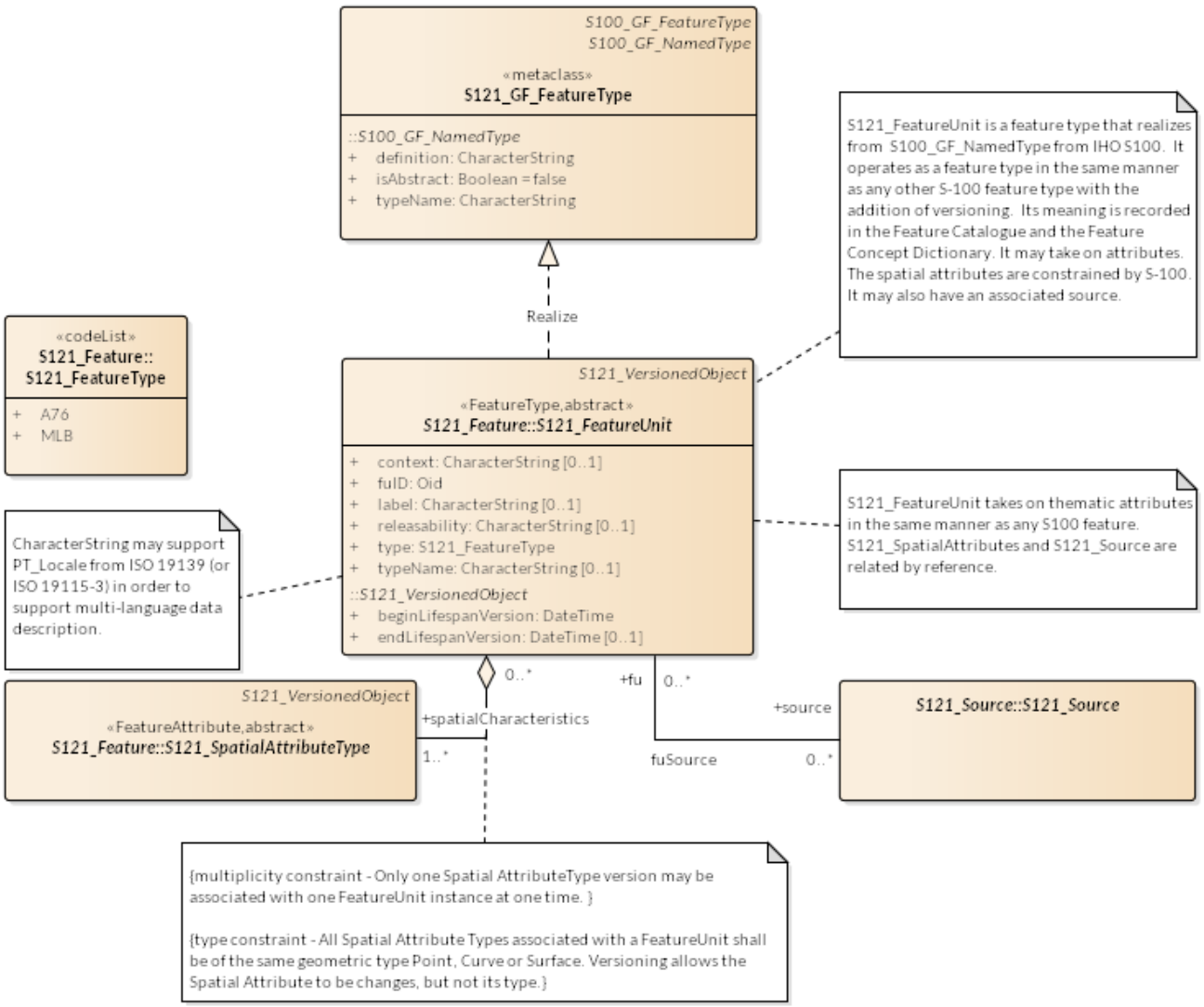

Figure 26: S121 Feature Unit

1.3.60 S121_FeatureUnit

Abstract «FeatureType» in package 'S121_Feature'

The Feature Unit is a feature type which derives from the S100 General Feture Model. The S121_FeatureUnit takes on spatial attributes through a relation to the S121_SpatialAttributeType. This is an abstract class. It is implemented through its subtypes S121_Location, S121_Limit, S121_Zone, S121_Space.

S121_FeatureUnit
Version Phase Proposed
CHS created on 03/11/2016. Last modified 27/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from «FeatureType» S121_FeatureUnit to «metaclass» S121_GF_FeatureType
[Name is Realize. Direction is 'Source -> Destination'.]

Generalization from «FeatureType» S121_FeatureUnit to S121_VersionedObject
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from «MLB» Limit Point to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Inland Waters to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «FeatureType» S121_Space to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» International Boundary to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Baseline Point to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Inland Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» The Area to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Baseline to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Boundary Point to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «HYDRO» Exclusive Economic Zone to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Territorial Sea Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Disputed Area to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from «HYDRO» Straight Baseline to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» High sea to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Exclusive Economic Zone Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Aggregation from «FeatureAttribute» S121_SpatialAttributeType to «FeatureType» S121_FeatureUnit
[Direction is 'Unspecified'.]

Generalization from «MLB» Normal Baseline to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «FeatureType» S121_Zone to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Contiguous Zone Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «HYDRO» Contiguous Zone to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «HYDRO» Continental Shelf Area to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Continental Shelf Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «FeatureType» S121_Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Internal Waters to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «FeatureType» S121_Location to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «HYDRO» Territorial Sea Area to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

ATTRIBUTES

context : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

ATTRIBUTES

fuID : Oid Public

the spatial unit identifier

[Is static False. Containment is Not Specified.]

label : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

[Is static False. Containment is Not Specified.]

releasability : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

This attribute may be used to differentiate between "official", "development", "internal use" or "in construction" status for particular features. This may be a code list in the future.

[Is static False. Containment is Not Specified.]

type : S121_FeatureType Public

[Is static False. Containment is Not Specified.]

typeName : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

short textual description of the spatial unit

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified)

Source: Public (Abstract) S121_FeatureUnit «FeatureType»
Cardinality: [0..*]

Target: Public (Class) S121_BAUnit
Cardinality: [1..*]

Association (direction: Unspecified) fuSource

Source: Public fu (Abstract) S121_FeatureUnit «FeatureType»
Cardinality: [0..*]

Target: Public source (Class) S121_Source
Cardinality: [0..*]

1.3.61 S121_FeatureType

Class «codeList» in package 'S121_Feature'

This code list includes types that have a common characteristic related to the marine environment. The code list is registered in the Feature Concept Dictionary as listed values and as such can be expanded to include all aspects of the legal context. The initial contents are: **MLB** (Marine Limits and Boundaries), and **A76** (UNCLOS article 76). This code list can be extended.

S121_FeatureType
Version 1.0 Phase 1.0 Proposed
created on 21/02/2016. Last modified 27/11/2016

ATTRIBUTES

A76 : Public

UNCLOS article 76

[Is static False. Containment is Not Specified.]

MLB : Public

Marine Limits and Boundaries

[Is static False. Containment is Not Specified.]

1.3.62 S121_SpatialAttributeType

Abstract «FeatureAttribute» in package 'S121_Feature'

The Spatial Attribute Type as defined for S121 inherits from S100_GF_SpatialAttributeType. This means that the geometry types inherited from S-100 apply. Only the geometry types GM_Point, GM_MultiPoint, GM_Curve, GM_Surface, CV_Coverage, GM_Curve (arcByCentrePoint and circleByCentrePoint may be used. This is an abstract class. It is implemented through its subtypes S121_Point, S121_Curve, S121_Surface, S121_Volume and S121_Composite.

S121_SpatialAttributeType
Version Phase Proposed
S121 PT created on 27/03/2015. Last modified 27/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «FeatureAttribute» S121_SpatialAttributeType to S121_VersionedObject

[Direction is 'Source -> Destination'.]

Realization from «FeatureAttribute» S121_SpatialAttributeType to «metaclass» S121_GF_SpatialAttributeType

[Name is Realize. Direction is 'Source -> Destination'.]

Aggregation from «FeatureAttribute» S121_SpatialAttributeType to «FeatureType» S121_FeatureUnit

[Direction is 'Unspecified'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from «Geometry» S121_Curve to «FeatureAttribute» S121_SpatialAttributeType

[Direction is 'Source -> Destination'.]

Generalization from «Geometry» S121_Composite to «FeatureAttribute» S121_SpatialAttributeType

[Direction is 'Source -> Destination'.]

Generalization from «Geometry» S121_Surface to «FeatureAttribute» S121_SpatialAttributeType

[Direction is 'Source -> Destination'.]

Generalization from «Geometry» S121_Point to «FeatureAttribute» S121_SpatialAttributeType

[Direction is 'Source -> Destination'.]

ATTRIBUTES

label : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

short textual description of the spatial unit

[Is static False. Containment is Not Specified.]

locationByText : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

[Is static False. Containment is Not Specified.]

referenceSystem : S100_IO_IdentifiedObject Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Spatial Referencing System

Constraints:
requirement : Pre-condition

[Is static False. Containment is Not Specified.]

saID : Oid Public

[Is static False. Containment is Not Specified.]

scaleMaximum : PositiveInteger Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Stereotype is «S100_GF_SpatialAttributeType». Is static False. Containment is Not Specified.]

scaleMinimum : PositiveInteger Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Stereotype is «S100_GF_SpatialAttributeType». Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified) saSource

Source: Public source (Class) S121_Source
Cardinality: [0..*]

Target: Public sa (Abstract)
S121_SpatialAttributeType «FeatureAttribute»
Cardinality: [0..*]

1.3.63 S121_Source

Class in package 'S121_Source'

documentation of the source of the referenced information.

S121_Source
Version 1.0 Phase CD Proposed
S121 PT created on 23/02/2016. Last modified 27/11/2016

OUTGOING STRUCTURAL RELATIONSHIPS

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_Source to «featureType» LA_Source
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from S121_Source to «metaclass» S100_GF_InformationType
[Name is Realize. Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from S121_SpatialSource to S121_Source
[Direction is 'Source -> Destination'.]

Generalization from S121_AdministrativeSource to S121_Source
[Direction is 'Source -> Destination'.]

ATTRIBUTES

acceptance : DateTime Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the date of force of law of the source by an authority
[Is static False. Containment is Not Specified.]

availabilityStatus : LA_AvailabilityStatusType Public
[Is static False. Containment is Not Specified.]

extArchiveID : ExtArchive Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the identifier of a source in an external registration
[Is static False. Containment is Not Specified.]

lifeSpanStamp : DateTime Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the moment that the event represented by the instance of LA_Source is further processed in the LA system
[Is static False. Containment is Not Specified.]

maintype : CI_PresentationFormCode Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the type of document
[Is static False. Containment is Not Specified.]

name : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Document name - for example the document (legislation, treaty, title) that defines the object.
[Stereotype is «S121». Is static False. Containment is Not Specified.]

quality : DQ_Element Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

ATTRIBUTES

[Is static False. Containment is Not Specified.]

recordation : DateTime Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the date of registration (recordation) of the source by registering authority

[Is static False. Containment is Not Specified.]

registryNumber : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Unique official identifier of the record in a registry. For example, in states with registers of legislative instruments, versioning is controlled by the registry ID.

[Stereotype is «S121». Is static False. Containment is Not Specified.]

sID : Oid Public

the identifier of the source

[Is static False. Containment is Not Specified.]

source : S121_ResponsibleParty Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

[Is static False. Containment is Not Specified.]

submission : DateTime Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the date of submission of the source by a party

[Is static False. Containment is Not Specified.]

URL : S121_OnlineResource Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

URL - this is official the URL (or equivalent online resource) where the document is distributed.

[Stereotype is «S121». Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified)

Source: Public source (Class) S121_Source
Cardinality: [0..*]

Target: Public party (Class) S121_Party
Cardinality: [1..*]

Association (direction: Unspecified) rrrSource

Source: Public source (Class) S121_Source
Cardinality: [1..*]

Target: Public rrr (Class) S121_RRR
Cardinality: [0..*]

Association (direction: Unspecified) unitSource

Source: Public source (Class) S121_Source
Cardinality: [0..*]

Target: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

ASSOCIATIONS

Association (direction: Unspecified) saSource

Source: Public source (Class) S121_Source
Cardinality: [0..*]

Target: Public sa (Abstract) S121_SpatialAttributeType «FeatureAttribute»
Cardinality: [0..*]

Association (direction: Unspecified) fuSource

Source: Public fu (Abstract) S121_FeatureUnit «FeatureType»
Cardinality: [0..*]

Target: Public source (Class) S121_Source
Cardinality: [0..*]

1.3.64 S121 Spatial Attribute diagram

Class diagram in package 'S121 Information Structure'

S121 Spatial Attribute
Version
CHS created on 04/11/2016. Last modified 27/11/2016

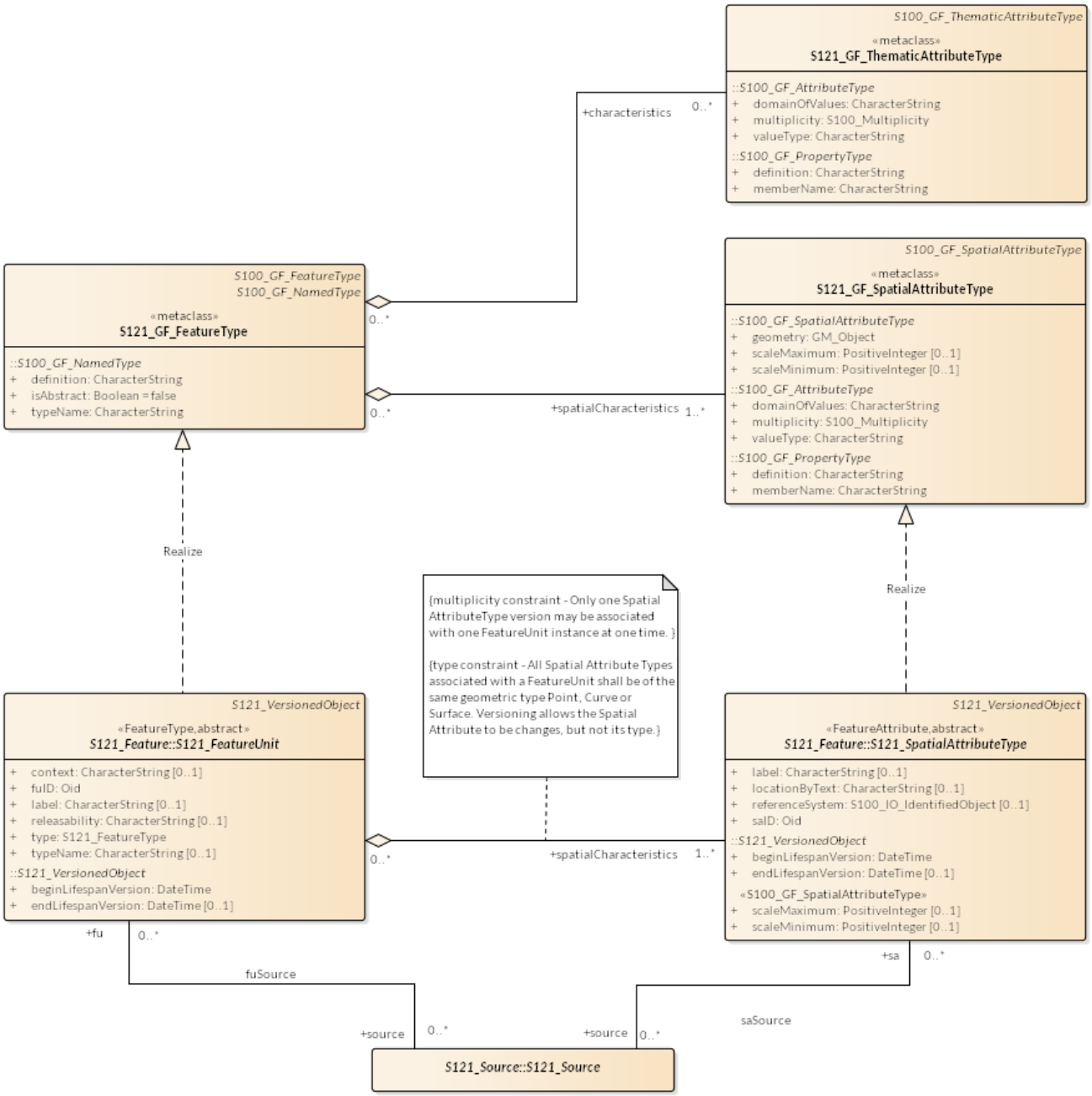

Figure 27: S121 Spatial Attribute

1.3.65 S121_FeatureUnit

Abstract «FeatureType» in package 'S121_Feature'

The Feature Unit is a feature type which derives from the S100 General Feture Model. The S121_FeatureUnit takes on spatial attributes through a relation to the S121_SpatialAttributeType. This is an abstract class. It is implemented through its subtypes S121_Location, S121_Limit, S121_Zone, S121_Space.

S121_FeatureUnit
Version Phase Proposed
CHS created on 03/11/2016. Last modified 27/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from «FeatureType» S121_FeatureUnit to «metaclass» S121_GF_FeatureType
[Name is Realize. Direction is 'Source -> Destination'.]

Generalization from «FeatureType» S121_FeatureUnit to S121_VersionedObject
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from «MLB» Limit Point to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Inland Waters to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «FeatureType» S121_Space to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» International Boundary to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Baseline Point to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Inland Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» The Area to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Baseline to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Boundary Point to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «HYDRO» Exclusive Economic Zone to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Territorial Sea Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Disputed Area to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «HYDRO» Straight Baseline to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from «MLB» High sea to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Exclusive Economic Zone Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Aggregation from «FeatureAttribute» S121_SpatialAttributeType to «FeatureType» S121_FeatureUnit
[Direction is 'Unspecified'.]

Generalization from «MLB» Normal Baseline to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «FeatureType» S121_Zone to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Contiguous Zone Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «HYDRO» Contiguous Zone to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «HYDRO» Continental Shelf Area to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Continental Shelf Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «FeatureType» S121_Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Internal Waters to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «FeatureType» S121_Location to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «HYDRO» Territorial Sea Area to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

ATTRIBUTES

context : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

fuID : Oid Public

ATTRIBUTES

the spatial unit identifier

[Is static False. Containment is Not Specified.]

label : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

[Is static False. Containment is Not Specified.]

releasability : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

This attribute may be used to differentiate between "official", "development", "internal use" or "in construction" status for particular features. This may be a code list in the future.

[Is static False. Containment is Not Specified.]

type : S121_FeatureType Public

[Is static False. Containment is Not Specified.]

typeName : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

short textual description of the spatial unit

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified)

Source: Public (Abstract) S121_FeatureUnit «FeatureType»
Cardinality: [0..*]

Target: Public (Class) S121_BAUnit
Cardinality: [1..*]

Association (direction: Unspecified) fuSource

Source: Public fu (Abstract) S121_FeatureUnit «FeatureType»
Cardinality: [0..*]

Target: Public source (Class) S121_Source
Cardinality: [0..*]

1.3.66 S121_SpatialAttributeType

Abstract «FeatureAttribute» in package 'S121_Feature'

The Spatial Attribute Type as defined for S121 inherits from S100_GF_SpatialAttributeType. This means that the geometry types inherited from S-100 apply. Only the geometry types GM_Point, GM_MultiPoint, GM_Curve, GM_Surface, CV_Coverage, GM_Curve (arcByCentrePoint and circleByCentrePoint may be used. This is an abstract class. It is implemented through its subtypes S121_Point, S121_Curve, S121_Surface, S121_Volume and S121_Composite.

S121_SpatialAttributeType
Version Phase Proposed
S121 PT created on 27/03/2015. Last modified 27/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «FeatureAttribute» S121_SpatialAttributeType to S121_VersionedObject
[Direction is 'Source -> Destination'.]

Realization from «FeatureAttribute» S121_SpatialAttributeType to «metaclass» S121_GF_SpatialAttributeType
[Name is Realize. Direction is 'Source -> Destination'.]

Aggregation from «FeatureAttribute» S121_SpatialAttributeType to «FeatureType» S121_FeatureUnit
[Direction is 'Unspecified'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from «Geometry» S121_Curve to «FeatureAttribute» S121_SpatialAttributeType
[Direction is 'Source -> Destination'.]

Generalization from «Geometry» S121_Composite to «FeatureAttribute» S121_SpatialAttributeType
[Direction is 'Source -> Destination'.]

Generalization from «Geometry» S121_Surface to «FeatureAttribute» S121_SpatialAttributeType
[Direction is 'Source -> Destination'.]

Generalization from «Geometry» S121_Point to «FeatureAttribute» S121_SpatialAttributeType
[Direction is 'Source -> Destination'.]

ATTRIBUTES

label : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

short textual description of the spatial unit
[Is static False. Containment is Not Specified.]

locationByText : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

referenceSystem : S100_IO_IdentifiedObject Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Spatial Referencing System

Constraints:
requirement : Pre-condition
[Is static False. Containment is Not Specified.]

salD : Oid Public
[Is static False. Containment is Not Specified.]

scaleMaximum : PositiveInteger Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Stereotype is «S100_GF_SpatialAttributeType». Is static False. Containment is Not Specified.]

ATTRIBUTES

scaleMinimum : PositiveInteger Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Stereotype is «S100_GF_SpatialAttributeType». Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified) saSource

Source: Public source (Class) S121_Source
Cardinality: [0..*]

Target: Public sa (Abstract)
S121_SpatialAttributeType «FeatureAttribute»
Cardinality: [0..*]

1.3.67 S121_Source

Class in package 'S121_Source'

documentation of the source of the referenced information.

S121_Source
Version 1.0 Phase CD Proposed
S121 PT created on 23/02/2016. Last modified 27/11/2016

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_Source to «featureType» LA_Source
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from S121_Source to «metaclass» S100_GF_InformationType
[Name is Realize. Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from S121_SpatialSource to S121_Source
[Direction is 'Source -> Destination'.]

Generalization from S121_AdministrativeSource to S121_Source
[Direction is 'Source -> Destination'.]

ATTRIBUTES

acceptance : DateTime Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the date of force of law of the source by an authority
[Is static False. Containment is Not Specified.]

availabilityStatus : LA_AvailabilityStatusType Public
[Is static False. Containment is Not Specified.]

ATTRIBUTES

extArchiveID : ExtArchive Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the identifier of a source in an external registration

[Is static False. Containment is Not Specified.]

lifeSpanStamp : DateTime Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the moment that the event represented by the instance of LA_Source is further processed in the LA system

[Is static False. Containment is Not Specified.]

maintype : CI_PresentationFormCode Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the type of document

[Is static False. Containment is Not Specified.]

name : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Document name - for example the document (legislation, treaty, title) that defines the object.

[Stereotype is «S121». Is static False. Containment is Not Specified.]

quality : DQ_Element Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

[Is static False. Containment is Not Specified.]

recordation : DateTime Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the date of registration (recordation) of the source by registering authority

[Is static False. Containment is Not Specified.]

registryNumber : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Unique official identifier of the record in a registry. For example, in states with registers of legislative instruments, versioning is controlled by the registry ID.

[Stereotype is «S121». Is static False. Containment is Not Specified.]

sID : Oid Public

the identifier of the source

[Is static False. Containment is Not Specified.]

source : S121_ResponsibleParty Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

[Is static False. Containment is Not Specified.]

submission : DateTime Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the date of submission of the source by a party

ATTRIBUTES

[Is static False. Containment is Not Specified.]

URL : S121_OnlineResource Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

URL - this is official the URL (or equivalent online resource) where the document is distributed.
[Stereotype is «S121». Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified)

Source: Public source (Class) S121_Source
Cardinality: [0..*]

Target: Public party (Class) S121_Party
Cardinality: [1..*]

Association (direction: Unspecified) rrrSource

Source: Public source (Class) S121_Source
Cardinality: [1..*]

Target: Public rrr (Class) S121_RRR
Cardinality: [0..*]

Association (direction: Unspecified) unitSource

Source: Public source (Class) S121_Source
Cardinality: [0..*]

Target: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Association (direction: Unspecified) saSource

Source: Public source (Class) S121_Source
Cardinality: [0..*]

Target: Public sa (Abstract) S121_SpatialAttributeType «FeatureAttribute»
Cardinality: [0..*]

Association (direction: Unspecified) fuSource

Source: Public fu (Abstract) S121_FeatureUnit «FeatureType»
Cardinality: [0..*]

Target: Public source (Class) S121_Source
Cardinality: [0..*]

1.3.68 S121 Spatial Referencing diagram

Class diagram in package 'S121 Information Structure'

S121 Spatial Referencing
Version
CHS created on 21/11/2016. Last modified 27/11/2016

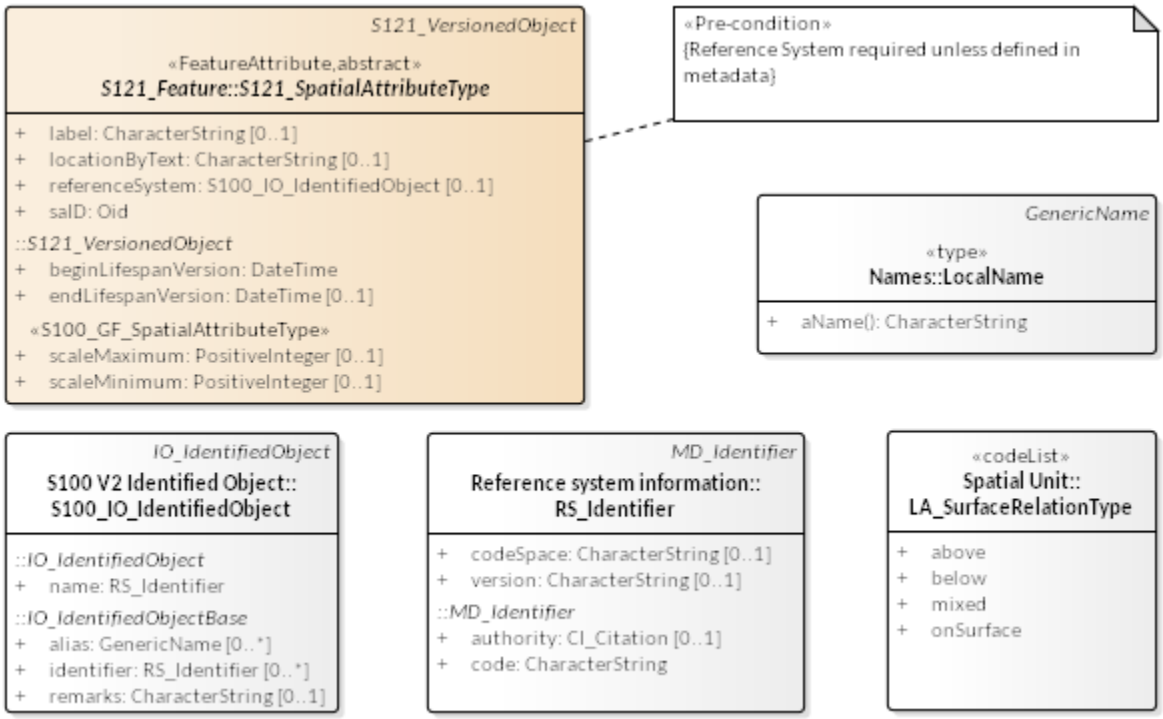

Figure 28: S121 Spatial Referencing

1.3.69 LocalName

Class «type» in package 'Names'

A LocalName references a local object directly accessible the NameSpace.

LocalName
Version Phase Proposed
created on 10/04/2008. Last modified 27/11/2016

CONSTRAINTS
Invariant. depth = 1 [Approved, Weight is 0.]
Invariant. self = parsedName() [Approved, Weight is 1.]

OUTGOING STRUCTURAL RELATIONSHIPS
Generalization from «type» LocalName to «type» GenericName [

INCOMING STRUCTURAL RELATIONSHIPS
Generalization from «type» TypeName to «type» LocalName [
Generalization from «type» MemberName to «type» LocalName [

OPERATIONS

aName () : CharacterString Public
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

1.3.70 RS_Identifier

Class in package 'Reference system information'

An identification of a CRS object. The first use of a XX_RS_Identifier for an object, if any, is normally the primary identification code, and any others are aliases.

RS_Identifier
Version Phase
created on 10/04/2008. Last modified 22/11/2016

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from RS_Identifier to MD_Identifier
[

ATTRIBUTES

codeSpace : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: , Is ordered: False)

Identifier of a code space within which one or more codes are defined. This code space is optional but is normally included. This code space is often defined by some authority organization, where one organization may define multiple code spaces. The range and format of each Code Space identifier is defined by that code space authority.
[Is static False. Containment is .]

version : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: , Is ordered: False)

Identifier of the version of the associated codeSpace or code, as specified by the codeSpace or code authority. This version is included only when the "code" or "codeSpace" uses versions. When appropriate, the version is identified by the effective date, coded using ISO 8601 date format.
[Is static False. Containment is .]

1.3.71 S121_SpatialAttributeType

Abstract «FeatureAttribute» in package 'S121_Feature'

The Spatial Attribute Type as defined for S121 inherits from S100_GF_SpatialAttributeType. This means that the geometry types inherited from S-100 apply. Only the geometry types GM_Point, GM_MultiPoint, GM_Curve, GM_Surface, CV_Coverage, GM_Curve (arcByCentrePoint and circleByCentrePoint may be used. This is an abstract class. It is implemented through its subtypes S121_Point, S121_Curve, S121_Surface, S121_Volume and S121_Composite.

S121_SpatialAttributeType
Version Phase Proposed
S121 PT created on 27/03/2015. Last modified 27/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «FeatureAttribute» S121_SpatialAttributeType to S121_VersionedObject
[Direction is 'Source -> Destination'.]

Realization from «FeatureAttribute» S121_SpatialAttributeType to «metaclass» S121_GF_SpatialAttributeType
[Name is Realize. Direction is 'Source -> Destination'.]

Aggregation from «FeatureAttribute» S121_SpatialAttributeType to «FeatureType» S121_FeatureUnit
[Direction is 'Unspecified'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from «Geometry» S121_Curve to «FeatureAttribute» S121_SpatialAttributeType
[Direction is 'Source -> Destination'.]

Generalization from «Geometry» S121_Composite to «FeatureAttribute» S121_SpatialAttributeType
[Direction is 'Source -> Destination'.]

Generalization from «Geometry» S121_Surface to «FeatureAttribute» S121_SpatialAttributeType
[Direction is 'Source -> Destination'.]

Generalization from «Geometry» S121_Point to «FeatureAttribute» S121_SpatialAttributeType
[Direction is 'Source -> Destination'.]

ATTRIBUTES

label : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

short textual description of the spatial unit
[Is static False. Containment is Not Specified.]

locationByText : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

referenceSystem : S100_IO_IdentifiedObject Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Spatial Referencing System

Constraints:
requirement : Pre-condition
[Is static False. Containment is Not Specified.]

salD : Oid Public
[Is static False. Containment is Not Specified.]

scaleMaximum : PositiveInteger Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Stereotype is «S100_GF_SpatialAttributeType». Is static False. Containment is Not Specified.]

ATTRIBUTES

scaleMinimum : PositiveInteger Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Stereotype is «S100_GF_SpatialAttributeType». Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified) saSource

Source: Public source (Class) S121_Source
Cardinality: [0..*]

Target: Public sa (Abstract)
S121_SpatialAttributeType «FeatureAttribute»
Cardinality: [0..*]

1.3.72 S121 Spatial Geometry diagram

Class diagram in package 'S121 Information Structure'

S121 Spatial Geometry
Version 1.0
CDOBrien created on 22/11/2016. Last modified 27/11/2016

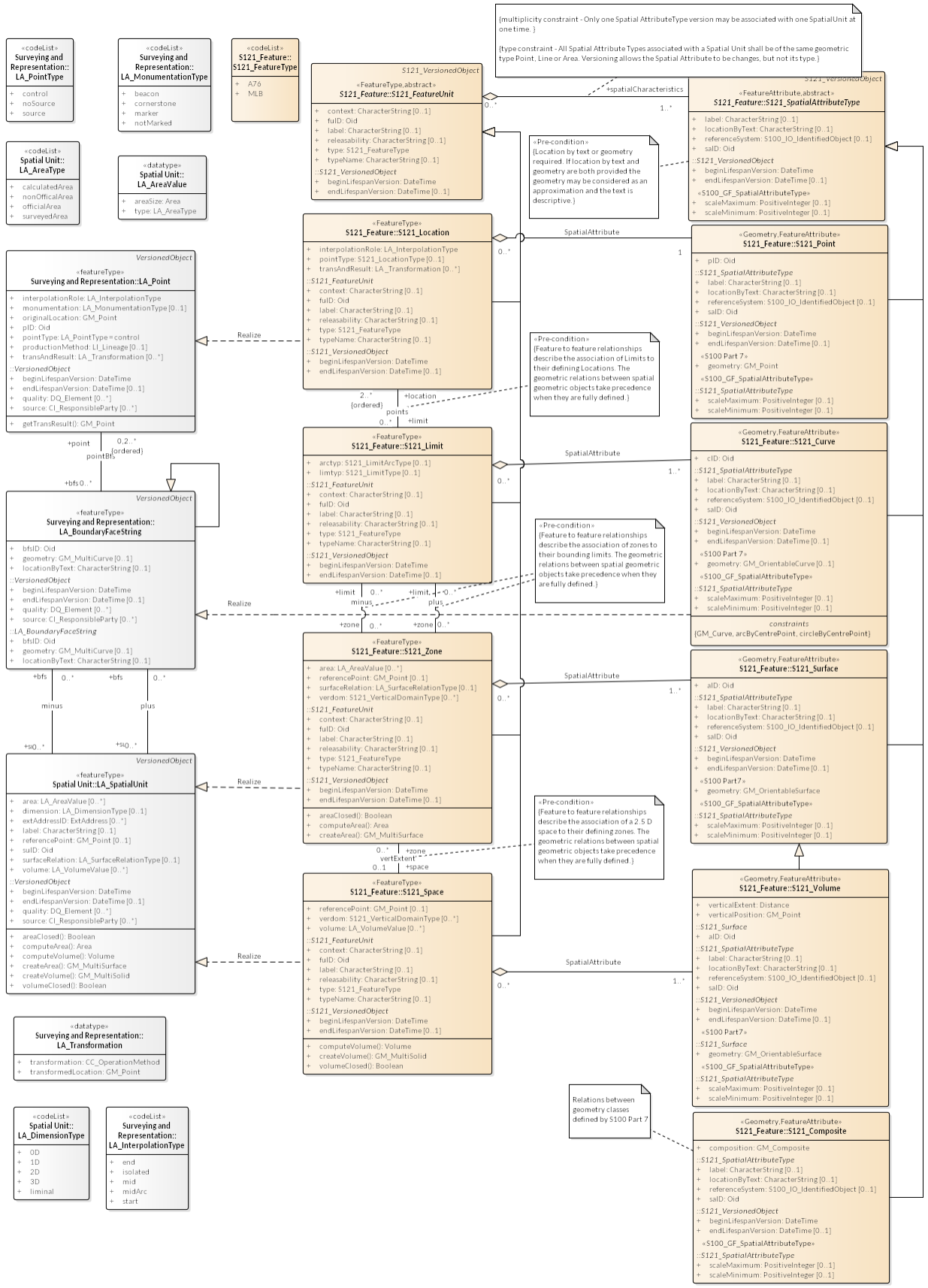

Figure 29: S121 Spatial Geometry

1.3.73 LA_SpatialUnit

Class «featureType» in package 'Spatial Unit'

single area (or multiple areas) of land or water, or a single volume (or multiple volumes) of space

LA_SpatialUnit
Version 1.0 Phase 1.0 Proposed
ISO 19152 created on 12/09/2008. Last modified 23/11/2016
Alias LA_Parcel

OUTGOING STRUCTURAL RELATIONSHIPS

Aggregation from «featureType» LA_SpatialUnit to «interface» LA_PartyPortfolio
[Direction is 'Source -> Destination'.]

Aggregation from «featureType» LA_SpatialUnit to «interface» LA_RegionMap
[Direction is 'Source -> Destination'.]

Aggregation from «featureType» LA_SpatialUnit to «featureType» LA_SpatialUnit
[Name is suHierarchy. Direction is 'Source -> Destination'.]

Generalization from «featureType» LA_SpatialUnit to «featureType» VersionedObject
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from Text_SpatialUnit to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

Generalization from QLD_AdminArea to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

Generalization from SurfacewHoles_SpatialUnit to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

Generalization from «featureType» JP_LASpatialUnit to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

Realization from «FeatureType» S121_Space to «featureType» LA_SpatialUnit
[Name is Realize. Direction is 'Source -> Destination'.]

Generalization from Unstructured_SpatialUnit to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

Generalization from «featureType» LA_LegalSpaceBuildingUnit to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

Generalization from «featureType» LA_LegalSpaceUtilityNetwork to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

Generalization from Topological_SpatialUnit to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from «FeatureType» S121_FeatureUnit to «featureType» LA_SpatialUnit
[Name is Realize. Direction is 'Source -> Destination'.]

Generalization from «featureType» KR_Parcel to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

Realization from «FeatureType» S121_Zone to «featureType» LA_SpatialUnit
[Name is Realize. Direction is 'Source -> Destination'.]

Generalization from Polygon_SpatialUnit to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

Aggregation from «featureType» SubParcel to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

Generalization from «featureType» RF_LegalSpaceBuilding to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

Generalization from «featureType» RF_LegalSpaceUnfinshed to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

Generalization from 3D_SpatialUnit to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

Generalization from «Feature Type» HUN_SpatialUnit to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

Generalization from «featureType» RF_LandParcel to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

Generalization from «featureType» RF_LegalSpaceOtherConstruction to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

Generalization from QLD_SpatialUnit to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

Generalization from Point_SpatialUnit to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

Realization from «FeatureAttribute» S121_SpatialAttributeType to «featureType» LA_SpatialUnit
[Name is Realize. Direction is 'Source -> Destination'.]

Generalization from «featureType» CadastralParcel to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Aggregation from «featureType» LA_SpatialUnit to «featureType» LA_SpatialUnit
[Name is suHierarchy. Direction is 'Source -> Destination'.]

Generalization from NL_SpatialUnit to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

Generalization from «featureType» RF_LegalSpaceBuildingUnit to «featureType» LA_SpatialUnit
[Direction is 'Source -> Destination'.]

CONNECTORS

Dependency Source -> Destination
From: WithHoles not separate option : Package, Public
To: LA_SpatialUnit : Class, Public

Dependency Source -> Destination
From: Topological_Profile : Package, Public
To: LA_SpatialUnit : Class, Public

ATTRIBUTES

area : LA_AreaValue Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

the area value

[Is static False. Containment is Not Specified.]

dimension : LA_DimensionType Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the dimension of the spatial unit

[Is static False. Containment is Not Specified.]

extAddressID : ExtAddress Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

the link to external address(es) of the spatial unit

[Is static False. Containment is Not Specified.]

label : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

short textual description of the spatial unit

[Is static False. Containment is Not Specified.]

referencePoint : GM_Point Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the coordinates of a point inside the spatial unit

[Is static False. Containment is Not Specified.]

ATTRIBUTES

suID : Oid Public
Alias: nationalCadastralReference

the spatial unit identifier

[Is static False. Containment is Not Specified.]

surfaceRelation : LA_SurfaceRelationType Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

[Is static False. Containment is Not Specified.]

volume : LA_VolumeValue Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

the volume value (in case of bounded 3D description)

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

AssociationClass (direction: Unspecified) relationSu

Source: Public su1 (Class) LA_SpatialUnit «featureType»
Cardinality: [0..*]

Target: Public su2 (Class) LA_SpatialUnit «featureType»
Cardinality: [0..*]

Association (direction: Unspecified) suBaunit

Source: Public su (Class) LA_SpatialUnit «featureType»
Cardinality: [0..*]

Target: Public baunit (Class) LA_BAUnit «featureType»
Cardinality: [0..*]

Association (direction: Unspecified)

Source: Public suID (Class) LA_SpatialUnit «featureType»
Cardinality: [1]

Target: Public (Class) QLD_BoundaryConnector
Cardinality: [*]

Association (direction: Unspecified) plus

Source: Public su (Class) LA_SpatialUnit «featureType»
Cardinality: [0..*]

Target: Public bf (Class) LA_BoundaryFace «featureType»
Cardinality: [0..*]

Association (direction: Unspecified) minus

Source: Public su (Class) LA_SpatialUnit «featureType»
Cardinality: [0..*]

Target: Public bfs (Class) LA_BoundaryFaceString «featureType»
Cardinality: [0..*]

AssociationClass (direction: Unspecified) relationSu

Source: Public su1 (Class) LA_SpatialUnit «featureType»
Cardinality: [0..*]

Target: Public su2 (Class) LA_SpatialUnit «featureType»
Cardinality: [0..*]

Association (direction: Unspecified)

ASSOCIATIONS

Source: Public overview (Class) LA_SpatialUnitOverview «interface»
Cardinality: [0..*]

Target: Public spatialUnit (Class) LA_SpatialUnit «featureType»
Cardinality: [1]

Association (direction: Unspecified) minus

Source: Public bf (Class) LA_BoundaryFace «featureType»
Cardinality: [0..*]

Target: Public su (Class) LA_SpatialUnit «featureType»
Cardinality: [0..*]

Association (direction: Unspecified) suSuGroup

Source: Public whole (Class) LA_SpatialUnitGroup «featureType»
Cardinality: [0..*]

Target: Public part (Class) LA_SpatialUnit «featureType»
Cardinality: [0..*]

Association (direction: Unspecified) plus

Source: Public bfs (Class) LA_BoundaryFaceString «featureType»
Cardinality: [0..*]

Target: Public su (Class) LA_SpatialUnit «featureType»
Cardinality: [0..*]

Association (direction: Unspecified)

Source: Public use (Class) ExtLandUse «blueprint»
Cardinality: [0..*]

Target: Public su (Class) LA_SpatialUnit «featureType»
Cardinality: [1]

Association (direction: Unspecified) suSource

Source: Public source (Class) LA_SpatialSource «featureType»
Cardinality: [0..*]

Target: Public su (Class) LA_SpatialUnit «featureType»
Cardinality: [0..*]

Association (direction: Unspecified) referencePoint

Source: Public point (Class) LA_Point «featureType»
Cardinality: [0..1]

Target: Public su (Class) LA_SpatialUnit «featureType»
Cardinality: [0..1]

Association (direction: Unspecified)

Source: Public (Class) QLD_NonPropertyDetail
Cardinality: [0..*]

Target: Public (Class) LA_SpatialUnit «featureType»
Cardinality: [0..1]

Association (direction: Unspecified)

Source: Public cov (Class) ExtLandCover «blueprint»
Cardinality: [0..*]

Target: Public su (Class) LA_SpatialUnit «featureType»
Cardinality: [1]

Association (direction: Unspecified) suLevel

Source: Public level (Class) LA_Level «featureType»

Target: Public su (Class) LA_SpatialUnit

ASSOCIATIONS	
Cardinality: [0..1]	«featureType» Cardinality: [0..*]

OPERATIONS
areaClosed () : Boolean Public [Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]
computeArea () : Area Public [Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]
computeVolume () : Volume Public [Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]
createArea () : GM_MultiSurface Public [Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]
createVolume () : GM_MultiSolid Public [Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]
volumeClosed () : Boolean Public [Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

1.3.74 LA_Point

Class «featureType» in package 'Surveying and Representation'

0-dimensional geometric primitive, representing a position

LA_Point
Version 1.0 Phase 1.0 Proposed
uitermark created on 23/05/2008. Last modified 23/11/2016
Alias LA_SurveyPoint

OUTGOING STRUCTURAL RELATIONSHIPS
Generalization from «featureType» LA_Point to «featureType» VersionedObject [Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS
Generalization from «featureType» JP_LAPoint to «featureType» LA_Point [Direction is 'Source -> Destination'.]
Generalization from «featureType» KR_ControlPoint to «featureType» LA_Point [Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from «FeatureType» S121_Location to «featureType» LA_Point
[Name is Realize. Direction is 'Source -> Destination'.]

ATTRIBUTES

interpolationRole : LA_InterpolationType Public

the role of point in the structure of a straight line or curve
[Is static False. Containment is Not Specified.]

monumentation : LA_MonumentationType Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the type of monumentation
[Is static False. Containment is Not Specified.]

originalLocation : GM_Point Public

the calculated co-ordinates, based on observations
[Is static False. Containment is Not Specified.]

pID : Oid Public

the point identifier
[Is static False. Containment is Not Specified.]

pointType : LA_PointType Public = control

the type of point
[Is static False. Containment is Not Specified.]

productionMethod : LI_Lineage Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

lineage
[Is static False. Containment is Not Specified.]

transAndResult : LA _Transformation Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

transformation and transformed location
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified) pointSource

Source: Public point (Class) LA_Point «featureType»
Cardinality: [1..*]

Target: Public source (Class) LA_SpatialSource «featureType»
Cardinality: [0..*]

Association (direction: Unspecified) referencePoint

ASSOCIATIONS

Source: Public point (Class) LA_Point «featureType»
Cardinality: [0..1]

Target: Public su (Class) LA_SpatialUnit «featureType»
Cardinality: [0..1]

Association (direction: Unspecified) pointBf

Source: Public bf (Class) LA_BoundaryFace «featureType»
Cardinality: [0..*]

Target: Public point (Class) LA_Point «featureType»
Cardinality: [0,3..*]

Association (direction: Unspecified) geometry

Source: Public (Class) ExtNetworkSegment «blueprint»
Cardinality: [0..*]

Target: Public (Class) LA_Point «featureType»
Cardinality: [0..*]

Association (direction: Unspecified) pointBfs

Source: Public bfs (Class) LA_BoundaryFaceString «featureType»
Cardinality: [0..*]

Target: Public point (Class) LA_Point «featureType»
Cardinality: [0,2..*]

Association (direction: Unspecified) geometry

Source: Public (Class) ExtNetworkNode «blueprint»
Cardinality: [0..*]

Target: Public (Class) LA_Point «featureType»

OPERATIONS

getTransResult () : GM_Point Public
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

1.3.75 LA_BoundaryFaceString

Class «featureType» in package 'Surveying and Representation'

boundary forming part of the outside of a **spatial unit**

LA_BoundaryFaceString
Version 1.0 Phase 1.0 Proposed
uitermark created on 29/08/2008. Last modified 23/11/2016

CONSTRAINTS

Invariant. (count (geometry) + count (locationByText)) > 0 or count (point) >1
[Approved, Weight is 1.]

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «featureType» LA_BoundaryFaceString to «featureType» VersionedObject
[Direction is 'Source -> Destination'.]

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «featureType» LA_BoundaryFaceString to «featureType» LA_BoundaryFaceString
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from Text_Boundary to «featureType» LA_BoundaryFaceString
[Direction is 'Source -> Destination'.]

Generalization from SurfacewHoles_FaceString to «featureType» LA_BoundaryFaceString
[Direction is 'Source -> Destination'.]

Generalization from Polygon_Boundary to «featureType» LA_BoundaryFaceString
[Direction is 'Source -> Destination'.]

Generalization from Unstructured_Boundary to «featureType» LA_BoundaryFaceString
[Direction is 'Source -> Destination'.]

Generalization from «featureType» JP_LABoundaryFaceString to «featureType» LA_BoundaryFaceString
[Direction is 'Source -> Destination'.]

Generalization from Topological_Boundary to «featureType» LA_BoundaryFaceString
[Direction is 'Source -> Destination'.]

Realization from «Geometry» S121_Curve to «featureType» LA_BoundaryFaceString
[Name is Realize. Direction is 'Source -> Destination'.]

Generalization from «featureType» LA_BoundaryFaceString to «featureType» LA_BoundaryFaceString
[Direction is 'Source -> Destination'.]

Generalization from «featureType» CadastralBoundary to «featureType» LA_BoundaryFaceString
[Direction is 'Source -> Destination'.]

ATTRIBUTES

bfsID : Oid Public

the boundary face string identifier

[Is static False. Containment is Not Specified.]

geometry : GM_MultiCurve Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

boundary represented via a curve at ground level

Constraints:
interpolation : Invariant

[Is static False. Containment is Not Specified.]

locationByText : CharacterString Public

ATTRIBUTES

Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the boundary represented in text

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified) plus

Source: Public bfs (Class) LA_BoundaryFaceString «featureType»
Cardinality: [0..*]

Target: Public su (Class) LA_SpatialUnit «featureType»
Cardinality: [0..*]

Association (direction: Unspecified) pointBfs

Source: Public bfs (Class) LA_BoundaryFaceString «featureType»
Cardinality: [0..*]

Target: Public point (Class) LA_Point «featureType»
Cardinality: [0,2..*]

Association (direction: Unspecified)

Source: Public fsID (Class) LA_BoundaryFaceString «featureType»
Cardinality: [1]

Target: Public (Class) QLD_BoundaryConnector
Cardinality: [*]

Association (direction: Unspecified) minus

Source: Public su (Class) LA_SpatialUnit «featureType»
Cardinality: [0..*]

Target: Public bfs (Class) LA_BoundaryFaceString «featureType»
Cardinality: [0..*]

Association (direction: Unspecified) bfsSource

Source: Public source (Class) LA_SpatialSource «featureType»
Cardinality: [0..*]

Target: Public bfs (Class) LA_BoundaryFaceString «featureType»
Cardinality: [0..*]

1.3.76 S121_Limit

Class «FeatureType» in package 'S121_Feature'

Name: Limit
AlphaCode: MLBLIM
camelCaseCode: Limit
NumericCode:
Use Type: theme
Definition: The MLB_Limit object is an object that defines any limits or boundaries either relating to terrestrial, marine or both environments.
Permitted Primitives: P, L
References:
Remarks:

S121_Limit
Version Phase Proposed
S-121 PT created on 26/03/2015. Last modified 01/12/2016

Extends S121_FeatureUnit

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «FeatureType» S121_Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from «MLB» Exclusive Economic Zone Limit to «FeatureType» S121_Limit
[Direction is 'Source -> Destination'.]

Realization from «MLB» Baseline to «FeatureType» S121_Limit
[Direction is 'Source -> Destination'.]

Realization from «MLB» Contiguous Zone Limit to «FeatureType» S121_Limit
[Direction is 'Source -> Destination'.]

Realization from «MLB» Inland Limit to «FeatureType» S121_Limit
[Direction is 'Source -> Destination'.]

Realization from «MLB» International Boundary to «FeatureType» S121_Limit
[Direction is 'Source -> Destination'.]

Aggregation from «Geometry» S121_Curve to «FeatureType» S121_Limit
[Name is SpatialAttribute. Direction is 'Source -> Destination'.]

Realization from «HYDRO» Straight Baseline to «FeatureType» S121_Limit
[Direction is 'Source -> Destination'.]

Realization from «MLB» Territorial Sea Limit to «FeatureType» S121_Limit
[Direction is 'Source -> Destination'.]

Realization from «MLB» Continental Shelf Limit to «FeatureType» S121_Limit
[Direction is 'Source -> Destination'.]

Realization from «MLB» Normal Baseline to «FeatureType» S121_Limit
[Direction is 'Source -> Destination'.]

ATTRIBUTES

arctyp : S121_LimitArcType Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Definition: Type of computation used to define an arc (line). (Geodesic or loxodrome).
[Is static False. Containment is Not Specified.]

limtyp : S121_LimitType Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Definition: Type of delineation (Boundary, Limit or Construction).

ATTRIBUTES

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified) plus

Source: Public zone (Class) S121_Zone «FeatureType»
Cardinality: [0..*]

Target: Public limit (Class) S121_Limit «FeatureType»
Cardinality: [0..*]

Association (direction: Unspecified) minus

Source: Public zone (Class) S121_Zone «FeatureType»
Cardinality: [0..*]

Target: Public limit (Class) S121_Limit «FeatureType»
Cardinality: [0..*]

Association (direction: Unspecified) points

Source: Public location (Class) S121_Location «FeatureType»
Cardinality: [2..*]

Target: Public limit (Class) S121_Limit «FeatureType»
Cardinality: [0..*]

1.3.77 S121_Location

Class «FeatureType» in package 'S121_Feature'

Name: Location
AlphaCode: MLOCTN
camelCaseCode: Limit
NumericCode:
Use Type: theme
Definition: The Location object is an object that defines the underlying structure of location.
Permitted Primitives: P
Remarks: To portray a geodesic or loxodrome curve correctly, additional vertices may be included in the dataset. These are densified locations. These vertices would not have formed part of the original source information. The loctyp attribute can be used to differentiate between a defined vertex (e.g. declared in a treaty) with a vertex densified to ensure correct GIS depiction. A computed location is also not part of the original source information, but is calculated as the result of the original source guidance, such as the intersection between arcs, geodesics, or loxodromes. A construction vertex is any arbitrary position established to support computation.
References:

S121_Location
Version Phase Proposed
S-121 PT created on 26/03/2015. Last modified 01/12/2016
Extends S121_FeatureUnit

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «FeatureType» S121_Location to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from «FeatureType» S121_Location to «featureType» LA_Point
[Name is Realize. Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from «MLB» Boundary Point to «FeatureType» S121_Location
[Direction is 'Source -> Destination'.]

Realization from «MLB» Baseline Point to «FeatureType» S121_Location
[Direction is 'Source -> Destination'.]

Aggregation from «Geometry» S121_Point to «FeatureType» S121_Location
[Name is SpatialAttribute. Direction is 'Source -> Destination'.]

Realization from «MLB» Limit Point to «FeatureType» S121_Location
[Direction is 'Source -> Destination'.]

ATTRIBUTES

interpolationRole : LA_InterpolationType Public

the role of point in the structure of a straight line or curve
[Is static False. Containment is Not Specified.]

pointType : S121_LocationType Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Definition: Computational origin of the element (defined, densified, computed or construction)
[Is static False. Containment is Not Specified.]

transAndResult : LA _Transformation Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

transformation and transformed location
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified) points

Source: Public location (Class) S121_Location «FeatureType»
Cardinality: [2..*]

Target: Public limit (Class) S121_Limit «FeatureType»
Cardinality: [0..*]

1.3.78 S121_Zone

Class «FeatureType» in package 'S121_Feature'

Name: Zone

AlphaCode: MZONE
camelCaseCode: Zone
NumericCode:
Use Type: theme
Definition: The Zone object is an object that defines an area which is logically delimited by instances of delineation (limit_boundary) objects.
Permitted Primitives: P,L,A
Remarks: Maritime, terrestrial or inter-tidal zone objects are the three real objects that inherit from this object.
References:

S121_Zone
Version Phase Proposed
S-121 PT created on 26/03/2015. Last modified 01/12/2016
Extends S121_FeatureUnit

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from «FeatureType» S121_Zone to «featureType» LA_SpatialUnit
[Name is Realize. Direction is 'Source -> Destination'.]

Generalization from «FeatureType» S121_Zone to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from «HYDRO» Territorial Sea Area to «FeatureType» S121_Zone
[Direction is 'Source -> Destination'.]

Realization from «HYDRO» Exclusive Economic Zone to «FeatureType» S121_Zone
[Direction is 'Source -> Destination'.]

Aggregation from «Geometry» S121_Surface to «FeatureType» S121_Zone
[Name is SpatialAttribute. Direction is 'Source -> Destination'.]

Realization from «MLB» High sea to «FeatureType» S121_Zone
[Direction is 'Source -> Destination'.]

Realization from «HYDRO» Continental Shelf Area to «FeatureType» S121_Zone
[Direction is 'Source -> Destination'.]

Realization from «MLB» Internal Waters to «FeatureType» S121_Zone
[Direction is 'Source -> Destination'.]

Realization from «HYDRO» Contiguous Zone to «FeatureType» S121_Zone
[Direction is 'Source -> Destination'.]

Realization from «MLB» The Area to «FeatureType» S121_Zone
[Direction is 'Source -> Destination'.]

Realization from «MLB» Disputed Area to «FeatureType» S121_Zone
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from «MLB» Inland Waters to «FeatureType» S121_Zone

[Direction is 'Source -> Destination'.]

ATTRIBUTES

area : LA_AreaValue Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

the area value

[Is static False. Containment is Not Specified.]

referencePoint : GM_Point Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the coordinates of a point inside the spatial unit

[Is static False. Containment is Not Specified.]

surfaceRelation : LA_SurfaceRelationType Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

[Is static False. Containment is Not Specified.]

verdom : S121_VerticalDomainType Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

Definition: verdom - Category of vertical domain of the object delimited. (e.g. airspace, land_surface, water_surface, water_column, seabed_surface, subsoil). Any particular object may span more than one vertical domain.

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified) plus

Source: Public zone (Class) S121_Zone «FeatureType»
Cardinality: [0..*]

Target: Public limit (Class) S121_Limit «FeatureType»
Cardinality: [0..*]

Association (direction: Unspecified) minus

Source: Public zone (Class) S121_Zone «FeatureType»
Cardinality: [0..*]

Target: Public limit (Class) S121_Limit «FeatureType»
Cardinality: [0..*]

Association (direction: Unspecified)

Source: Public (Class) S121_BAUnit

Target: Public (Class) S121_Zone «FeatureType»

Association (direction: Unspecified) vertExtent

Source: Public space (Class) S121_Space «FeatureType»
Cardinality: [0..1]

Target: Public zone (Class) S121_Zone «FeatureType»
Cardinality: [0..*]

OPERATIONS

areaClosed () : Boolean Public
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

computeArea () : Area Public
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

createArea () : GM_MultiSurface Public
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

1.3.79 S121_Space

Class «FeatureType» in package 'S121_Feature'

Name: Space
AlphaCode: MSPACE
camelCaseCode: Space
NumericCode:
Use Type: theme
Definition: The Space object is an object that defines an volume which is logically delimited by instances of zone objects.
Permitted Primitives: P,L,A
Remarks: A Space is an objects of 2 dimensions with a height description located in 2 or 3 dimensional space. This is sometimes called 2 1/2 dimensions. A Space has the same geometry as a Zone with the attributes of vertical position. The vertical position may be explicit numerical attributes of height above a reference or a textual description.
References:

S121_Space
Version Phase Proposed
S-121 PT created on 26/03/2015. Last modified 01/12/2016
Extends S121_FeatureUnit

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «FeatureType» S121_Space to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Realization from «FeatureType» S121_Space to «featureType» LA_SpatialUnit
[Name is Realize. Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Aggregation from «Geometry» S121_Volume to «FeatureType» S121_Space
[Name is SpatialAttribute. Direction is 'Source -> Destination'.]

ATTRIBUTES

referencePoint : GM_Point Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the coordinates of a point inside the spatial unit

ATTRIBUTES

[Is static False. Containment is Not Specified.]

verdom : S121_VerticalDomainType Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

Definition: verdom - Category of vertical domain of the object delimited. (e.g. airspace, land_surface, water_surface, water_column, seabed_surface, subsoil). Any particular object may span more than one vertical domain.

[Is static False. Containment is Not Specified.]

volume : LA_VolumeValue Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

the volume value (in case of bounded 3D description)

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified) vertExtent

Source: Public space (Class) S121_Space «FeatureType»
Cardinality: [0..1]

Target: Public zone (Class) S121_Zone «FeatureType»
Cardinality: [0..*]

Association (direction: Unspecified)

Source: Public (Class) S121_BAUnit

Target: Public (Class) S121_Space «FeatureType»

OPERATIONS

computeVolume () : Volume Public
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

createVolume () : GM_MultiSolid Public
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

volumeClosed () : Boolean Public
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

1.3.80 S121_FeatureUnit

Abstract «FeatureType» in package 'S121_Feature'

The Feature Unit is a feature type which derives from the S100 General Feture Model. The S121_FeatureUnit takes on spatial attributes through a relation to the S121_SpatialAttributeType. This is an abstract class. It is implemented through its subtypes S121_Location, S121_Limit, S121_Zone, S121_Space.

S121_FeatureUnit
Version Phase Proposed
CHS created on 03/11/2016. Last modified 27/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from «FeatureType» S121_FeatureUnit to «metaclass» S121_GF_FeatureType
[Name is Realize. Direction is 'Source -> Destination'.]

Generalization from «FeatureType» S121_FeatureUnit to S121_VersionedObject
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from «MLB» Limit Point to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Inland Waters to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «FeatureType» S121_Space to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» International Boundary to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Baseline Point to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Inland Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» The Area to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Baseline to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Boundary Point to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «HYDRO» Exclusive Economic Zone to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Territorial Sea Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Disputed Area to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «HYDRO» Straight Baseline to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from «MLB» High sea to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Exclusive Economic Zone Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Aggregation from «FeatureAttribute» S121_SpatialAttributeType to «FeatureType» S121_FeatureUnit
[Direction is 'Unspecified'.]

Generalization from «MLB» Normal Baseline to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «FeatureType» S121_Zone to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Contiguous Zone Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «HYDRO» Contiguous Zone to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «HYDRO» Continental Shelf Area to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Continental Shelf Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «FeatureType» S121_Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Internal Waters to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «FeatureType» S121_Location to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «HYDRO» Territorial Sea Area to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

ATTRIBUTES

context : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

fuID : Oid Public

ATTRIBUTES

the spatial unit identifier

[Is static False. Containment is Not Specified.]

label : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

[Is static False. Containment is Not Specified.]

releasability : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

This attribute may be used to differentiate between "official", "development", "internal use" or "in construction" status for particular features. This may be a code list in the future.

[Is static False. Containment is Not Specified.]

type : S121_FeatureType Public

[Is static False. Containment is Not Specified.]

typeName : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

short textual description of the spatial unit

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified)

Source: Public (Abstract) S121_FeatureUnit «FeatureType»
Cardinality: [0..*]

Target: Public (Class) S121_BAUnit
Cardinality: [1..*]

Association (direction: Unspecified) fuSource

Source: Public fu (Abstract) S121_FeatureUnit «FeatureType»
Cardinality: [0..*]

Target: Public source (Class) S121_Source
Cardinality: [0..*]

1.3.81 S121_FeatureType

Class «codeList» in package 'S121_Feature'

This code list includes types that have a common characteristic related to the marine environment. The code list is registered in the Feature Concept Dictionary as listed values and as such can be expanded to include all aspects of the legal context. The initial contents are: **MLB** (Marine Limits and Boundaries), and **A76** (UNCLOS article 76). This code list can be extended.

S121_FeatureType
Version 1.0 Phase 1.0 Proposed
created on 21/02/2016. Last modified 27/11/2016

ATTRIBUTES

A76 : Public

ATTRIBUTES

UNCLOS article 76

[Is static False. Containment is Not Specified.]

MLB : Public

Marine Limits and Boundaries

[Is static False. Containment is Not Specified.]

1.3.82 S121_SpatialAttributeType

Abstract «FeatureAttribute» in package 'S121_Feature'

The Spatial Attribute Type as defined for S121 inherits from S100_GF_SpatialAttributeType. This means that the geometry types inherited from S-100 apply. Only the geometry types GM_Point, GM_MultiPoint, GM_Curve, GM_Surface, CV_Coverage, GM_Curve (arcByCentrePoint and circleByCentrePoint may be used. This is an abstract class. It is implemented through its subtypes S121_Point, S121_Curve, S121_Surface, S121_Volume and S121_Composite.

S121_SpatialAttributeType
Version Phase Proposed
S121 PT created on 27/03/2015. Last modified 27/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «FeatureAttribute» S121_SpatialAttributeType to S121_VersionedObject
[Direction is 'Source -> Destination'.]

Realization from «FeatureAttribute» S121_SpatialAttributeType to «metaclass» S121_GF_SpatialAttributeType
[Name is Realize. Direction is 'Source -> Destination'.]

Aggregation from «FeatureAttribute» S121_SpatialAttributeType to «FeatureType» S121_FeatureUnit
[Direction is 'Unspecified'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from «Geometry» S121_Curve to «FeatureAttribute» S121_SpatialAttributeType
[Direction is 'Source -> Destination'.]

Generalization from «Geometry» S121_Composite to «FeatureAttribute» S121_SpatialAttributeType
[Direction is 'Source -> Destination'.]

Generalization from «Geometry» S121_Surface to «FeatureAttribute» S121_SpatialAttributeType
[Direction is 'Source -> Destination'.]

Generalization from «Geometry» S121_Point to «FeatureAttribute» S121_SpatialAttributeType
[Direction is 'Source -> Destination'.]

ATTRIBUTES

ATTRIBUTES

label : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

short textual description of the spatial unit

[Is static False. Containment is Not Specified.]

locationByText : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

[Is static False. Containment is Not Specified.]

referenceSystem : S100_IO_IdentifiedObject Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Spatial Referencing System

Constraints:
requirement : Pre-condition

[Is static False. Containment is Not Specified.]

saID : Oid Public

[Is static False. Containment is Not Specified.]

scaleMaximum : PositiveInteger Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Stereotype is «S100_GF_SpatialAttributeType». Is static False. Containment is Not Specified.]

scaleMinimum : PositiveInteger Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Stereotype is «S100_GF_SpatialAttributeType». Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified) saSource

Source: Public source (Class) S121_Source
Cardinality: [0..*]

Target: Public sa (Abstract)
S121_SpatialAttributeType «FeatureAttribute»
Cardinality: [0..*]

1.3.83 S121 Feature Relation diagram

Class diagram in package 'S121 Information Structure'

S121 Feature Relation
Version 1.0
CDOBrien created on 23/11/2016. Last modified 27/11/2016

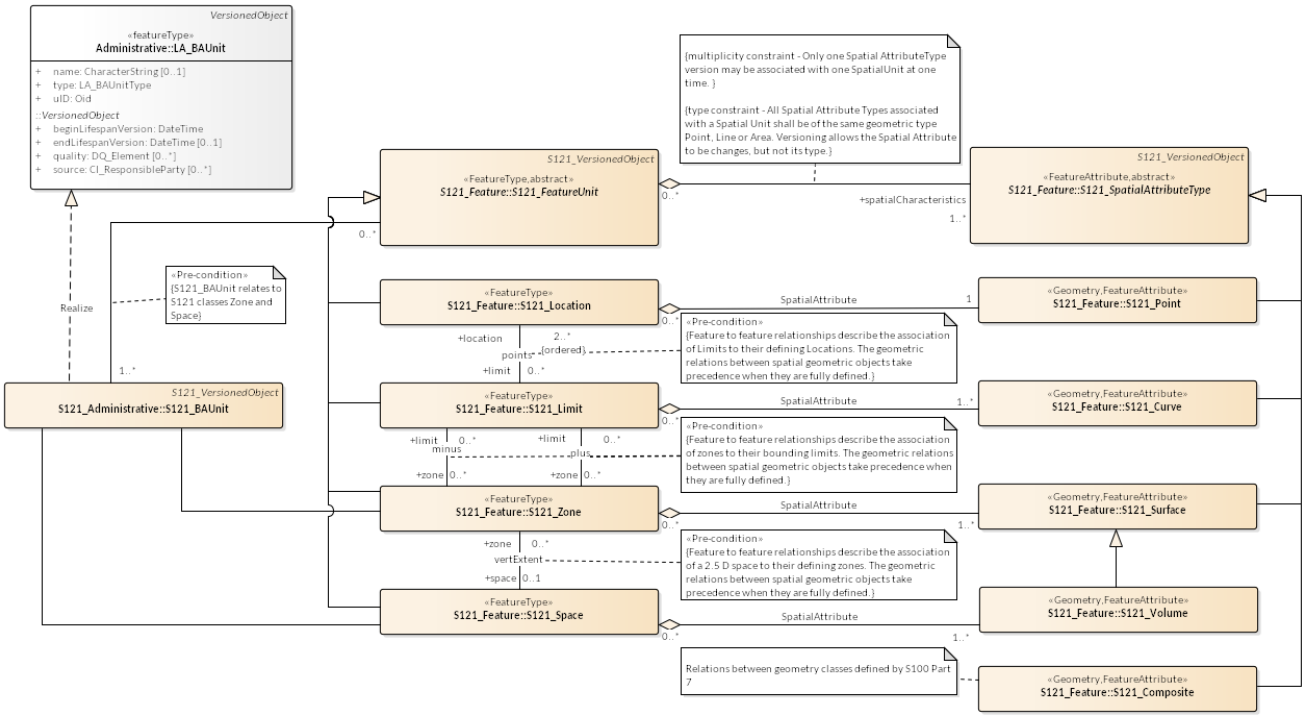

Figure 30: S121 Feature Relation

1.3.84 LA_BAUnit

Class «featureType» in package 'Administrative'

administrative entity consisting of zero or more **spatial units** against which (one or more) unique and homogeneous **rights** (e.g. ownership right or land use right), **responsibilities** or **restrictions** are associated to the whole entity, as included in a **Land Administration** system

LA_BAUnit
Version 1.0 Phase 1.0 Proposed
ISO 19152 created on 26/05/2008. Last modified 27/11/2016

CONSTRAINTS
Invariant. sum(RRR.share)=1 per type if RRR.shareCheck [Approved, Weight is 0.]
Invariant. no overlap RRR.timeSpec per summed type [Approved, Weight is 1.]

OUTGOING STRUCTURAL RELATIONSHIPS
Aggregation from «featureType» LA_BAUnit to «interface» LA_SpatialUnitOverview [Direction is 'Source -> Destination'.]
Generalization from «featureType» LA_BAUnit to «featureType» VersionedObject [Direction is 'Source -> Destination'.]

OUTGOING STRUCTURAL RELATIONSHIPS

Aggregation from «featureType» LA_BAUnit to «interface» LA_PartyPortfolio
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from S121_BAUnit to «featureType» LA_BAUnit
[Name is Realize. Direction is 'Source -> Destination'.]

Generalization from «featureType» BasicPropertyUnit to «featureType» LA_BAUnit
[Direction is 'Source -> Destination'.]

Generalization from «featureType» KR_ParcelPrice to «featureType» LA_BAUnit
[Direction is 'Source -> Destination'.]

Generalization from Parcel to «featureType» LA_BAUnit
[Direction is 'Source -> Destination'.]

Generalization from NL_BAUnit to «featureType» LA_BAUnit
[Direction is 'Source -> Destination'.]

Generalization from QLD_BAUnit to «featureType» LA_BAUnit
[Direction is 'Source -> Destination'.]

Realization from S121_BAUnit to «featureType» LA_BAUnit
[Name is Realize. Direction is 'Source -> Destination'.]

ATTRIBUTES

name : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the name of the basic administrative unit
[Is static False. Containment is Not Specified.]

type : LA_BAUnitType Public

the type of the basic administrative unit
[Is static False. Containment is Not Specified.]

uID : Oid Public

the identifier of the basic administrative unit
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified) baunitSource

Source: Public unit (Class) LA_BAUnit «featureType» Target: Public source (Class) LA_SpatialSource

ASSOCIATIONS

Cardinality: [0..*]

«featureType»
Cardinality: [0..*]

Association (direction: Unspecified) unitSource

Source: Public unit (Class) LA_BAUnit «featureType»
Cardinality: [0..*]

Target: Public source (Class) LA_AdministrativeSource «featureType»
Cardinality: [0..*]

Association (direction: Unspecified) baunitAsParty

Source: Public unit (Class) LA_BAUnit «featureType»
Cardinality: [0..*]

Target: Public party (Class) LA_Party «featureType»
Cardinality: [0..*]

AssociationClass (direction: Unspecified) relationBaunit

Source: Public unit1 (Class) LA_BAUnit «featureType»
Cardinality: [0..*]

Target: Public unit2 (Class) LA_BAUnit «featureType»
Cardinality: [0..*]

Association (direction: Unspecified)

Source: Public value (Class) ExtValuation «blueprint»
Cardinality: [0..*]

Target: Public unit (Class) LA_BAUnit «featureType»
Cardinality: [1]

Association (direction: Unspecified) suBaunit

Source: Public su (Class) LA_SpatialUnit «featureType»
Cardinality: [0..*]

Target: Public baunit (Class) LA_BAUnit «featureType»
Cardinality: [0..*]

Association (direction: Unspecified) unitRrr

Source: Public rrr (Class) LA_RRR «featureType»
Cardinality: [1..*]

Target: Public unit (Class) LA_BAUnit «featureType»
Cardinality: [1]

Association (direction: Unspecified)

Source: Public tax (Class) ExtTaxation «blueprint»
Cardinality: [0..*]

Target: Public unit (Class) LA_BAUnit «featureType»
Cardinality: [1]

AssociationClass (direction: Unspecified) relationBaunit

Source: Public unit1 (Class) LA_BAUnit «featureType»
Cardinality: [0..*]

Target: Public unit2 (Class) LA_BAUnit «featureType»
Cardinality: [0..*]

1.3.85 S121_Limit

Class «FeatureType» in package 'S121_Feature'

Name: Limit
AlphaCode: MLBLIM
camelCaseCode: Limit
NumericCode:
Use Type: theme
Definition: The MLB_Limit object is an object that defines any limits or boundaries either relating to terrestrial, marine or both environments.
Permitted Primitives: P, L
References:
Remarks:

S121_Limit
Version Phase Proposed
S-121 PT created on 26/03/2015. Last modified 01/12/2016
Extends S121_FeatureUnit

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «FeatureType» S121_Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from «MLB» Exclusive Economic Zone Limit to «FeatureType» S121_Limit
[Direction is 'Source -> Destination'.]

Realization from «MLB» Baseline to «FeatureType» S121_Limit
[Direction is 'Source -> Destination'.]

Realization from «MLB» Contiguous Zone Limit to «FeatureType» S121_Limit
[Direction is 'Source -> Destination'.]

Realization from «MLB» Inland Limit to «FeatureType» S121_Limit
[Direction is 'Source -> Destination'.]

Realization from «MLB» International Boundary to «FeatureType» S121_Limit
[Direction is 'Source -> Destination'.]

Aggregation from «Geometry» S121_Curve to «FeatureType» S121_Limit
[Name is SpatialAttribute. Direction is 'Source -> Destination'.]

Realization from «HYDRO» Straight Baseline to «FeatureType» S121_Limit
[Direction is 'Source -> Destination'.]

Realization from «MLB» Territorial Sea Limit to «FeatureType» S121_Limit
[Direction is 'Source -> Destination'.]

Realization from «MLB» Continental Shelf Limit to «FeatureType» S121_Limit
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from «MLB» Normal Baseline to «FeatureType» S121_Limit
[Direction is 'Source -> Destination'.]

ATTRIBUTES

arctyp : S121_LimitArcType Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Definition: Type of computation used to define an arc (line). (Geodesic or loxodrome).
[Is static False. Containment is Not Specified.]

limtyp : S121_LimitType Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Definition: Type of delineation (Boundary, Limit or Construction).
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified) plus

Source: Public zone (Class) S121_Zone «FeatureType»
Cardinality: [0..*]

Target: Public limit (Class) S121_Limit «FeatureType»
Cardinality: [0..*]

Association (direction: Unspecified) minus

Source: Public zone (Class) S121_Zone «FeatureType»
Cardinality: [0..*]

Target: Public limit (Class) S121_Limit «FeatureType»
Cardinality: [0..*]

Association (direction: Unspecified) points

Source: Public location (Class) S121_Location «FeatureType»
Cardinality: [2..*]

Target: Public limit (Class) S121_Limit «FeatureType»
Cardinality: [0..*]

1.3.86 S121_Location

Class «FeatureType» in package 'S121_Feature'

Name: Location
AlphaCode: MLOCTN
camelCaseCode: Limit
NumericCode:
Use Type: theme
Definition: The Location object is an object that defines the underlying structure of location.
Permitted Primitives: P
Remarks: To portray a geodesic or loxodrome curve correctly, additional vertices may be included in the dataset. These are densified locations. These vertices would not have formed part of the original source information. The loctyp attribute can be used to differentiate between a defined vertex (e.g. declared in a treaty) with a vertex densified to ensure correct GIS depiction. A computed location is also not part of the original source information, but is calculated

as the result of the original source guidance, such as the intersection between arcs, geodesics, or loxodromes. A construction vertex is any arbitrary position established to support computation.
References:

S121_Location
Version Phase Proposed
S-121 PT created on 26/03/2015. Last modified 01/12/2016
Extends S121_FeatureUnit

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «FeatureType» S121_Location to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Realization from «FeatureType» S121_Location to «featureType» LA_Point
[Name is Realize. Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from «MLB» Boundary Point to «FeatureType» S121_Location
[Direction is 'Source -> Destination'.]

Realization from «MLB» Baseline Point to «FeatureType» S121_Location
[Direction is 'Source -> Destination'.]

Aggregation from «Geometry» S121_Point to «FeatureType» S121_Location
[Name is SpatialAttribute. Direction is 'Source -> Destination'.]

Realization from «MLB» Limit Point to «FeatureType» S121_Location
[Direction is 'Source -> Destination'.]

ATTRIBUTES

interpolationRole : LA_InterpolationType Public

the role of point in the structure of a straight line or curve
[Is static False. Containment is Not Specified.]

pointType : S121_LocationType Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Definition: Computational origin of the element (defined, densified, computed or construction)
[Is static False. Containment is Not Specified.]

transAndResult : LA _Transformation Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

transformation and transformed location
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

ASSOCIATIONS

Association (direction: Unspecified) points

Source: Public location (Class) S121_Location «FeatureType»
Cardinality: [2..*]

Target: Public limit (Class) S121_Limit «FeatureType»
Cardinality: [0..*]

1.3.87 S121_Zone

Class «FeatureType» in package 'S121_Feature'

Name: Zone
AlphaCode: MZONE
camelCaseCode: Zone
NumericCode:
Use Type: theme
Definition: The Zone object is an object that defines an area which is logically delimited by instances of delineation (limit_boundary) objects.
Permitted Primitives: P,L,A
Remarks: Maritime, terrestrial or inter-tidal zone objects are the three real objects that inherit from this object.
References:

S121_Zone
Version Phase Proposed
S-121 PT created on 26/03/2015. Last modified 01/12/2016
Extends S121_FeatureUnit

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from «FeatureType» S121_Zone to «featureType» LA_SpatialUnit
[Name is Realize. Direction is 'Source -> Destination'.]

Generalization from «FeatureType» S121_Zone to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from «HYDRO» Territorial Sea Area to «FeatureType» S121_Zone
[Direction is 'Source -> Destination'.]

Realization from «HYDRO» Exclusive Economic Zone to «FeatureType» S121_Zone
[Direction is 'Source -> Destination'.]

Aggregation from «Geometry» S121_Surface to «FeatureType» S121_Zone
[Name is SpatialAttribute. Direction is 'Source -> Destination'.]

Realization from «MLB» High sea to «FeatureType» S121_Zone
[Direction is 'Source -> Destination'.]

Realization from «HYDRO» Continental Shelf Area to «FeatureType» S121_Zone
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from «MLB» Internal Waters to «FeatureType» S121_Zone
[Direction is 'Source -> Destination'.]

Realization from «HYDRO» Contiguous Zone to «FeatureType» S121_Zone
[Direction is 'Source -> Destination'.]

Realization from «MLB» The Area to «FeatureType» S121_Zone
[Direction is 'Source -> Destination'.]

Realization from «MLB» Disputed Area to «FeatureType» S121_Zone
[Direction is 'Source -> Destination'.]

Realization from «MLB» Inland Waters to «FeatureType» S121_Zone
[Direction is 'Source -> Destination'.]

ATTRIBUTES

area : LA_AreaValue Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

the area value
[Is static False. Containment is Not Specified.]

referencePoint : GM_Point Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the coordinates of a point inside the spatial unit
[Is static False. Containment is Not Specified.]

surfaceRelation : LA_SurfaceRelationType Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

verdom : S121_VerticalDomainType Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

Definition: verdom - Category of vertical domain of the object delimited. (e.g. airspace, land_surface, water_surface, water_column, seabed_surface, subsoil). Any particular object may span more than one vertical domain.
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified) plus

Source: Public zone (Class) S121_Zone «FeatureType»
Cardinality: [0..*]

Target: Public limit (Class) S121_Limit «FeatureType»
Cardinality: [0..*]

Association (direction: Unspecified) minus

Source: Public zone (Class) S121_Zone «FeatureType»

Target: Public limit (Class) S121_Limit

ASSOCIATIONS

Cardinality: [0..*]

«FeatureType»
Cardinality: [0..*]

Association (direction: Unspecified)

Source: Public (Class) S121_BAUnit

Target: Public (Class) S121_Zone «FeatureType»

Association (direction: Unspecified) vertExtent

Source: Public space (Class) S121_Space «FeatureType»
Cardinality: [0..1]

Target: Public zone (Class) S121_Zone «FeatureType»
Cardinality: [0..*]

OPERATIONS

areaClosed () : Boolean Public
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

computeArea () : Area Public
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

createArea () : GM_MultiSurface Public
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

1.3.88 S121_Space

Class «FeatureType» in package 'S121_Feature'

Name: Space
AlphaCode: MSPACE
camelCaseCode: Space
NumericCode:
Use Type: theme
Definition: The Space object is an object that defines an volume which is logically delimited by instances of zone objects.
Permitted Primitives: P,L,A
Remarks: A Space is an objects of 2 dimensions with a height description located in 2 or 3 dimensional space. This is sometimes called 2 1/2 dimensions. A Space has the same geometry as a Zone with the attributes of vertical position. The vertical position may be explicit numerical attributes of height above a reference or a textual description.
References:

S121_Space
Version Phase Proposed
S-121 PT created on 26/03/2015. Last modified 01/12/2016
Extends S121_FeatureUnit

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «FeatureType» S121_Space to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from «FeatureType» S121_Space to «featureType» LA_SpatialUnit
[Name is Realize. Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Aggregation from «Geometry» S121_Volume to «FeatureType» S121_Space
[Name is SpatialAttribute. Direction is 'Source -> Destination'.]

ATTRIBUTES

referencePoint : GM_Point Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the coordinates of a point inside the spatial unit
[Is static False. Containment is Not Specified.]

verdom : S121_VerticalDomainType Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

Definition: verdom - Category of vertical domain of the object delimited. (e.g. airspace, land_surface, water_surface, water_column, seabed_surface, subsoil). Any particular object may span more than one vertical domain.
[Is static False. Containment is Not Specified.]

volume : LA_VolumeValue Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

the volume value (in case of bounded 3D description)
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified) vertExtent

Source: Public space (Class) S121_Space «FeatureType»
Cardinality: [0..1]

Target: Public zone (Class) S121_Zone «FeatureType»
Cardinality: [0..*]

Association (direction: Unspecified)

Source: Public (Class) S121_BAUnit

Target: Public (Class) S121_Space «FeatureType»

OPERATIONS

computeVolume () : Volume Public
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

createVolume () : GM_MultiSolid Public
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

volumeClosed () : Boolean Public
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

OPERATIONS

1.3.89 S121_FeatureUnit

Abstract «FeatureType» in package 'S121_Feature'

The Feature Unit is a feature type which derives from the S100 General Feture Model. The S121_FeatureUnit takes on spatial attributes through a relation to the S121_SpatialAttributeType. This is an abstract class. It is implemented through its subtypes S121_Location, S121_Limit, S121_Zone, S121_Space.

S121_FeatureUnit
Version Phase Proposed
CHS created on 03/11/2016. Last modified 27/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS
Realization from «FeatureType» S121_FeatureUnit to «metaclass» S121_GF_FeatureType [Name is Realize. Direction is 'Source -> Destination'.]
Generalization from «FeatureType» S121_FeatureUnit to S121_VersionedObject [Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS
Generalization from «MLB» Limit Point to «FeatureType» S121_FeatureUnit [Direction is 'Source -> Destination'.]
Generalization from «MLB» Inland Waters to «FeatureType» S121_FeatureUnit [Direction is 'Source -> Destination'.]
Generalization from «FeatureType» S121_Space to «FeatureType» S121_FeatureUnit [Direction is 'Source -> Destination'.]
Generalization from «MLB» International Boundary to «FeatureType» S121_FeatureUnit [Direction is 'Source -> Destination'.]
Generalization from «MLB» Baseline Point to «FeatureType» S121_FeatureUnit [Direction is 'Source -> Destination'.]
Generalization from «MLB» Inland Limit to «FeatureType» S121_FeatureUnit [Direction is 'Source -> Destination'.]
Generalization from «MLB» The Area to «FeatureType» S121_FeatureUnit [Direction is 'Source -> Destination'.]
Generalization from «MLB» Baseline to «FeatureType» S121_FeatureUnit [Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from «MLB» Boundary Point to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «HYDRO» Exclusive Economic Zone to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Territorial Sea Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Disputed Area to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «HYDRO» Straight Baseline to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» High sea to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Exclusive Economic Zone Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Aggregation from «FeatureAttribute» S121_SpatialAttributeType to «FeatureType» S121_FeatureUnit
[Direction is 'Unspecified'.]

Generalization from «MLB» Normal Baseline to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «FeatureType» S121_Zone to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Contiguous Zone Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «HYDRO» Contiguous Zone to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «HYDRO» Continental Shelf Area to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Continental Shelf Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «FeatureType» S121_Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from «MLB» Internal Waters to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «FeatureType» S121_Location to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «HYDRO» Territorial Sea Area to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

ATTRIBUTES

context : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

fuID : Oid Public

the spatial unit identifier
[Is static False. Containment is Not Specified.]

label : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

releasability : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

This attribute may be used to differentiate between "official", "development", "internal use" or "in construction" status for particular features. This may be a code list in the future.
[Is static False. Containment is Not Specified.]

type : S121_FeatureType Public
[Is static False. Containment is Not Specified.]

typeName : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

short textual description of the spatial unit
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified)

Source: Public (Abstract) S121_FeatureUnit «FeatureType»
Cardinality: [0..*]

Target: Public (Class) S121_BAUnit
Cardinality: [1..*]

Association (direction: Unspecified) fuSource

Source: Public fu (Abstract) S121_FeatureUnit «FeatureType»
Cardinality: [0..*]

Target: Public source (Class) S121_Source
Cardinality: [0..*]

ASSOCIATIONS

1.3.90 S121_SpatialAttributeType

Abstract «FeatureAttribute» in package 'S121_Feature'

The Spatial Attribute Type as defined for S121 inherits from S100_GF_SpatialAttributeType. This means that the geometry types inherited from S-100 apply. Only the geometry types GM_Point, GM_MultiPoint, GM_Curve, GM_Surface, CV_Coverage, GM_Curve (arcByCentrePoint and circleByCentrePoint may be used. This is an abstract class. It is implemented through its subtypes S121_Point, S121_Curve, S121_Surface, S121_Volume and S121_Composite.

S121_SpatialAttributeType
Version Phase Proposed
S121 PT created on 27/03/2015. Last modified 27/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «FeatureAttribute» S121_SpatialAttributeType to S121_VersionedObject
[Direction is 'Source -> Destination'.]

Realization from «FeatureAttribute» S121_SpatialAttributeType to «metaclass» S121_GF_SpatialAttributeType
[Name is Realize. Direction is 'Source -> Destination'.]

Aggregation from «FeatureAttribute» S121_SpatialAttributeType to «FeatureType» S121_FeatureUnit
[Direction is 'Unspecified'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from «Geometry» S121_Curve to «FeatureAttribute» S121_SpatialAttributeType
[Direction is 'Source -> Destination'.]

Generalization from «Geometry» S121_Composite to «FeatureAttribute» S121_SpatialAttributeType
[Direction is 'Source -> Destination'.]

Generalization from «Geometry» S121_Surface to «FeatureAttribute» S121_SpatialAttributeType
[Direction is 'Source -> Destination'.]

Generalization from «Geometry» S121_Point to «FeatureAttribute» S121_SpatialAttributeType
[Direction is 'Source -> Destination'.]

ATTRIBUTES

label : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

short textual description of the spatial unit

[Is static False. Containment is Not Specified.]

ATTRIBUTES

locationByText : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

referenceSystem : S100_IO_IdentifiedObject Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Spatial Referencing System

Constraints:
requirement : Pre-condition
[Is static False. Containment is Not Specified.]

saID : Oid Public
[Is static False. Containment is Not Specified.]

scaleMaximum : PositiveInteger Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Stereotype is «S100_GF_SpatialAttributeType». Is static False. Containment is Not Specified.]

scaleMinimum : PositiveInteger Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Stereotype is «S100_GF_SpatialAttributeType». Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified) saSource

Source: Public source (Class) S121_Source
Cardinality: [0..*]

Target: Public sa (Abstract)
S121_SpatialAttributeType «FeatureAttribute»
Cardinality: [0..*]

1.3.91 S121_BAUnit

Class in package 'S121_Administrative'

The Basic Administrative Unit is an information object to “which (one or more) unique and homogeneous rights, responsibilities or restrictions are associated”. It is an information object since it does not directly take on spatial attributes. The S121_BAUnit is derived from both the S121_GF_ThematicAttributeType and the LA_BAUnit defined in ISO 19152.

S121_BAUnit
Version Phase Proposed
CHS created on 27/03/2015. Last modified 27/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from S121_BAUnit to S121_VersionedObject
[Direction is 'Source -> Destination'.]

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_BAUnit to «metaclass» S100_GF_InformationType
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from S121_BAUnit to «metaclass» S121_GF_ThematicAttributeType
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from S121_BAUnit to «featureType» LA_BAUnit
[Name is Realize. Direction is 'Source -> Destination'.]

ATTRIBUTES

context : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

name : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

type : S121_BAUnitType Public

the use type of the basic administrative unit
[Is static False. Containment is Not Specified.]

uID : Oid Public

An ID used in relationships between elements of the RRR structure and the Basic Administrative Unit.
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified)

Source: Public (Class) S121_BAUnit
Target: Public (Class) S121_Zone «FeatureType»

Association (direction: Unspecified)

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]
Target: Public rrr (Class) S121_RRR
Cardinality: [1..*]

Association (direction: Unspecified)

Source: Public (Class) S121_BAUnit
Target: Public (Class) S121_Space «FeatureType»

Association (direction: Unspecified) relationBAUnit

Source: Public unit1 (Class) S121_BAUnit
Cardinality: [0..*]
Target: Public unit2 (Class) S121_BAUnit
Cardinality: [0..*]

Association (direction: Unspecified) baunitAsParty

ASSOCIATIONS

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Target: Public party (Class) S121_Party
Cardinality: [0..*]

Association (direction: Unspecified)

Source: Public (Abstract) S121_FeatureUnit «FeatureType»
Cardinality: [0..*]

Target: Public (Class) S121_BAUnit
Cardinality: [1..*]

Association (direction: Unspecified) unitSource

Source: Public source (Class) S121_Source
Cardinality: [0..*]

Target: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Association (direction: Unspecified) relationBAUnit

Source: Public unit1 (Class) S121_BAUnit
Cardinality: [0..*]

Target: Public unit2 (Class) S121_BAUnit
Cardinality: [0..*]

1.3.92 S121 Source diagram

Class diagram in package 'S121 Information Structure'

S121 Source
Version
CHS created on 22/02/2016. Last modified 27/11/2016

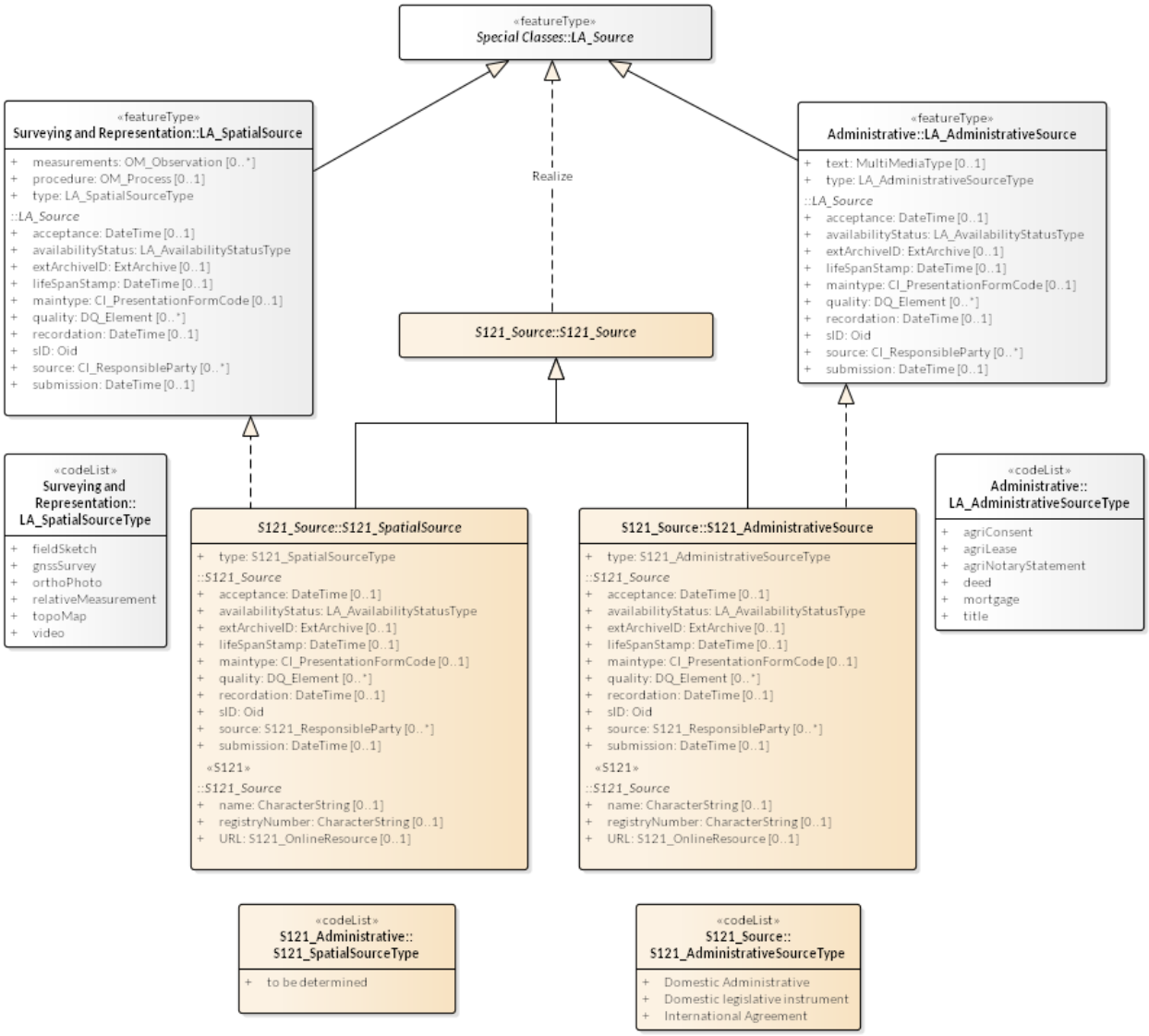

Figure 31: S121 Source

1.3.93 LA_AdministrativeSource

Class «featureType» in package 'Administrative'

source with the administrative description (where applicable) of the **parties** involved, the **rights**, **restrictions** and **responsibilities** created and the **basic administrative units** affected

LA_AdministrativeSource
Version 1.0 Phase 1.0 Proposed
created on 03/06/2008. Last modified 23/11/2016
Alias LA_SocialTenureInventory

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «featureType» LA_AdministrativeSource to «featureType» LA_Source
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

INCOMING STRUCTURAL RELATIONSHIPS

Realization from S121_AdministrativeSource to «featureType» LA_AdministrativeSource
[Direction is 'Source -> Destination'.]

Realization from S121_AdministrativeSource to «featureType» LA_AdministrativeSource
[Direction is 'Source -> Destination'.]

Generalization from NL_AdminSourceDocument to «featureType» LA_AdministrativeSource
[Direction is 'Source -> Destination'.]

ATTRIBUTES

text : MultiMediaType Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the content of the document
[Is static False. Containment is Not Specified.]

type : LA_AdministrativeSourceType Public

the type of document
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified) relationSource

Source: Public source (Class) LA_AdministrativeSource «featureType»
Cardinality: [0..*]

Target: Public requiredRelationBaunit (AssociationClass) LA_RequiredRelationshipBAUnit «featureType»
Cardinality: [0..*]

Association (direction: Unspecified)

Source: Public (Class) LA_AdministrativeSource «featureType»
Cardinality: [0..*]

Target: Public represented by (Class) LA_Party «featureType»
Cardinality: [0..1]

Association (direction: Unspecified) conveyancerSource

Source: Public conveyancer (Class) LA_Party «featureType»
Cardinality: [1..*]

Target: Public source (Class) LA_AdministrativeSource «featureType»
Cardinality: [0..*]

Association (direction: Unspecified) unitSource

Source: Public unit (Class) LA_BAUnit «featureType»
Cardinality: [0..*]

Target: Public source (Class) LA_AdministrativeSource «featureType»
Cardinality: [0..*]

Association (direction: Unspecified) rrrSource

Source: Public rrr (Class) LA_RRR «featureType»

Target: Public source (Class)

ASSOCIATIONS	
Cardinality: [0..*]	LA_AdministrativeSource «featureType» Cardinality: [1..*]

1.3.94 LA_SpatialSource

Class «featureType» in package 'Surveying and Representation'

source with the spatial representation of one (part of) or more **spatial units**

LA_SpatialSource
Version 1.0 Phase 1.0 Proposed
created on 03/06/2008. Last modified 23/11/2016
Alias LA_SpatialUnitInventory

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «featureType» LA_SpatialSource to «featureType» LA_Source
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from «featureType» JP_LASpatialSource to «featureType» LA_SpatialSource
[Direction is 'Source -> Destination'.]

Generalization from «featureType» KR_SpatialSource to «featureType» LA_SpatialSource
[Direction is 'Source -> Destination'.]

Realization from S121_SpatialSource to «featureType» LA_SpatialSource
[Direction is 'Source -> Destination'.]

ATTRIBUTES

measurements : OM_Observation Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

the observations, and measurements, as a basis for mapping, and as a basis for historical reconstruction of the location of (parts of) the spatial unit in the field
[Is static False. Containment is Not Specified.]

procedure : OM_Process Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

type : LA_SpatialSourceType Public

the type of the spatial source
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

ASSOCIATIONS

Association (direction: Unspecified) bfSource

Source: Public source (Class) LA_SpatialSource «featureType»
Cardinality: [0..*]

Target: Public bf (Class) LA_BoundaryFace «featureType»
Cardinality: [0..*]

Association (direction: Unspecified) suSource

Source: Public source (Class) LA_SpatialSource «featureType»
Cardinality: [0..*]

Target: Public su (Class) LA_SpatialUnit «featureType»
Cardinality: [0..*]

Association (direction: Unspecified) bfsSource

Source: Public source (Class) LA_SpatialSource «featureType»
Cardinality: [0..*]

Target: Public bfs (Class) LA_BoundaryFaceString «featureType»
Cardinality: [0..*]

Association (direction: Unspecified) baunitSource

Source: Public unit (Class) LA_BAUnit «featureType»
Cardinality: [0..*]

Target: Public source (Class) LA_SpatialSource «featureType»
Cardinality: [0..*]

Association (direction: Unspecified) pointSource

Source: Public point (Class) LA_Point «featureType»
Cardinality: [1..*]

Target: Public source (Class) LA_SpatialSource «featureType»
Cardinality: [0..*]

Association (direction: Unspecified) surveyorSource

Source: Public surveyor (Class) LA_Party «featureType»
Cardinality: [1..*]

Target: Public source (Class) LA_SpatialSource «featureType»
Cardinality: [0..*]

1.3.95 LA_Source

Class «featureType» in package 'Special Classes'

document providing facts

LA_Source
Version 1.0 Phase CD Proposed
uitermark created on 23/05/2008. Last modified 23/11/2016

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from PT_TitleDeclaration to «featureType» LA_Source
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from «featureType» LA_SpatialSource to «featureType» LA_Source
[Direction is 'Source -> Destination'.]

Generalization from «featureType» LA_AdministrativeSource to «featureType» LA_Source
[Direction is 'Source -> Destination'.]

Realization from S121_Source to «featureType» LA_Source
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from S121_Source to «featureType» LA_Source
[Name is Realize. Direction is 'Source -> Destination'.]

ATTRIBUTES

acceptance : DateTime Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the date of force of law of the source by an authority
[Is static False. Containment is Not Specified.]

availabilityStatus : LA_AvailabilityStatusType Public
[Is static False. Containment is Not Specified.]

extArchiveID : ExtArchive Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the identifier of a source in an external registration
[Is static False. Containment is Not Specified.]

lifeSpanStamp : DateTime Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the moment that the event represented by the instance of LA_Source is further processed in the LA system
[Is static False. Containment is Not Specified.]

maintype : CI_PresentationFormCode Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the type of document
[Is static False. Containment is Not Specified.]

quality : DQ_Element Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

recordation : DateTime Public
Alias: recordation
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the date of registration (recordation) of the source by registering authority
[Is static False. Containment is Not Specified.]

ATTRIBUTES

sID : Oid Public

the identifier of the source

[Is static False. Containment is Not Specified.]

source : CI_ResponsibleParty Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

[Is static False. Containment is Not Specified.]

submission : DateTime Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the date of submission of the source by a party

[Is static False. Containment is Not Specified.]

1.3.96 S121_SpatialSourceType

Class «codeList» in package 'S121_Administrative'

Type of SpatialSource

S121_SpatialSourceType
Version Phase Proposed
PT S121 created on 18/11/2016. Last modified 27/11/2016

ATTRIBUTES

to be determined : Public

[Is static False. Containment is Not Specified.]

1.3.97 S121_Source

Class in package 'S121_Source'

documentation of the source of the referenced information.

S121_Source
Version 1.0 Phase CD Proposed
S121 PT created on 23/02/2016. Last modified 27/11/2016

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_Source to «featureType» LA_Source

[Name is Realize. Direction is 'Source -> Destination'.]

Realization from S121_Source to «metaclass» S100_GF_InformationType

[Name is Realize. Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from S121_SpatialSource to S121_Source

[Direction is 'Source -> Destination'.]

Generalization from S121_AdministrativeSource to S121_Source

[Direction is 'Source -> Destination'.]

ATTRIBUTES

acceptance : DateTime Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the date of force of law of the source by an authority

[Is static False. Containment is Not Specified.]

availabilityStatus : LA_AvailabilityStatusType Public

[Is static False. Containment is Not Specified.]

extArchiveID : ExtArchive Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the identifier of a source in an external registration

[Is static False. Containment is Not Specified.]

lifeSpanStamp : DateTime Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the moment that the event represented by the instance of LA_Source is further processed in the LA system

[Is static False. Containment is Not Specified.]

maintype : CI_PresentationFormCode Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the type of document

[Is static False. Containment is Not Specified.]

name : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Document name - for example the document (legislation, treaty, title) that defines the object.

[Stereotype is «S121». Is static False. Containment is Not Specified.]

quality : DQ_Element Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

[Is static False. Containment is Not Specified.]

recordation : DateTime Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the date of registration (recordation) of the source by registering authority

[Is static False. Containment is Not Specified.]

registryNumber : CharacterString Public

ATTRIBUTES

Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Unique official identifier of the record in a registry. For example, in states with registers of legislative instruments, versioning is controlled by the registry ID.

[Stereotype is «S121». Is static False. Containment is Not Specified.]

sID : Oid Public

the identifier of the source

[Is static False. Containment is Not Specified.]

source : S121_ResponsibleParty Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

[Is static False. Containment is Not Specified.]

submission : DateTime Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the date of submission of the source by a party

[Is static False. Containment is Not Specified.]

URL : S121_OnlineResource Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

URL - this is official the URL (or equivalent online resource) where the document is distributed.

[Stereotype is «S121». Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified)

Source: Public source (Class) S121_Source
Cardinality: [0..*]

Target: Public party (Class) S121_Party
Cardinality: [1..*]

Association (direction: Unspecified) rrrSource

Source: Public source (Class) S121_Source
Cardinality: [1..*]

Target: Public rrr (Class) S121_RRR
Cardinality: [0..*]

Association (direction: Unspecified) unitSource

Source: Public source (Class) S121_Source
Cardinality: [0..*]

Target: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Association (direction: Unspecified) saSource

Source: Public source (Class) S121_Source
Cardinality: [0..*]

Target: Public sa (Abstract) S121_SpatialAttributeType «FeatureAttribute»
Cardinality: [0..*]

Association (direction: Unspecified) fuSource

Source: Public fu (Abstract) S121_FeatureUnit «FeatureType»
Cardinality: [0..*]

Target: Public source (Class) S121_Source
Cardinality: [0..*]

ASSOCIATIONS

1.3.98 S121_SpatialSource

Class in package 'S121_Source'

documentation of the source of the referenced information.

S121_SpatialSource
Version 1.0 Phase CD Proposed
S121 PT created on 22/02/2016. Last modified 27/11/2016
Extends S121_Source

OUTGOING STRUCTURAL RELATIONSHIPS
Generalization from S121_SpatialSource to S121_Source [Direction is 'Source -> Destination'.]
Realization from S121_SpatialSource to «featureType» LA_SpatialSource [Direction is 'Source -> Destination'.]

ATTRIBUTES
type : S121_SpatialSourceType Public [Is static False. Containment is Not Specified.]

1.3.99 S121_AdministrativeSourceType

Class «codeList» in package 'S121_Source'

Type of AdministrativeSource

S121_AdministrativeSourceType
Version Phase Proposed
PT S121 created on 18/11/2016. Last modified 27/11/2016

ATTRIBUTES
Domestic Administrative : Public Source based under a legislative framework by the authority given under domestic legislation for instance petroleum permits [Is static False. Containment is Not Specified.]
Domestic legislative instrument : Public These cover primary and secondary legislative processes and domestic implementations of treaties. For example • Domestic – Declaration • Domestic – Public Notice • Domestic – Proclamation • Domestic – Order in Council

ATTRIBUTES

- Domestic – Legislation
- Domestic – Legislative Instrument

[Is static False. Containment is Not Specified.]

International Agreement : Public

For example:Treaty, Agreement, MOU Memorandum of Understanding, Exchange of letters

[Is static False. Containment is Not Specified.]

1.3.100 S121_AdministrativeSource

Class in package 'S121_Source'

S121_AdministrativeSource is a **source** with the administrative description (where applicable) of the **parties** involved, the **rights**, **restrictions** and **responsibilities** created and the **basic administrative units** affected

S121_AdministrativeSource derived from LA_AdministrativeSource

Note: ISO 19152 LADM stereotypes this the LA_AdministrativeSource object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed.

S121_AdministrativeSource
Version Phase Proposed
CHS created on 27/03/2015. Last modified 27/11/2016
Extends S121_Source

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_AdministrativeSource to «metaclass» S100_GF_InformationType

[Name is Realize. Direction is 'Source -> Destination'.]

Realization from S121_AdministrativeSource to «featureType» LA_AdministrativeSource

[Direction is 'Source -> Destination'.]

Generalization from S121_AdministrativeSource to S121_Source

[Direction is 'Source -> Destination'.]

ATTRIBUTES

type : S121_AdministrativeSourceType Public

the type of document

[Is static False. Containment is Not Specified.]

1.3.101 S121 Source Attributes diagram

Class diagram in package 'S121 Information Structure'

S121 Source Attributes
Version
CHS created on 23/02/2016. Last modified 27/11/2016

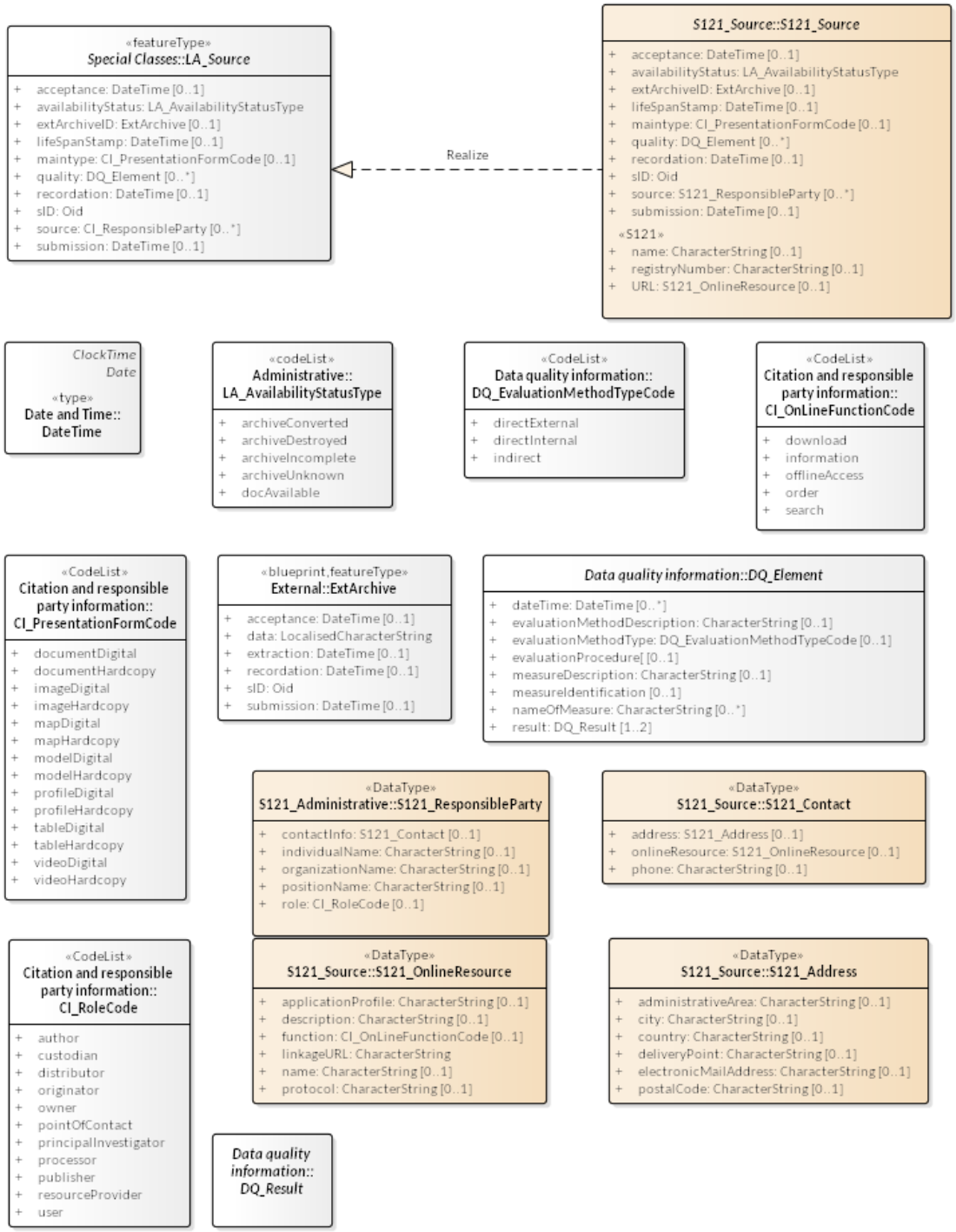

Figure 32: S121 Source Attributes

1.3.102 CI_PresentationFormCode

Class «CodeList» in package 'Citation and responsible party information'

Mode in which the data is represented

CI_PresentationFormCode
Version Phase Proposed
created on 29/03/2010. Last modified 19/11/2016

ATTRIBUTES

documentDigital : <undefined> Public

Piece of written or printed matter that provides a record or evidence of events, an agreement, ownership, identification, etc..

[Is static False. Containment is .]

documentHardcopy : <undefined> Public

Representation of a map which is printed on paper, photographic material, or other media and can be interpreted directly by the human user

[Is static False. Containment is .]

imageDigital : <undefined> Public

Permanent record of the likeness of any natural or man-made features, objects, and activities reproduced on photographic materials. This image can be acquired through the sensing of visual or any other segment of the electromagnetic spectrum by sensors, such as thermal infrared, and high resolution radar.

[Is static False. Containment is .]

imageHardcopy : <undefined> Public

[Is static False. Containment is .]

mapDigital : <undefined> Public

[Is static False. Containment is .]

mapHardcopy : <undefined> Public

[Is static False. Containment is .]

modelDigital : <undefined> Public

Representation in three dimensions of geospatial data

[Is static False. Containment is .]

modelHardcopy : <undefined> Public

[Is static False. Containment is .]

profileDigital : <undefined> Public

Vertical cross-section of geospatial data

[Is static False. Containment is .]

profileHardcopy : <undefined> Public

[Is static False. Containment is .]

tableDigital : <undefined> Public

[Is static False. Containment is .]

ATTRIBUTES
tableHardcopy : <undefined> Public [Is static False. Containment is .]
videoDigital : <undefined> Public [Is static False. Containment is .]
videoHardcopy : <undefined> Public [Is static False. Containment is .]

1.3.103 CI_RoleCode

Class «CodeList» in package 'Citation and responsible party information'

Function performed by the responsible party

CI_RoleCode
Version Phase Proposed
created on 29/03/2010. Last modified 23/02/2016

ATTRIBUTES
author : <undefined> Public [Is static False. Containment is .]
custodian : <undefined> Public Guardian or keeper responsible for maintaining the data [Is static False. Containment is .]
distributor : <undefined> Public Person or organisation who distributes the data [Is static False. Containment is .]
originator : <undefined> Public Responsible party who created the dataset or metadata [Is static False. Containment is .]
owner : <undefined> Public Person who owns the data [Is static False. Containment is .]
pointOfContact : <undefined> Public Responsible party who can be contacted for acquiring knowledge about or acquisition of the data. [Is static False. Containment is .]
principalInvestigator : <undefined> Public

ATTRIBUTES
Key person responsible for gathering information and conducting research [Is static False. Containment is .]
processor : <undefined> Public Responsible party who has processed the data in a manner in which the data has been modified. [Is static False. Containment is .]
publisher : <undefined> Public Responsible party who published the data [Is static False. Containment is .]
resourceProvider : <undefined> Public Party that supplies the data [Is static False. Containment is .]
user : <undefined> Public Person who uses the data [Is static False. Containment is .]

1.3.104 CI_OnLineFunctionCode

Class «CodeList» in package 'Citation and responsible party information'

Function performed by the resource

CI_OnLineFunctionCode
Version Phase Proposed
created on 10/04/2008. Last modified 23/02/2016

ATTRIBUTES
download : <undefined> Public Online instructions provide the information necessary to acquire data [Is static False. Containment is .]
information : <undefined> Public Online instructions provide more information about the data [Is static False. Containment is .]
offlineAccess : <undefined> Public Online instructions provide the ability to transfer data from one storage device or system to another [Is static False. Containment is .]
order : <undefined> Public

ATTRIBUTES

Online instructions provide the ability to acquire data

[Is static False. Containment is .]

search : <undefined> Public

Online instructions provide the ability to seek out information about a dataset

[Is static False. Containment is .]

1.3.105 LA_Source

Class «featureType» in package 'Special Classes'

document providing facts

LA_Source
Version 1.0 Phase CD Proposed
uitermark created on 23/05/2008. Last modified 23/11/2016

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from PT_TitleDeclaration to «featureType» LA_Source

[Direction is 'Source -> Destination'.]

Generalization from «featureType» LA_SpatialSource to «featureType» LA_Source

[Direction is 'Source -> Destination'.]

Generalization from «featureType» LA_AdministrativeSource to «featureType» LA_Source

[Direction is 'Source -> Destination'.]

Realization from S121_Source to «featureType» LA_Source

[Name is Realize. Direction is 'Source -> Destination'.]

Realization from S121_Source to «featureType» LA_Source

[Name is Realize. Direction is 'Source -> Destination'.]

ATTRIBUTES

acceptance : DateTime Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the date of force of law of the source by an authority

[Is static False. Containment is Not Specified.]

availabilityStatus : LA_AvailabilityStatusType Public

[Is static False. Containment is Not Specified.]

extArchiveID : ExtArchive Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

ATTRIBUTES

the identifier of a source in an external registration

[Is static False. Containment is Not Specified.]

lifeSpanStamp : DateTime Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the moment that the event represented by the instance of LA_Source is further processed in the LA system

[Is static False. Containment is Not Specified.]

maintype : CI_PresentationFormCode Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the type of document

[Is static False. Containment is Not Specified.]

quality : DQ_Element Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

[Is static False. Containment is Not Specified.]

recordation : DateTime Public
Alias: recordation
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the date of registration (recordation) of the source by registering authority

[Is static False. Containment is Not Specified.]

sID : Oid Public

the identifier of the source

[Is static False. Containment is Not Specified.]

source : CI_ResponsibleParty Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

[Is static False. Containment is Not Specified.]

submission : DateTime Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the date of submission of the source by a party

[Is static False. Containment is Not Specified.]

1.3.106 ExtArchive

Class «blueprint» in package 'External'

class ExtArchive is a ‘blueprint’ class for the external registration of sources

ExtArchive
Version 1.0 Phase 1.0 Proposed
Lokaal created on 03/11/2009. Last modified 17/11/2016

ATTRIBUTES

ATTRIBUTES

acceptance : DateTime Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the date of force of law of the source by the authority

[Is static False. Containment is Not Specified.]

data : LocalisedCharacterString Public

the content of the source

[Is static False. Containment is Not Specified.]

extraction : DateTime Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

[Is static False. Containment is Not Specified.]

recordation : DateTime Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the date of registration (recordation) of the source by registering authority

[Is static False. Containment is Not Specified.]

sID : Oid Public

the identifier of the source

[Is static False. Containment is Not Specified.]

submission : DateTime Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the date of submission of the source by a party

[Is static False. Containment is Not Specified.]

1.3.107 S121_ResponsibleParty

Class «DataType» in package 'S121_Administrative'

The datatype S121_ResponsibleParty realizes CI_ResponsibleParty.

It uses a simplified form of CI_ContactInfo

It includes direct attributes replacing the reference to CI_Contact and makes CI_RoleCode optional

S121_ResponsibleParty
Version 1 Phase 1 Proposed
CHS created on 26/03/2015. Last modified 27/11/2016

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from «DataType» S121_ResponsibleParty to «datatype» CI_ResponsibleParty

[Direction is 'Source -> Destination'.]

ATTRIBUTES

contactInfo : S121_Contact Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Contact Information of the responsible party

[Is static False. Containment is Not Specified.]

individualName : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Name of the responsible individual

[Is static False. Containment is Not Specified.]

organizationName : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Name of the organization

[Is static False. Containment is Not Specified.]

positionName : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Role or position of the responsible person

[Is static False. Containment is Not Specified.]

role : CI_RoleCode Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Function performed by the responsible party

[Is static False. Containment is .]

1.3.108 S121_Source

Class in package 'S121_Source'

documentation of the source of the referenced information.

S121_Source
Version 1.0 Phase CD Proposed
S121 PT created on 23/02/2016. Last modified 27/11/2016

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_Source to «featureType» LA_Source

[Name is Realize. Direction is 'Source -> Destination'.]

Realization from S121_Source to «metaclass» S100_GF_InformationType

[Name is Realize. Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from S121_SpatialSource to S121_Source

[Direction is 'Source -> Destination'.]

Generalization from S121_AdministrativeSource to S121_Source

[Direction is 'Source -> Destination'.]

ATTRIBUTES

acceptance : DateTime Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the date of force of law of the source by an authority

[Is static False. Containment is Not Specified.]

availabilityStatus : LA_AvailabilityStatusType Public

[Is static False. Containment is Not Specified.]

extArchiveID : ExtArchive Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the identifier of a source in an external registration

[Is static False. Containment is Not Specified.]

lifeSpanStamp : DateTime Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the moment that the event represented by the instance of LA_Source is further processed in the LA system

[Is static False. Containment is Not Specified.]

maintype : CI_PresentationFormCode Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the type of document

[Is static False. Containment is Not Specified.]

name : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Document name - for example the document (legislation, treaty, title) that defines the object.

[Stereotype is «S121». Is static False. Containment is Not Specified.]

quality : DQ_Element Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

[Is static False. Containment is Not Specified.]

recordation : DateTime Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the date of registration (recordation) of the source by registering authority

[Is static False. Containment is Not Specified.]

registryNumber : CharacterString Public

ATTRIBUTES

Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Unique official identifier of the record in a registry. For example, in states with registers of legislative instruments, versioning is controlled by the registry ID.

[Stereotype is «S121». Is static False. Containment is Not Specified.]

sID : Oid Public

the identifier of the source

[Is static False. Containment is Not Specified.]

source : S121_ResponsibleParty Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

[Is static False. Containment is Not Specified.]

submission : DateTime Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the date of submission of the source by a party

[Is static False. Containment is Not Specified.]

URL : S121_OnlineResource Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

URL - this is official the URL (or equivalent online resource) where the document is distributed.

[Stereotype is «S121». Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified)

Source: Public source (Class) S121_Source
Cardinality: [0..*]

Target: Public party (Class) S121_Party
Cardinality: [1..*]

Association (direction: Unspecified) rrrSource

Source: Public source (Class) S121_Source
Cardinality: [1..*]

Target: Public rrr (Class) S121_RRR
Cardinality: [0..*]

Association (direction: Unspecified) unitSource

Source: Public source (Class) S121_Source
Cardinality: [0..*]

Target: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Association (direction: Unspecified) saSource

Source: Public source (Class) S121_Source
Cardinality: [0..*]

Target: Public sa (Abstract) S121_SpatialAttributeType «FeatureAttribute»
Cardinality: [0..*]

Association (direction: Unspecified) fuSource

Source: Public fu (Abstract) S121_FeatureUnit «FeatureType»
Cardinality: [0..*]

Target: Public source (Class) S121_Source
Cardinality: [0..*]

ASSOCIATIONS

1.3.109 S121_Address

Class «DataType» in package 'S121_Source'

Location of the responsible individual or organisation

S121_Address
Version Phase Proposed
CHS created on 03/06/2015. Last modified 27/11/2016

ATTRIBUTES

administrativeArea : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: , Is ordered: False)

State, province of the physical address

[Is static False. Containment is .]

city : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: , Is ordered: False)

City of the physical address

[Is static False. Containment is .]

country : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: , Is ordered: False)

Country of the physical address

[Is static False. Containment is .]

deliveryPoint : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Address line for the physical address (Street name, box number, suite)

[Is static False. Containment is .]

electronicMailAddress : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Address of the electronic mailbox of the responsible organisation or individual

[Is static False. Containment is .]

postalCode : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: , Is ordered: False)

ZIP or other postal code

[Is static False. Containment is .]

1.3.110 S121_Contact

Class «DataType» in package 'S121_Source'

Information required enabling contact with the responsible person and/or organisation

S121_Contact
Version Phase Proposed
CHS created on 03/06/2015. Last modified 27/11/2016

ATTRIBUTES

address : S121_Address Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Physical and email address at which the organisation or individual may be contacted

[Is static False. Containment is Not Specified.]

onlineResource : S121_OnlineResource Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Online information that can be used to contact the individual or organisation

[Is static False. Containment is Not Specified.]

phone : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Telephone numbers at which the organisation or individual may be contacted

[Is static False. Containment is Not Specified.]

1.3.111 S121_OnlineResource

Class «DataType» in package 'S121_Source'

Information about online sources from which the dataset, specification, or community profile name and extended metadata elements can be obtained.

S121_OnlineResource
Version Phase Proposed
CHS created on 03/06/2015. Last modified 27/11/2016

ATTRIBUTES

applicationProfile : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: , Is ordered: False)

Name of an application profile that can be used with the resource

[Is static False. Containment is .]

description : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: , Is ordered: False)

Description of what the resource is/does

[Is static False. Containment is .]

function : CI_OnLineFunctionCode Public
Multiplicity: ([0..1], Allow duplicates: , Is ordered: False)

ATTRIBUTES

Function performed by the resource

[Is static False. Containment is .]

linkageURL : CharacterString Public

Method, source, or location for online access.
Example: a Uniform Resource Locator (URL) such as http://www,gii.getty.edu/tgn_browser/

[Is static False. Containment is Not Specified.]

name : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: , Is ordered: False)

Name of the resource

[Is static False. Containment is .]

protocol : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: , Is ordered: False)

Connection protocol to be used

[Is static False. Containment is .]

1.3.112 S121 Party Package diagram

Class diagram in package 'S121 Information Structure'

S121 Party Package
Version
CHS created on 27/03/2015. Last modified 27/11/2016

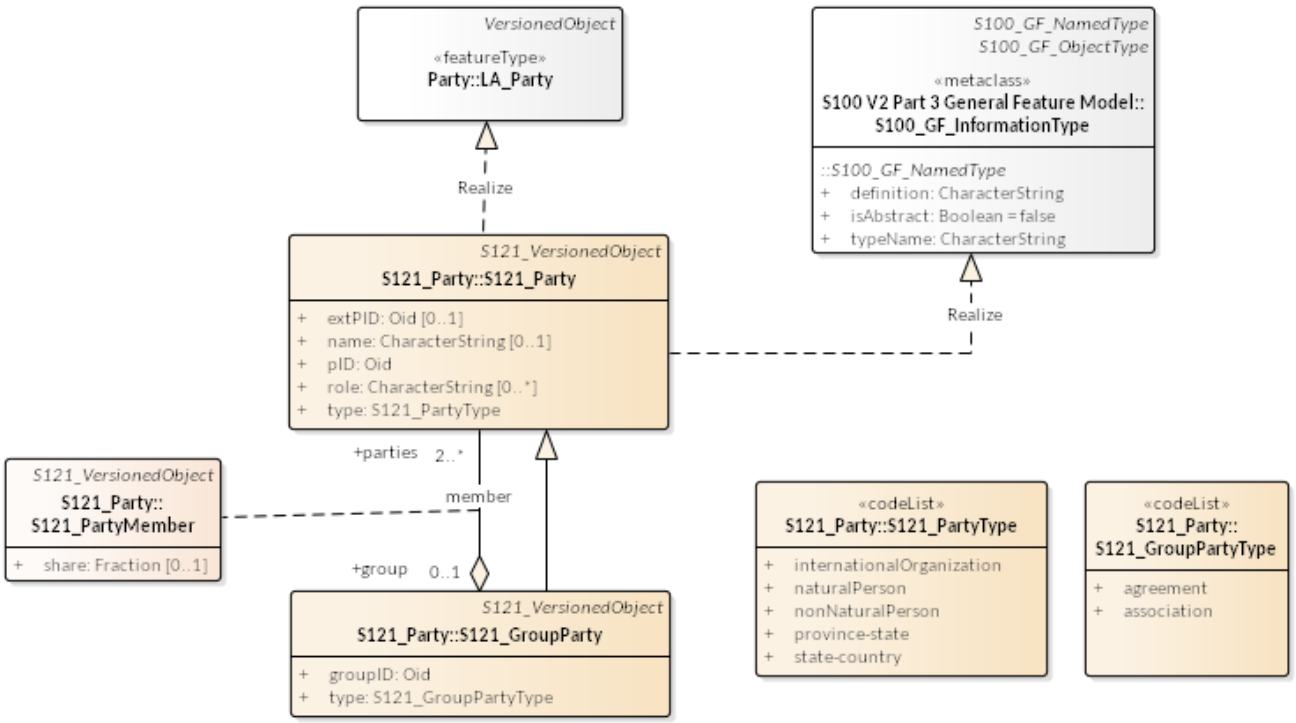

Figure 33: S121 Party Package

1.3.113 LA_Party

Class «featureType» in package 'Party'

a person or organisation that plays a role in a **rights** transaction

LA_Party
Version 1.0 Phase Mandatory
ISO 19152 created on 20/05/2008. Last modified 23/11/2016

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «featureType» LA_Party to «featureType» VersionedObject
[Direction is 'Source -> Destination'.]

Aggregation from «featureType» LA_Party to «interface» LA_SpatialUnitOverview
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from «featureType» LA_GroupParty to «featureType» LA_Party
[Direction is 'Source -> Destination'.]

Realization from S121_Party to «featureType» LA_Party
[Name is Realize. Direction is 'Source -> Destination'.]

Generalization from «featureType» KR_OwnerInformation to «featureType» LA_Party
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from S121_Party to «featureType» LA_Party
[Name is Realize. Direction is 'Source -> Destination'.]

Generalization from «featureType» Farmer to «featureType» LA_Party
[Direction is 'Source -> Destination'.]

Generalization from QLD_Party to «featureType» LA_Party
[Direction is 'Source -> Destination'.]

Generalization from NL_Party to «featureType» LA_Party
[Direction is 'Source -> Destination'.]

ATTRIBUTES

extPID : Oid Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the identifier of the party in an external registration
[Is static False. Containment is Not Specified.]

name : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the name of the party
[Is static False. Containment is Not Specified.]

pID : Oid Public

the identifier of the party
[Is static False. Containment is Not Specified.]

role : LA_PartyRoleType Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

the role of a party in the data update and maintenance process
[Is static False. Containment is Not Specified.]

type : LA_PartyType Public

the type of the party
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified) conveyancerSource

Source: Public conveyancer (Class) LA_Party «featureType»
Cardinality: [1..*]

Target: Public source (Class)
LA_AdministrativeSource «featureType»
Cardinality: [0..*]

Association (direction: Unspecified) surveyorSource

ASSOCIATIONS

Source: Public surveyor (Class) LA_Party «featureType»
Cardinality: [1..*]

Target: Public source (Class) LA_SpatialSource «featureType»
Cardinality: [0..*]

Association (direction: Unspecified) rrrParty

Source: Public party (Class) LA_Party «featureType»
Cardinality: [0..1]

Target: Public rrr (Class) LA_RRR «featureType»
Cardinality: [0..*]

AssociationClass (direction: Unspecified) members

Source: Public group (Class) LA_GroupParty «featureType»
Cardinality: [0..1]

Target: Public parties (Class) LA_Party «featureType»
Cardinality: [2..*]

Association (direction: Unspecified) baunitAsParty

Source: Public unit (Class) LA_BAUnit «featureType»
Cardinality: [0..*]

Target: Public party (Class) LA_Party «featureType»
Cardinality: [0..*]

Association (direction: Unspecified)

Source: Public folio (Class) LA_PartyPortfolio «interface»
Cardinality: [0..*]

Target: Public party (Class) LA_Party «featureType»
Cardinality: [1]

Association (direction: Unspecified)

Source: Public (Class) LA_AdministrativeSource «featureType»
Cardinality: [0..*]

Target: Public represented by (Class) LA_Party «featureType»
Cardinality: [0..1]

1.3.114 S100_GF_InformationType

Metaclass «metaclass» in package 'S100 V2 Part 3 General Feature Model'

S100_GF_InformationType is the class for information types within S-100. An information type is an identifiable object that can be associated with features in order to carry information particular to the associated features. An example of an information type might be a Chart Note. Information types can also be associated with each other. This could be done where there is further supplementary information that is relevant to the information type or where there is a need to translate the information. For example a primary information object carrying a Chart Note may contain text in English and an associated supplementary information object may carry the same text in German.

The characteristics of information types shall be carried by thematic attribute types only.Therefore, S100_GF_InformationType is associated with only S100_GF_ThematicAttributeType rather than the more generic class S100_GF_PropertyType. The associations to information types are modelled by means of the type S100_InformationAssociationType.

S100_GF_InformationType
Version 2.0 Phase 2.0 Proposed
IHO TSMAD created on 22/12/2014. Last modified 27/11/2016

OUTGOING STRUCTURAL RELATIONSHIPS

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «metaclass» S100_GF_InformationType to «metaclass» S100_GF_ObjectType
[Direction is 'Source -> Destination'.]

Generalization from «metaclass» S100_GF_InformationType to «metaclass» S100_GF_NamedType
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from S121_AdministrativeSource to «metaclass» S100_GF_InformationType
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from S121_Source to «metaclass» S100_GF_InformationType
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from S121_Party to «metaclass» S100_GF_InformationType
[Direction is 'Source -> Destination'.]

Aggregation from «metaclass» S121_GF_ThematicAttributeType to «metaclass» S100_GF_InformationType
[Direction is 'Source -> Destination'.]

Realization from S121_BAUnit to «metaclass» S100_GF_InformationType
[Name is Realize. Direction is 'Source -> Destination'.]

Aggregation from «metaclass» S100_GF_ThematicAttributeType to «metaclass» S100_GF_InformationType
[Direction is 'Source -> Destination'.]

Realization from S121_RRR to «metaclass» S100_GF_InformationType
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from S121_BAUnit to «metaclass» S100_GF_InformationType
[Direction is 'Source -> Destination'.]

Realization from S121_AdministrativeSource to «metaclass» S100_GF_InformationType
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from «abstract» S121_RRR to «metaclass» S100_GF_InformationType
[Direction is 'Source -> Destination'.]

Aggregation from «metaclass» S121_GF_ThematicAttributeType to «metaclass» S100_GF_InformationType
[Direction is 'Source -> Destination'.]

Realization from S121_Source to «metaclass» S100_GF_InformationType
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from S121_Party to «metaclass» S100_GF_InformationType
[Name is Realize. Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Aggregation from «metaclass» S100_GF_AssociationRole to «metaclass» S100_GF_InformationType
[Direction is 'Source -> Destination'.]

CONNECTORS

Dependency «trace» Source -> Destination
From: S100_GF_InformationType : Metaclass, Public
To: S100_GF_InformationType : Metaclass, Public

ASSOCIATIONS

Association (direction: Unspecified)

Source: Public includes (Metaclass) S100_GF_InformationType «metaclass»
Cardinality: [1..*]

Target: Public linkBetween (Metaclass) S100_GF_InformationAssociationType «metaclass»
Cardinality: [1..*]

The information type that is included in the relationship.

Association (direction: Unspecified) inheritance

Role: superType - The more generic feature type from which this feature type is derived.
Role: subType - The more specific feature types which are derived from this feature type.

Source: Public subType (Metaclass) S100_GF_InformationType «metaclass»
Cardinality: [0..*]

Target: Public superType (Metaclass) S100_GF_InformationType «metaclass»
Cardinality: [0..1]

Association (direction: Unspecified) inheritance

Role: superType - The more generic feature type from which this feature type is derived.
Role: subType - The more specific feature types which are derived from this feature type.

Source: Public subType (Metaclass) S100_GF_InformationType «metaclass»
Cardinality: [0..*]

Target: Public superType (Metaclass) S100_GF_InformationType «metaclass»
Cardinality: [0..1]

1.3.115 S121_PartyMember

AssociationClass in package 'S121_Party'

S121_PartyMember derived from LA_PartyMember

Note: This class is a relationship class - i.e. it provides an attribute on a relationship. A party member is a fraction of a group party.

Note: ISO 19152 LADM stereotypes this the LA_PartyMember object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed.

S121_PartyMember
Version Phase Proposed
CHS created on 17/11/2016. Last modified 27/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from S121_PartyMember to S121_VersionedObject
[Direction is 'Source -> Destination'.]

ATTRIBUTES

share : Fraction Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the fraction of the whole
[Is static False. Containment is Not Specified.]

1.3.116 S121_Party

Class in package 'S121_Party'

S121_Party is a a person or organisation that plays a role in a **rights** transaction

S121_Party realized from LA_Party

Note: ISO 19152 LADM stereotypes this the LA_Party object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed.

S121_Party
Version Phase Mandatory
CHS created on 27/03/2015. Last modified 27/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from S121_Party to S121_VersionedObject
[Direction is 'Source -> Destination'.]

Realization from S121_Party to «featureType» LA_Party
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from S121_Party to «metaclass» S100_GF_InformationType
[Name is Realize. Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from S121_GroupParty to S121_Party
[Direction is 'Source -> Destination'.]

Realization from Party Instance to S121_Party
[Name is Instance. Direction is 'Source -> Destination'.]

ATTRIBUTES

ATTRIBUTES

extPID : Oid Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the identifier of the party in an external registration

[Is static False. Containment is Not Specified.]

name : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the name of the party

[Is static False. Containment is Not Specified.]

pID : Oid Public

the identifier of the party

[Is static False. Containment is Not Specified.]

role : CharacterString Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

[Is static False. Containment is Not Specified.]

type : S121_PartyType Public

the type of the party

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified)

Source: Public source (Class) S121_Source
Cardinality: [0..*]

Target: Public party (Class) S121_Party
Cardinality: [1..*]

AssociationClass (direction: Unspecified) member

Source: Public group (Class) S121_GroupParty
Cardinality: [0..1]

Target: Public parties (Class) S121_Party
Cardinality: [2..*]

Association (direction: Unspecified) baunitAsParty

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Target: Public party (Class) S121_Party
Cardinality: [0..*]

Association (direction: Unspecified) rrrParty

Source: Public rrr (Class) S121_RRR
Cardinality: [0..*]

Target: Public party (Class) S121_Party
Cardinality: [0..1]

1.3.117 S121_GroupParty

Class in package 'S121_Party'

S121_GroupParty is any number of **parties**, forming together a distinct entity, with each **party** registered.

S121_GroupParty realized from LA_GroupParty

Note: ISO 19152 LADM stereotypes this the LA_GroupParty object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed.

S121_GroupParty
Version Phase Proposed
CHS created on 27/03/2015. Last modified 27/11/2016
Extends S121_Party, S121_VersionedObject

CONSTRAINTS

Invariant. sum(LA_PartyMember.share)=1 per group

[Approved, Weight is 0.]

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_GroupParty to «featureType» LA_GroupParty

[Direction is 'Source -> Destination'.]

Generalization from S121_GroupParty to S121_VersionedObject

[Direction is 'Source -> Destination'.]

Generalization from S121_GroupParty to S121_Party

[Direction is 'Source -> Destination'.]

ATTRIBUTES

groupID : Oid Public

the identifier of a group party

[Is static False. Containment is Not Specified.]

type : S121_GroupPartyType Public

the type of the group party

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

AssociationClass (direction: Unspecified) member

Source: Public group (Class) S121_GroupParty
Cardinality: [0..1]

Target: Public parties (Class) S121_Party
Cardinality: [2..*]

1.3.118 S121 Administrative RRR diagram

Class diagram in package 'S121 Information Structure'

S121 Administrative RRR
Version
CHS created on 27/03/2015. Last modified 27/11/2016

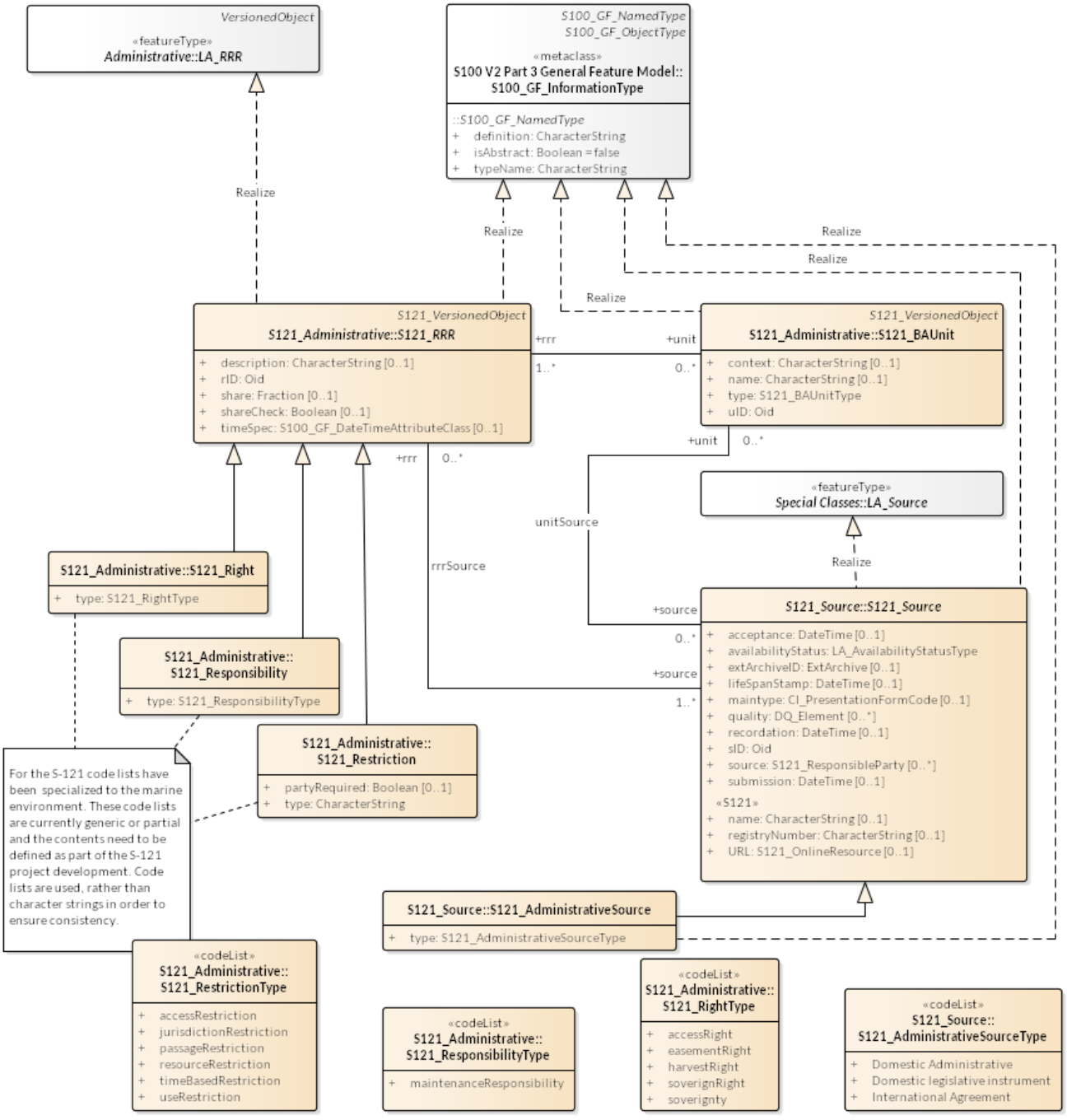

Figure 34: S121 Administrative RRR

1.3.119 LA_RRR

Class «featureType» in package 'Administrative'

An instance of a subclass of LA_RRR is a **right** (or social tenure relationship), a **restriction**, or a **responsibility**

LA_RRR
Version 1.0 Phase 1.0 Proposed
ISO 19152 created on 27/05/2008. Last modified 23/11/2016
Alias LA_SocialTenureRelationship

OUTGOING STRUCTURAL RELATIONSHIPS

Aggregation from «featureType» LA_RRR to «interface» LA_SpatialUnitOverview
[Direction is 'Source -> Destination'.]

Aggregation from «featureType» LA_RRR to «interface» LA_PartyPortfolio
[Direction is 'Source -> Destination'.]

Generalization from «featureType» LA_RRR to «featureType» VersionedObject
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from S121_RRR to «featureType» LA_RRR
[Name is Realize. Direction is 'Source -> Destination'.]

Generalization from «featureType» LA_Restriction to «featureType» LA_RRR
[Direction is 'Source -> Destination'.]

Realization from «abstract» S121_RRR to «featureType» LA_RRR
[Name is Realize. Direction is 'Source -> Destination'.]

Generalization from «featureType» KR_ParcelPrice to «featureType» LA_RRR
[Direction is 'Source -> Destination'.]

Generalization from QLD_RRR to «featureType» LA_RRR
[Direction is 'Source -> Destination'.]

Generalization from NL_RRR to «featureType» LA_RRR
[Direction is 'Source -> Destination'.]

Generalization from «featureType» LA_Responsibility to «featureType» LA_RRR
[Direction is 'Source -> Destination'.]

Generalization from «featureType» LA_Right to «featureType» LA_RRR
[Direction is 'Source -> Destination'.]

CONNECTORS

Dependency Source -> Destination
From: Legal Profiles : Package, Public
To: LA_RRR : Class, Public

ATTRIBUTES

ATTRIBUTES

description : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

description regarding the right, restriction or responsibility

[Is static False. Containment is Not Specified.]

rID : Oid Public

The RRR identifier

[Is static False. Containment is Not Specified.]

share : Fraction Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

a share in an instance of a subclass of LA_RRR

[Is static False. Containment is Not Specified.]

shareCheck : Boolean Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

boolean indicating whether the constraint is applicable

[Is static False. Containment is Not Specified.]

timeSpec : ISO8601_ISO14825_Type Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

operational use of a right in time sharing

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified) unitRrr

Source: Public rrr (Class) LA_RRR «featureType»
Cardinality: [1..*]

Target: Public unit (Class) LA_BAUnit «featureType»
Cardinality: [1]

Association (direction: Unspecified) rrrSource

Source: Public rrr (Class) LA_RRR «featureType»
Cardinality: [0..*]

Target: Public source (Class) LA_AdministrativeSource «featureType»
Cardinality: [1..*]

Association (direction: Unspecified) rrrParty

Source: Public party (Class) LA_Party «featureType»
Cardinality: [0..1]

Target: Public rrr (Class) LA_RRR «featureType»
Cardinality: [0..*]

1.3.120 LA_Source

Class «featureType» in package 'Special Classes'

document providing facts

LA_Source
Version 1.0 Phase CD Proposed
uitermark created on 23/05/2008. Last modified 23/11/2016

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from PT_TitleDeclaration to «featureType» LA_Source
[Direction is 'Source -> Destination'.]

Generalization from «featureType» LA_SpatialSource to «featureType» LA_Source
[Direction is 'Source -> Destination'.]

Generalization from «featureType» LA_AdministrativeSource to «featureType» LA_Source
[Direction is 'Source -> Destination'.]

Realization from S121_Source to «featureType» LA_Source
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from S121_Source to «featureType» LA_Source
[Name is Realize. Direction is 'Source -> Destination'.]

ATTRIBUTES

acceptance : DateTime Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the date of force of law of the source by an authority
[Is static False. Containment is Not Specified.]

availabilityStatus : LA_AvailabilityStatusType Public
[Is static False. Containment is Not Specified.]

extArchiveID : ExtArchive Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the identifier of a source in an external registration
[Is static False. Containment is Not Specified.]

lifeSpanStamp : DateTime Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the moment that the event represented by the instance of LA_Source is further processed in the LA system
[Is static False. Containment is Not Specified.]

maintype : CI_PresentationFormCode Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the type of document
[Is static False. Containment is Not Specified.]

quality : DQ_Element Public

ATTRIBUTES

Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

recordation : DateTime Public
Alias: recordation
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the date of registration (recordation) of the source by registering authority
[Is static False. Containment is Not Specified.]

sID : Oid Public

the identifier of the source
[Is static False. Containment is Not Specified.]

source : CI_ResponsibleParty Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

submission : DateTime Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the date of submission of the source by a party
[Is static False. Containment is Not Specified.]

1.3.121 S100_GF_InformationType

Metaclass «metaclass» in package 'S100 V2 Part 3 General Feature Model'

S100_GF_InformationType is the class for information types within S-100. An information type is an identifiable object that can be associated with features in order to carry information particular to the associated features. An example of an information type might be a Chart Note. Information types can also be associated with each other. This could be done where there is further supplementary information that is relevant to the information type or where there is a need to translate the information. For example a primary information object carrying a Chart Note may contain text in English and an associated supplementary information object may carry the same text in German.

The characteristics of information types shall be carried by thematic attribute types only.Therefore, S100_GF_InformationType is associated with only S100_GF_ThematicAttributeType rather than the more generic class S100_GF_PropertyType. The associations to information types are modelled by means of the type S100_InformationAssociationType.

S100_GF_InformationType
Version 2.0 Phase 2.0 Proposed
IHO TSMAD created on 22/12/2014. Last modified 27/11/2016

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «metaclass» S100_GF_InformationType to «metaclass» S100_GF_ObjectType
[Direction is 'Source -> Destination'.]

Generalization from «metaclass» S100_GF_InformationType to «metaclass» S100_GF_NamedType
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from S121_AdministrativeSource to «metaclass» S100_GF_InformationType
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from S121_Source to «metaclass» S100_GF_InformationType
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from S121_Party to «metaclass» S100_GF_InformationType
[Direction is 'Source -> Destination'.]

Aggregation from «metaclass» S121_GF_ThematicAttributeType to «metaclass» S100_GF_InformationType
[Direction is 'Source -> Destination'.]

Realization from S121_BAUnit to «metaclass» S100_GF_InformationType
[Name is Realize. Direction is 'Source -> Destination'.]

Aggregation from «metaclass» S100_GF_ThematicAttributeType to «metaclass» S100_GF_InformationType
[Direction is 'Source -> Destination'.]

Realization from S121_RRR to «metaclass» S100_GF_InformationType
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from S121_BAUnit to «metaclass» S100_GF_InformationType
[Direction is 'Source -> Destination'.]

Realization from S121_AdministrativeSource to «metaclass» S100_GF_InformationType
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from «abstract» S121_RRR to «metaclass» S100_GF_InformationType
[Direction is 'Source -> Destination'.]

Aggregation from «metaclass» S121_GF_ThematicAttributeType to «metaclass» S100_GF_InformationType
[Direction is 'Source -> Destination'.]

Realization from S121_Source to «metaclass» S100_GF_InformationType
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from S121_Party to «metaclass» S100_GF_InformationType
[Name is Realize. Direction is 'Source -> Destination'.]

Aggregation from «metaclass» S100_GF_AssociationRole to «metaclass» S100_GF_InformationType
[Direction is 'Source -> Destination'.]

CONNECTORS

CONNECTORS

Dependency «trace» Source -> Destination
From: S100_GF_InformationType : Metaclass, Public
To: S100_GF_InformationType : Metaclass, Public

ASSOCIATIONS

Association (direction: Unspecified)

Source: Public includes (Metaclass) S100_GF_InformationType «metaclass»
Cardinality: [1..*]

Target: Public linkBetween (Metaclass) S100_GF_InformationAssociationType «metaclass»
Cardinality: [1..*]

The information type that is included in the relationship.

Association (direction: Unspecified) inheritance

Role: superType - The more generic feature type from which this feature type is derived.
Role: subType - The more specific feature types which are derived from this feature type.

Source: Public subType (Metaclass) S100_GF_InformationType «metaclass»
Cardinality: [0..*]

Target: Public superType (Metaclass) S100_GF_InformationType «metaclass»
Cardinality: [0..1]

Association (direction: Unspecified) inheritance

Role: superType - The more generic feature type from which this feature type is derived.
Role: subType - The more specific feature types which are derived from this feature type.

Source: Public subType (Metaclass) S100_GF_InformationType «metaclass»
Cardinality: [0..*]

Target: Public superType (Metaclass) S100_GF_InformationType «metaclass»
Cardinality: [0..1]

1.3.122 S121_BAUnit

Class in package 'S121_Administrative'

The Basic Administrative Unit is an information object to “which (one or more) unique and homogeneous rights, responsibilities or restrictions are associated”. It is an information object since it does not directly take on spatial attributes. The S121_BAUnit is derived from both the S121_GF_ThematicAttributeType and the LA_BAUnit defined in ISO 19152.

S121_BAUnit
Version Phase Proposed
CHS created on 27/03/2015. Last modified 27/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from S121_BAUnit to S121_VersionedObject
[Direction is 'Source -> Destination'.]

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_BAUnit to «metaclass» S100_GF_InformationType
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from S121_BAUnit to «metaclass» S121_GF_ThematicAttributeType
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from S121_BAUnit to «featureType» LA_BAUnit
[Name is Realize. Direction is 'Source -> Destination'.]

ATTRIBUTES

context : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

name : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

type : S121_BAUnitType Public

the use type of the basic administrative unit
[Is static False. Containment is Not Specified.]

uID : Oid Public

An ID used in relationships between elements of the RRR structure and the Basic Administrative Unit.
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified)

Source: Public (Class) S121_BAUnit
Target: Public (Class) S121_Zone «FeatureType»

Association (direction: Unspecified)

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]
Target: Public rrr (Class) S121_RRR
Cardinality: [1..*]

Association (direction: Unspecified)

Source: Public (Class) S121_BAUnit
Target: Public (Class) S121_Space «FeatureType»

Association (direction: Unspecified) relationBAUnit

Source: Public unit1 (Class) S121_BAUnit
Cardinality: [0..*]
Target: Public unit2 (Class) S121_BAUnit
Cardinality: [0..*]

Association (direction: Unspecified) baunitAsParty

ASSOCIATIONS

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Target: Public party (Class) S121_Party
Cardinality: [0..*]

Association (direction: Unspecified)

Source: Public (Abstract) S121_FeatureUnit «FeatureType»
Cardinality: [0..*]

Target: Public (Class) S121_BAUnit
Cardinality: [1..*]

Association (direction: Unspecified) unitSource

Source: Public source (Class) S121_Source
Cardinality: [0..*]

Target: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Association (direction: Unspecified) relationBAUnit

Source: Public unit1 (Class) S121_BAUnit
Cardinality: [0..*]

Target: Public unit2 (Class) S121_BAUnit
Cardinality: [0..*]

1.3.123 S121_RightType

Class «codeList» in package 'S121_Administrative'

Type of right (soverignRight, accessRight, harvestRight, easementRight)

S121_RightType
Version Phase Proposed
PT S121 created on 21/02/2016. Last modified 27/11/2016

ATTRIBUTES

accessRight : Public

right of access including passage

[Is static False. Containment is Not Specified.]

easementRight : Public

the right to establish infrastructure (e.g. lay a cable)

[Is static False. Containment is Not Specified.]

harvestRight : Public

the right to harvest a marine resource such as fishing, mineral mining or oil

[Is static False. Containment is Not Specified.]

soverignRight : Public

The right of a exclusivity of jurisdiction (The coastal State has the exclusive right of decision in regard to the rules which are to apply within the zone) A handbook on the new law of the sea. RJ Dupuy, D Vignes, Martinus Nijhoff Publishers, Dordrecht, (1991)

[Is static False. Containment is Not Specified.]

ATTRIBUTES
soverignty : Public Absolute prescriptive and enforcement power, limited only by coastal state international obligations (ABLOS) [Is static False. Containment is Not Specified.]

1.3.124 S121_RestrictionType

Class «codeList» in package 'S121_Administrative'

Type of restriction (timeBasedRestriction, passageRestriction, accessRestriction, useRestriction, jurisdictionRestriction, resourceRestriction)

S121_RestrictionType
Version 1.0 Phase 1.0 Proposed
created on 21/02/2016. Last modified 27/11/2016

ATTRIBUTES
accessRestriction : Public restriction on the right of access [Is static False. Containment is Not Specified.]
jurisdictionRestriction : Public restriction on jurisdiction (e.g. limits on sovereign right) [Is static False. Containment is Not Specified.]
passageRestriction : Public restriction on the right of access for passage [Is static False. Containment is Not Specified.]
resourceRestriction : Public restriction on the right of harvest of a resource [Is static False. Containment is Not Specified.]
timeBasedRestriction : Public restriction on any right based on time [Is static False. Containment is Not Specified.]
useRestriction : Public restriction on use (such as rules for safe anchorage) [Is static False. Containment is Not Specified.]

1.3.125 S121_ResponsibilityType

Class «codeList» in package 'S121_Administrative'

Type of responsibility (maintenanceResponsibility)

S121_ResponsibilityType
Version Phase Proposed
created on 21/02/2016. Last modified 27/11/2016

ATTRIBUTES

maintenanceResponsibility : Public

Responsibility to maintain a facility or other entity.

[Is static False. Containment is Not Specified.]

1.3.126 S121_RRR

Class in package 'S121_Administrative'

S121_RRR realized from LA_RRR

An instance of a subclass of LA_RRR is a **right** (or social tenure relationship), a **restriction**, or a **responsibility**

Note: ISO 19152 LADM stereotypes this the LA_RRR object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed. In the S-100 environment the RRR objects are information objects that carry an object identifier "Oid". They can be referenced as objects from the attributes associated with an S-100 Feature Object. This allows Rights, Responsibilities and Restrictions to be re-used by several objects. Thagt is, several objects may reference the same RRR objects.

S121_RRR
Version Phase Proposed
CHS created on 27/03/2015. Last modified 27/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_RRR to «featureType» LA_RRR

[Name is Realize. Direction is 'Source -> Destination'.]

Realization from S121_RRR to «metaclass» S100_GF_InformationType

[Name is Realize. Direction is 'Source -> Destination'.]

Generalization from S121_RRR to S121_VersionedObject

[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from S121_Responsibility to S121_RRR

[Direction is 'Source -> Destination'.]

Realization from Rights Instance to S121_RRR

[Name is Instance. Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from S121_Right to S121_RRR

[Direction is 'Source -> Destination'.]

Generalization from S121_Restriction to S121_RRR

[Direction is 'Source -> Destination'.]

ATTRIBUTES

description : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

description regarding the right, restriction or responsibility

[Is static False. Containment is Not Specified.]

rID : Oid Public

The RRR identifier

[Is static False. Containment is Not Specified.]

share : Fraction Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

a share in an instance of a subclass of LA_RRR

[Is static False. Containment is Not Specified.]

shareCheck : Boolean Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

boolean indicating whether the constraint is applicable

[Is static False. Containment is Not Specified.]

timeSpec : S100_GF_DateTimeAttributeClass Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

operational use of a right in time sharing

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified) rrrParty

Source: Public rrr (Class) S121_RRR
Cardinality: [0..*]

Target: Public party (Class) S121_Party
Cardinality: [0..1]

Association (direction: Unspecified) rrrSource

Source: Public source (Class) S121_Source
Cardinality: [1..*]

Target: Public rrr (Class) S121_RRR
Cardinality: [0..*]

Association (direction: Unspecified)

Source: Public unit (Class) S121_BAUnit

Target: Public rrr (Class) S121_RRR

ASSOCIATIONS	
Cardinality: [0..*]	Cardinality: [1..*]

1.3.127 S121_Right

Class in package 'S121_Administrative'

S121_Right is an action, activity or class of actions that a system participant may perform on or using an associated resource.

S121_Right is realized from LA_Right

For the S-121 code lists have been specialized to the marine environment. These code lists are currently generic or partial and the contents need to be defined as part of the S-121 project development. Code lists are used, rather than character strings in order to ensure consistency.

Note: ISO 19152 LADM stereotypes this the LA_Right object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed. In the S-100 environment the RRR objects are information objects that carry an object identifier "Oid". They can be referenced as objects from the attributes associated with an S-100 Feature Object.

S121_Right
Version Phase Proposed
CHS created on 27/03/2015. Last modified 27/11/2016
Extends S121_RRR

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from S121_Right to S121_RRR
[Direction is 'Source -> Destination'.]

Realization from S121_Right to «featureType» LA_Right
[Direction is 'Source -> Destination'.]

ATTRIBUTES

type : S121_RightType Public

the type of the right
[Is static False. Containment is Not Specified.]

1.3.128 S121_Restriction

Class in package 'S121_Administrative'

S121_Restriction is a formal or informal entitlement to refrain from doing something.

S121_Restriction is realized from LA_Restriction

For the S-121 code lists have been specialized to the marine environment. These code lists are currently generic or partial and the contents need to be defined as part of the S-121 project development. Code lists are used, rather than character strings in order to ensure consistency.

Note: ISO 19152 LADM stereotypes this the LA_Restriction object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed. In the S-100 environment the RRR objects are information objects that carry an object identifier "Oid". They can be referenced as objects from the attributes associated with an S-100 Feature Object.

S121_Restriction
Version 1 Phase 1 Proposed
CHS created on 27/03/2015. Last modified 27/11/2016
Extends S121_RRR

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from S121_Restriction to S121_RRR
[Direction is 'Source -> Destination'.]

Realization from S121_Restriction to «featureType» LA_Restriction
[Direction is 'Source -> Destination'.]

ATTRIBUTES

partyRequired : Boolean Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

indicates whether a party is required for the registration of the restriction in the association to LA_Party
[Is static False. Containment is Not Specified.]

type : CharacterString Public

the type of the restriction
[Is static False. Containment is Not Specified.]

1.3.129 S121_Responsibility

Class in package 'S121_Administrative'

S121_Responsibility is a formal or informal obligation to do something

S121_Responsibility realized from LA_Responsibility

For the S-121 code lists have been specialized to the marine environment. These code lists are currently generic or partial and the contents need to be defined as part of the S-121 project development. Code lists are used, rather than character strings in order to ensure consistency.

Note: ISO 19152 LADM stereotypes this the LA_Responsibility object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed. In the S-100 environment the RRR objects are information objects that carry an object identifier "Oid". They can be referenced as objects from the attributes associated with an S-100 Feature Object. This allows Rights, Responsibilities and Restrictions to be re-used by several objects. Thagt is, several objects may reference the same RRR objects.

S121_Responsibility
Version 1 Phase 1 Proposed
CHS created on 27/03/2015. Last modified 27/11/2016
Extends S121_RRR

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from S121_Responsibility to S121_RRR
[Direction is 'Source -> Destination'.]

Realization from S121_Responsibility to «featureType» LA_Responsibility
[Direction is 'Source -> Destination'.]

ATTRIBUTES

type : S121_ResponsibilityType Public
[Is static False. Containment is Not Specified.]

1.3.130 S121_Source

Class in package 'S121_Source'

documentation of the source of the referenced information.

S121_Source
Version 1.0 Phase CD Proposed
S121 PT created on 23/02/2016. Last modified 27/11/2016

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_Source to «featureType» LA_Source
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from S121_Source to «metaclass» S100_GF_InformationType
[Name is Realize. Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from S121_SpatialSource to S121_Source
[Direction is 'Source -> Destination'.]

Generalization from S121_AdministrativeSource to S121_Source
[Direction is 'Source -> Destination'.]

ATTRIBUTES

acceptance : DateTime Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the date of force of law of the source by an authority
[Is static False. Containment is Not Specified.]

availabilityStatus : LA_AvailabilityStatusType Public
[Is static False. Containment is Not Specified.]

ATTRIBUTES

extArchiveID : ExtArchive Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the identifier of a source in an external registration

[Is static False. Containment is Not Specified.]

lifeSpanStamp : DateTime Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the moment that the event represented by the instance of LA_Source is further processed in the LA system

[Is static False. Containment is Not Specified.]

maintype : CI_PresentationFormCode Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the type of document

[Is static False. Containment is Not Specified.]

name : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Document name - for example the document (legislation, treaty, title) that defines the object.

[Stereotype is «S121». Is static False. Containment is Not Specified.]

quality : DQ_Element Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

[Is static False. Containment is Not Specified.]

recordation : DateTime Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the date of registration (recordation) of the source by registering authority

[Is static False. Containment is Not Specified.]

registryNumber : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Unique official identifier of the record in a registry. For example, in states with registers of legislative instruments, versioning is controlled by the registry ID.

[Stereotype is «S121». Is static False. Containment is Not Specified.]

sID : Oid Public

the identifier of the source

[Is static False. Containment is Not Specified.]

source : S121_ResponsibleParty Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

[Is static False. Containment is Not Specified.]

submission : DateTime Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the date of submission of the source by a party

[Is static False. Containment is Not Specified.]

ATTRIBUTES

URL : S121_OnlineResource Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

URL - this is official the URL (or equivalent online resource) where the document is distributed.
[Stereotype is «S121». Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified)

Source: Public source (Class) S121_Source
Cardinality: [0..*]

Target: Public party (Class) S121_Party
Cardinality: [1..*]

Association (direction: Unspecified) rrrSource

Source: Public source (Class) S121_Source
Cardinality: [1..*]

Target: Public rrr (Class) S121_RRR
Cardinality: [0..*]

Association (direction: Unspecified) unitSource

Source: Public source (Class) S121_Source
Cardinality: [0..*]

Target: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Association (direction: Unspecified) saSource

Source: Public source (Class) S121_Source
Cardinality: [0..*]

Target: Public sa (Abstract) S121_SpatialAttributeType «FeatureAttribute»
Cardinality: [0..*]

Association (direction: Unspecified) fuSource

Source: Public fu (Abstract) S121_FeatureUnit «FeatureType»
Cardinality: [0..*]

Target: Public source (Class) S121_Source
Cardinality: [0..*]

1.3.131 S121_AdministrativeSourceType

Class «codeList» in package 'S121_Source'

Type of AdministrativeSource

S121_AdministrativeSourceType
Version Phase Proposed
PT S121 created on 18/11/2016. Last modified 27/11/2016

ATTRIBUTES

Domestic Administrative : Public

Source based under a legislative framework by the authority given under domestic legislation for instance petroleum permits
[Is static False. Containment is Not Specified.]

ATTRIBUTES

Domestic legislative instrument : Public

These cover primary and secondary legislative processes and domestic implementations of treaties.

For example
- Domestic – Declaration
- Domestic – Public Notice
- Domestic – Proclamation
- Domestic – Order in Council
- Domestic – Legislation
- Domestic – Legislative Instrument

[Is static False. Containment is Not Specified.]

International Agreement : Public

For example:Treaty, Agreement, MOU Memorandum of Understanding, Exchange of letters

[Is static False. Containment is Not Specified.]

1.3.132 S121_AdministrativeSource

Class in package 'S121_Source'

S121_AdministrativeSource is a **source** with the administrative description (where applicable) of the **parties** involved, the **rights**, **restrictions** and **responsibilities** created and the **basic administrative units** affected

S121_AdministrativeSource derived from LA_AdministrativeSource

Note: ISO 19152 LADM stereotypes this the LA_AdministrativeSource object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed.

S121_AdministrativeSource
Version Phase Proposed
CHS created on 27/03/2015. Last modified 27/11/2016
Extends S121_Source

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_AdministrativeSource to «metaclass» S100_GF_InformationType
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from S121_AdministrativeSource to «featureType» LA_AdministrativeSource
[Direction is 'Source -> Destination'.]

Generalization from S121_AdministrativeSource to S121_Source
[Direction is 'Source -> Destination'.]

ATTRIBUTES

type : S121_AdministrativeSourceType Public

the type of document

[Is static False. Containment is Not Specified.]

1.3.133 S121 RRR Structure diagram

Class diagram in package 'S121 Information Structure'

S121 RRR Structure
Version 1.0
CDO'Brien created on 25/06/2015. Last modified 27/11/2016

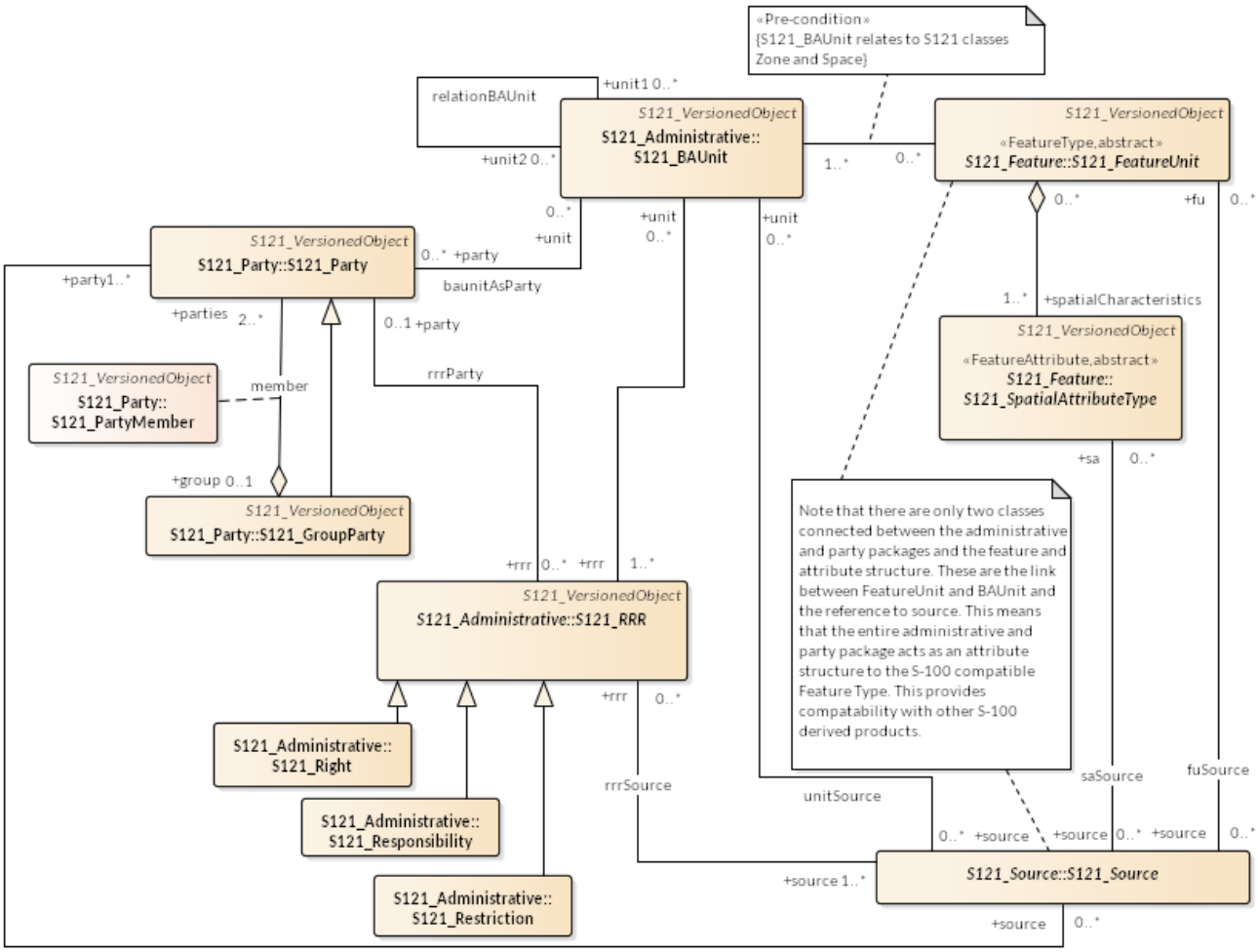

Figure 35: S121 RRR Structure

1.3.134 S121_PartyMember

AssociationClass in package 'S121_Party'

S121_PartyMember derived from LA_PartyMember

Note: This class is a relationship class - i.e. it provides an attribute on a relationship. A party member is a fraction of a group party.

Note: ISO 19152 LADM stereotypes this the LA_PartyMember object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed.

S121_PartyMember
Version Phase Proposed
CHS created on 17/11/2016. Last modified 27/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from S121_PartyMember to S121_VersionedObject
[Direction is 'Source -> Destination'.]

ATTRIBUTES

share : Fraction Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the fraction of the whole

[Is static False. Containment is Not Specified.]

1.3.135 S121_Party

Class in package 'S121_Party'

S121_Party is a a person or organisation that plays a role in a **rights** transaction

S121_Party realized from LA_Party

Note: ISO 19152 LADM stereotypes this the LA_Party object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed.

S121_Party
Version Phase Mandatory
CHS created on 27/03/2015. Last modified 27/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from S121_Party to S121_VersionedObject
[Direction is 'Source -> Destination'.]

Realization from S121_Party to «featureType» LA_Party
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from S121_Party to «metaclass» S100_GF_InformationType
[Name is Realize. Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from S121_GroupParty to S121_Party
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from Party Instance to S121_Party

[Name is Instance. Direction is 'Source -> Destination'.]

ATTRIBUTES

extPID : Oid Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the identifier of the party in an external registration

[Is static False. Containment is Not Specified.]

name : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the name of the party

[Is static False. Containment is Not Specified.]

pID : Oid Public

the identifier of the party

[Is static False. Containment is Not Specified.]

role : CharacterString Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

[Is static False. Containment is Not Specified.]

type : S121_PartyType Public

the type of the party

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified)

Source: Public source (Class) S121_Source
Cardinality: [0..*]

Target: Public party (Class) S121_Party
Cardinality: [1..*]

AssociationClass (direction: Unspecified) member

Source: Public group (Class) S121_GroupParty
Cardinality: [0..1]

Target: Public parties (Class) S121_Party
Cardinality: [2..*]

Association (direction: Unspecified) baunitAsParty

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Target: Public party (Class) S121_Party
Cardinality: [0..*]

Association (direction: Unspecified) rrrParty

Source: Public rrr (Class) S121_RRR
Cardinality: [0..*]

Target: Public party (Class) S121_Party
Cardinality: [0..1]

ASSOCIATIONS

1.3.136 S121_GroupParty

Class in package 'S121_Party'

S121_GroupParty is any number of **parties**, forming together a distinct entity, with each **party** registered.

S121_GroupParty realized from LA_GroupParty

Note: ISO 19152 LADM stereotypes this the LA_GroupParty object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed.

S121_GroupParty
Version Phase Proposed
CHS created on 27/03/2015. Last modified 27/11/2016
Extends S121_Party, S121_VersionedObject

CONSTRAINTS

Invariant. sum(LA_PartyMember.share)=1 per group

[Approved, Weight is 0.]

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_GroupParty to «featureType» LA_GroupParty

[Direction is 'Source -> Destination'.]

Generalization from S121_GroupParty to S121_VersionedObject

[Direction is 'Source -> Destination'.]

Generalization from S121_GroupParty to S121_Party

[Direction is 'Source -> Destination'.]

ATTRIBUTES

groupID : Oid Public

the identifier of a group party

[Is static False. Containment is Not Specified.]

type : S121_GroupPartyType Public

the type of the group party

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

AssociationClass (direction: Unspecified) member

Source: Public group (Class) S121_GroupParty Target: Public parties (Class) S121_Party

ASSOCIATIONS	
Cardinality: [0..1]	Cardinality: [2..*]

1.3.137 S121_FeatureUnit

Abstract «FeatureType» in package 'S121_Feature'

The Feature Unit is a feature type which derives from the S100 General Feture Model. The S121_FeatureUnit takes on spatial attributes through a relation to the S121_SpatialAttributeType. This is an abstract class. It is implemented through its subtypes S121_Location, S121_Limit, S121_Zone, S121_Space.

S121_FeatureUnit
Version Phase Proposed
CHS created on 03/11/2016. Last modified 27/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS
Realization from «FeatureType» S121_FeatureUnit to «metaclass» S121_GF_FeatureType [Name is Realize. Direction is 'Source -> Destination'.]
Generalization from «FeatureType» S121_FeatureUnit to S121_VersionedObject [Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS
Generalization from «MLB» Limit Point to «FeatureType» S121_FeatureUnit [Direction is 'Source -> Destination'.]
Generalization from «MLB» Inland Waters to «FeatureType» S121_FeatureUnit [Direction is 'Source -> Destination'.]
Generalization from «FeatureType» S121_Space to «FeatureType» S121_FeatureUnit [Direction is 'Source -> Destination'.]
Generalization from «MLB» International Boundary to «FeatureType» S121_FeatureUnit [Direction is 'Source -> Destination'.]
Generalization from «MLB» Baseline Point to «FeatureType» S121_FeatureUnit [Direction is 'Source -> Destination'.]
Generalization from «MLB» Inland Limit to «FeatureType» S121_FeatureUnit [Direction is 'Source -> Destination'.]
Generalization from «MLB» The Area to «FeatureType» S121_FeatureUnit [Direction is 'Source -> Destination'.]
Generalization from «MLB» Baseline to «FeatureType» S121_FeatureUnit [Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from «MLB» Boundary Point to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «HYDRO» Exclusive Economic Zone to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Territorial Sea Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Disputed Area to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «HYDRO» Straight Baseline to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» High sea to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Exclusive Economic Zone Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Aggregation from «FeatureAttribute» S121_SpatialAttributeType to «FeatureType» S121_FeatureUnit
[Direction is 'Unspecified'.]

Generalization from «MLB» Normal Baseline to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «FeatureType» S121_Zone to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Contiguous Zone Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «HYDRO» Contiguous Zone to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «HYDRO» Continental Shelf Area to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Continental Shelf Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «FeatureType» S121_Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from «MLB» Internal Waters to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «FeatureType» S121_Location to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «HYDRO» Territorial Sea Area to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

ATTRIBUTES

context : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

fuID : Oid Public

the spatial unit identifier
[Is static False. Containment is Not Specified.]

label : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

releasability : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

This attribute may be used to differentiate between "official", "development", "internal use" or "in construction" status for particular features. This may be a code list in the future.
[Is static False. Containment is Not Specified.]

type : S121_FeatureType Public
[Is static False. Containment is Not Specified.]

typeName : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

short textual description of the spatial unit
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified)

Source: Public (Abstract) S121_FeatureUnit «FeatureType»
Cardinality: [0..*]

Target: Public (Class) S121_BAUnit
Cardinality: [1..*]

Association (direction: Unspecified) fuSource

Source: Public fu (Abstract) S121_FeatureUnit «FeatureType»
Cardinality: [0..*]

Target: Public source (Class) S121_Source
Cardinality: [0..*]

ASSOCIATIONS

1.3.138 S121_SpatialAttributeType

Abstract «FeatureAttribute» in package 'S121_Feature'

The Spatial Attribute Type as defined for S121 inherits from S100_GF_SpatialAttributeType. This means that the geometry types inherited from S-100 apply. Only the geometry types GM_Point, GM_MultiPoint, GM_Curve, GM_Surface, CV_Coverage, GM_Curve (arcByCentrePoint and circleByCentrePoint may be used. This is an abstract class. It is implemented through its subtypes S121_Point, S121_Curve, S121_Surface, S121_Volume and S121_Composite.

S121_SpatialAttributeType
Version Phase Proposed
S121 PT created on 27/03/2015. Last modified 27/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «FeatureAttribute» S121_SpatialAttributeType to S121_VersionedObject
[Direction is 'Source -> Destination'.]

Realization from «FeatureAttribute» S121_SpatialAttributeType to «metaclass» S121_GF_SpatialAttributeType
[Name is Realize. Direction is 'Source -> Destination'.]

Aggregation from «FeatureAttribute» S121_SpatialAttributeType to «FeatureType» S121_FeatureUnit
[Direction is 'Unspecified'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from «Geometry» S121_Curve to «FeatureAttribute» S121_SpatialAttributeType
[Direction is 'Source -> Destination'.]

Generalization from «Geometry» S121_Composite to «FeatureAttribute» S121_SpatialAttributeType
[Direction is 'Source -> Destination'.]

Generalization from «Geometry» S121_Surface to «FeatureAttribute» S121_SpatialAttributeType
[Direction is 'Source -> Destination'.]

Generalization from «Geometry» S121_Point to «FeatureAttribute» S121_SpatialAttributeType
[Direction is 'Source -> Destination'.]

ATTRIBUTES

label : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

short textual description of the spatial unit

[Is static False. Containment is Not Specified.]

ATTRIBUTES

locationByText : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

referenceSystem : S100_IO_IdentifiedObject Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Spatial Referencing System

Constraints:
requirement : Pre-condition
[Is static False. Containment is Not Specified.]

saID : Oid Public
[Is static False. Containment is Not Specified.]

scaleMaximum : PositiveInteger Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Stereotype is «S100_GF_SpatialAttributeType». Is static False. Containment is Not Specified.]

scaleMinimum : PositiveInteger Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Stereotype is «S100_GF_SpatialAttributeType». Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified) saSource

Source: Public source (Class) S121_Source
Cardinality: [0..*]

Target: Public sa (Abstract)
S121_SpatialAttributeType «FeatureAttribute»
Cardinality: [0..*]

1.3.139 S121_BAUnit

Class in package 'S121_Administrative'

The Basic Administrative Unit is an information object to “which (one or more) unique and homogeneous rights, responsibilities or restrictions are associated”. It is an information object since it does not directly take on spatial attributes. The S121_BAUnit is derived from both the S121_GF_ThematicAttributeType and the LA_BAUnit defined in ISO 19152.

S121_BAUnit
Version Phase Proposed
CHS created on 27/03/2015. Last modified 27/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from S121_BAUnit to S121_VersionedObject
[Direction is 'Source -> Destination'.]

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_BAUnit to «metaclass» S100_GF_InformationType
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from S121_BAUnit to «metaclass» S121_GF_ThematicAttributeType
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from S121_BAUnit to «featureType» LA_BAUnit
[Name is Realize. Direction is 'Source -> Destination'.]

ATTRIBUTES

context : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

name : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

type : S121_BAUnitType Public

the use type of the basic administrative unit
[Is static False. Containment is Not Specified.]

uID : Oid Public

An ID used in relationships between elements of the RRR structure and the Basic Administrative Unit.
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified)

Source: Public (Class) S121_BAUnit
Target: Public (Class) S121_Zone «FeatureType»

Association (direction: Unspecified)

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]
Target: Public rrr (Class) S121_RRR
Cardinality: [1..*]

Association (direction: Unspecified)

Source: Public (Class) S121_BAUnit
Target: Public (Class) S121_Space «FeatureType»

Association (direction: Unspecified) relationBAUnit

Source: Public unit1 (Class) S121_BAUnit
Cardinality: [0..*]
Target: Public unit2 (Class) S121_BAUnit
Cardinality: [0..*]

Association (direction: Unspecified) baunitAsParty

ASSOCIATIONS

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Target: Public party (Class) S121_Party
Cardinality: [0..*]

Association (direction: Unspecified)

Source: Public (Abstract) S121_FeatureUnit «FeatureType»
Cardinality: [0..*]

Target: Public (Class) S121_BAUnit
Cardinality: [1..*]

Association (direction: Unspecified) unitSource

Source: Public source (Class) S121_Source
Cardinality: [0..*]

Target: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Association (direction: Unspecified) relationBAUnit

Source: Public unit1 (Class) S121_BAUnit
Cardinality: [0..*]

Target: Public unit2 (Class) S121_BAUnit
Cardinality: [0..*]

1.3.140 S121_RRR

Class in package 'S121_Administrative'

S121_RRR realized from LA_RRR

An instance of a subclass of LA_RRR is a **right** (or social tenure relationship), a **restriction**, or a **responsibility**

Note: ISO 19152 LADM stereotypes this the LA_RRR object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed. In the S-100 environment the RRR objects are information objects that carry an object identifier "Oid". They can be referenced as objects from the attributes associated with an S-100 Feature Object. This allows Rights, Responsibilities and Restrictions to be re-used by several objects. Thagt is, several objects may reference the same RRR objects.

S121_RRR
Version Phase Proposed
CHS created on 27/03/2015. Last modified 27/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_RRR to «featureType» LA_RRR
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from S121_RRR to «metaclass» S100_GF_InformationType
[Name is Realize. Direction is 'Source -> Destination'.]

Generalization from S121_RRR to S121_VersionedObject
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from S121_Responsibility to S121_RRR

[Direction is 'Source -> Destination'.]

Realization from Rights Instance to S121_RRR

[Name is Instance. Direction is 'Source -> Destination'.]

Generalization from S121_Right to S121_RRR

[Direction is 'Source -> Destination'.]

Generalization from S121_Restriction to S121_RRR

[Direction is 'Source -> Destination'.]

ATTRIBUTES

description : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

description regarding the right, restriction or responsibility

[Is static False. Containment is Not Specified.]

rID : Oid Public

The RRR identifier

[Is static False. Containment is Not Specified.]

share : Fraction Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

a share in an instance of a subclass of LA_RRR

[Is static False. Containment is Not Specified.]

shareCheck : Boolean Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

boolean indicating whether the constraint is applicable

[Is static False. Containment is Not Specified.]

timeSpec : S100_GF_DateTimeAttributeClass Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

operational use of a right in time sharing

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified) rrrParty

Source: Public rrr (Class) S121_RRR
Cardinality: [0..*]

Target: Public party (Class) S121_Party
Cardinality: [0..1]

Association (direction: Unspecified) rrrSource

ASSOCIATIONS

Source: Public source (Class) S121_Source
Cardinality: [1..*]

Target: Public rrr (Class) S121_RRR
Cardinality: [0..*]

Association (direction: Unspecified)

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Target: Public rrr (Class) S121_RRR
Cardinality: [1..*]

1.3.141 S121_Right

Class in package 'S121_Administrative'

S121_Right is an action, activity or class of actions that a system participant may perform on or using an associated resource.

S121_Right is realized from LA_Right

For the S-121 code lists have been specialized to the marine environment. These code lists are currently generic or partial and the contents need to be defined as part of the S-121 project development. Code lists are used, rather than character strings in order to ensure consistency.

Note: ISO 19152 LADM stereotypes this the LA_Right object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed. In the S-100 environment the RRR objects are information objects that carry an object identifier "Oid". They can be referenced as objects from the attributes associated with an S-100 Feature Object.

S121_Right
Version Phase Proposed
CHS created on 27/03/2015. Last modified 27/11/2016
Extends S121_RRR

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from S121_Right to S121_RRR
[Direction is 'Source -> Destination'.]

Realization from S121_Right to «featureType» LA_Right
[Direction is 'Source -> Destination'.]

ATTRIBUTES

type : S121_RightType Public

the type of the right
[Is static False. Containment is Not Specified.]

1.3.142 S121_Restriction

Class in package 'S121_Administrative'

S121_Restriction is a formal or informal entitlement to refrain from doing something.

S121_Restriction is realized from LA_Restriction

For the S-121 code lists have been specialized to the marine environment. These code lists are currently generic or partial and the contents need to be defined as part of the S-121 project development. Code lists are used, rather than character strings in order to ensure consistency.

Note: ISO 19152 LADM stereotypes this the LA_Restriction object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed. In the S-100 environment the RRR objects are information objects that carry an object identifier "Oid". They can be referenced as objects from the attributes associated with an S-100 Feature Object.

S121_Restriction
Version 1 Phase 1 Proposed
CHS created on 27/03/2015. Last modified 27/11/2016
Extends S121_RRR

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from S121_Restriction to S121_RRR
[Direction is 'Source -> Destination'.]

Realization from S121_Restriction to «featureType» LA_Restriction
[Direction is 'Source -> Destination'.]

ATTRIBUTES

partyRequired : Boolean Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

indicates whether a party is required for the registration of the restriction in the association to LA_Party
[Is static False. Containment is Not Specified.]

type : CharacterString Public

the type of the restriction
[Is static False. Containment is Not Specified.]

1.3.143 S121_Responsibility

Class in package 'S121_Administrative'

S121_Responsibility is a formal or informal obligation to do something

S121_Responsibility realized from LA_Responsibility

For the S-121 code lists have been specialized to the marine environment. These code lists are currently generic or partial and the contents need to be defined as part of the S-121 project development. Code lists are used, rather than character strings in order to ensure consistency.

Note: ISO 19152 LADM stereotypes this the LA_Responsibility object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed. In the S-100 environment the RRR objects are information objects that carry an object identifier "Oid". They can be referenced as objects from the attributes associated with an S-100 Feature Object. This allows Rights, Responsibilities and Restrictions to be re-used by

several objects. Thagt is, several objects may reference the same RRR objects.

S121_Responsibility
Version 1 Phase 1 Proposed
CHS created on 27/03/2015. Last modified 27/11/2016
Extends S121_RRR

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from S121_Responsibility to S121_RRR
[Direction is 'Source -> Destination'.]

Realization from S121_Responsibility to «featureType» LA_Responsibility
[Direction is 'Source -> Destination'.]

ATTRIBUTES

type : S121_ResponsibilityType Public
[Is static False. Containment is Not Specified.]

1.3.144 S121_Source

Class in package 'S121_Source'

documentation of the source of the referenced information.

S121_Source
Version 1.0 Phase CD Proposed
S121 PT created on 23/02/2016. Last modified 27/11/2016

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_Source to «featureType» LA_Source
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from S121_Source to «metaclass» S100_GF_InformationType
[Name is Realize. Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from S121_SpatialSource to S121_Source
[Direction is 'Source -> Destination'.]

Generalization from S121_AdministrativeSource to S121_Source
[Direction is 'Source -> Destination'.]

ATTRIBUTES

acceptance : DateTime Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

ATTRIBUTES

the date of force of law of the source by an authority

[Is static False. Containment is Not Specified.]

availabilityStatus : LA_AvailabilityStatusType Public

[Is static False. Containment is Not Specified.]

extArchiveID : ExtArchive Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the identifier of a source in an external registration

[Is static False. Containment is Not Specified.]

lifeSpanStamp : DateTime Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the moment that the event represented by the instance of LA_Source is further processed in the LA system

[Is static False. Containment is Not Specified.]

maintype : CI_PresentationFormCode Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the type of document

[Is static False. Containment is Not Specified.]

name : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Document name - for example the document (legislation, treaty, title) that defines the object.

[Stereotype is «S121». Is static False. Containment is Not Specified.]

quality : DQ_Element Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

[Is static False. Containment is Not Specified.]

recordation : DateTime Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the date of registration (recordation) of the source by registering authority

[Is static False. Containment is Not Specified.]

registryNumber : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Unique official identifier of the record in a registry. For example, in states with registers of legislative instruments, versioning is controlled by the registry ID.

[Stereotype is «S121». Is static False. Containment is Not Specified.]

sID : Oid Public

the identifier of the source

[Is static False. Containment is Not Specified.]

source : S121_ResponsibleParty Public

ATTRIBUTES

Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

submission : DateTime Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the date of submission of the source by a party
[Is static False. Containment is Not Specified.]

URL : S121_OnlineResource Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

URL - this is official the URL (or equivalent online resource) where the document is distributed.
[Stereotype is «S121». Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified)

Source: Public source (Class) S121_Source
Cardinality: [0..*]

Target: Public party (Class) S121_Party
Cardinality: [1..*]

Association (direction: Unspecified) rrrSource

Source: Public source (Class) S121_Source
Cardinality: [1..*]

Target: Public rrr (Class) S121_RRR
Cardinality: [0..*]

Association (direction: Unspecified) unitSource

Source: Public source (Class) S121_Source
Cardinality: [0..*]

Target: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Association (direction: Unspecified) saSource

Source: Public source (Class) S121_Source
Cardinality: [0..*]

Target: Public sa (Abstract) S121_SpatialAttributeType «FeatureAttribute»
Cardinality: [0..*]

Association (direction: Unspecified) fuSource

Source: Public fu (Abstract) S121_FeatureUnit «FeatureType»
Cardinality: [0..*]

Target: Public source (Class) S121_Source
Cardinality: [0..*]

1.3.145 S121 VersionedObject diagram

Class diagram in package 'S121 Information Structure'

S121 VersionedObject
Version DIS

Peter van Oosterom created on 28/03/2015. Last modified 27/11/2016

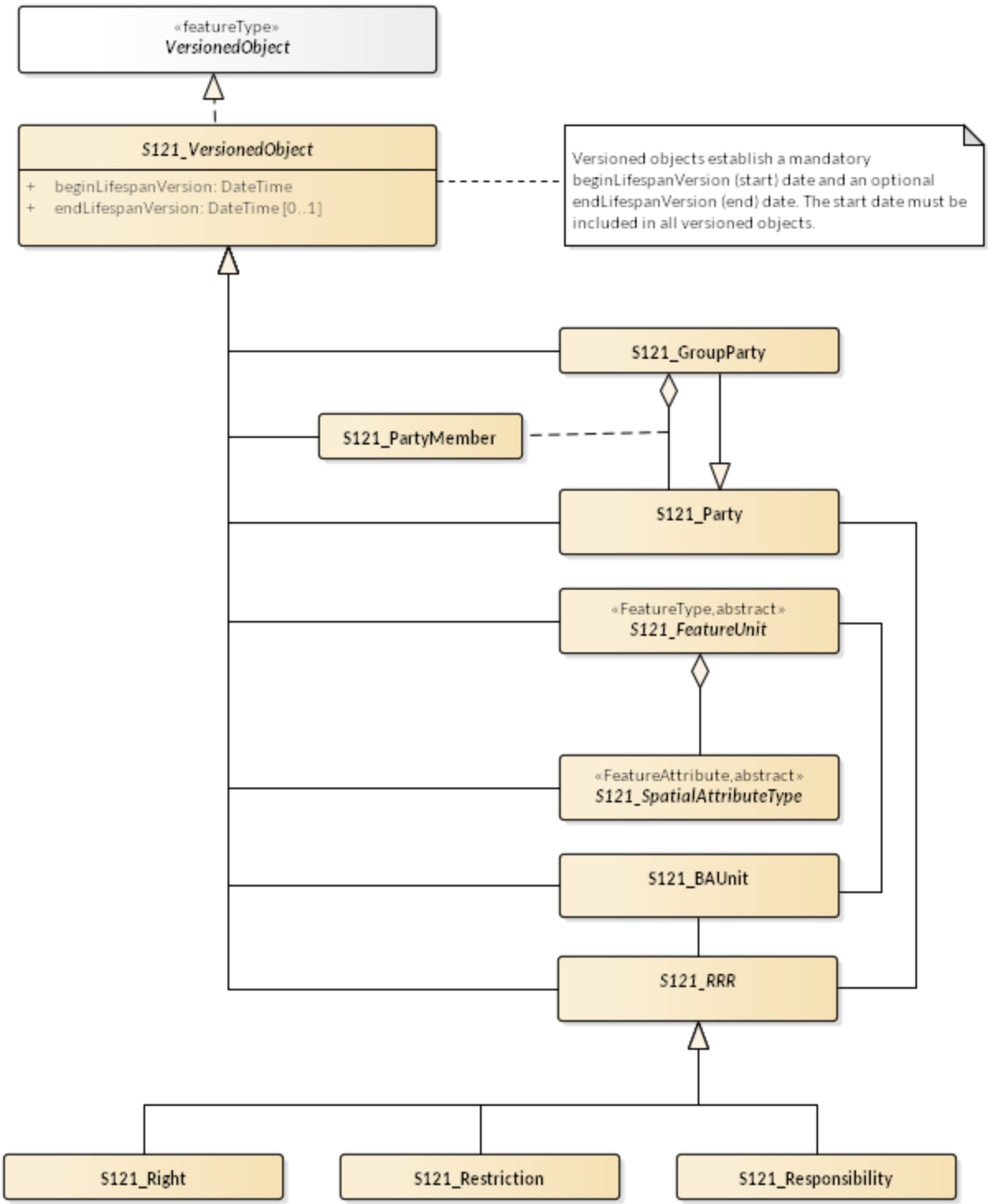

Figure 36: S121 VersionedObject

1.3.146 VersionedObject

Class «featureType» in package 'Special Classes'

this class is introduced in LADM to manage and maintain historical data in the database

VersionedObject
Version 1.0 Phase 1.0 Proposed
ISO 19152 created on 25/05/2008. Last modified 24/02/2016

CONSTRAINTS

Invariant. endLifespanVersion (n-1) = startLifespanVersion (n)
[Approved, Weight is 0.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from «featureType» LA_SpatialUnitGroup to «featureType» VersionedObject
[Direction is 'Source -> Destination'.]

Generalization from «blueprint» ExtValuation to «featureType» VersionedObject
[Direction is 'Source -> Destination'.]

Generalization from «featureType» LA_Party to «featureType» VersionedObject
[Direction is 'Source -> Destination'.]

Generalization from «blueprint» ExtLandUse to «featureType» VersionedObject
[Direction is 'Source -> Destination'.]

Generalization from «blueprint» ExtParty to «featureType» VersionedObject
[Direction is 'Source -> Destination'.]

Generalization from «blueprint» ExtTaxation to «featureType» VersionedObject
[Direction is 'Source -> Destination'.]

Generalization from «blueprint» ExtNetworkSegment to «featureType» VersionedObject
[Direction is 'Source -> Destination'.]

Generalization from «featureType» SubParcel to «featureType» VersionedObject
[Direction is 'Source -> Destination'.]

Generalization from «featureType» LA_RRR to «featureType» VersionedObject
[Direction is 'Source -> Destination'.]

Generalization from «featureType» PaymentEntitlement to «featureType» VersionedObject
[Direction is 'Source -> Destination'.]

Generalization from «featureType» LA_Point to «featureType» VersionedObject
[Direction is 'Source -> Destination'.]

Generalization from «featureType» LA_BoundaryFace to «featureType» VersionedObject
[Direction is 'Source -> Destination'.]

Generalization from «featureType» LA_BoundaryFaceString to «featureType» VersionedObject
[Direction is 'Source -> Destination'.]

Generalization from «featureType» LA_Level to «featureType» VersionedObject
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from «featureType» LA_RequiredRelationshipBAUnit to «featureType» VersionedObject
[Direction is 'Source -> Destination'.]

Generalization from «blueprint» ExtNetworkNode to «featureType» VersionedObject
[Direction is 'Source -> Destination'.]

Generalization from «blueprint» ExtPhysicalUtilityNetwork to «featureType» VersionedObject
[Direction is 'Source -> Destination'.]

Generalization from «featureType» YearlyFarmerSketch to «featureType» VersionedObject
[Direction is 'Source -> Destination'.]

Generalization from «featureType» LA_PartyMember to «featureType» VersionedObject
[Direction is 'Source -> Destination'.]

Generalization from «featureType» DeclaredAgriParcel to «featureType» VersionedObject
[Direction is 'Source -> Destination'.]

Generalization from «featureType» LA_BAUnit to «featureType» VersionedObject
[Direction is 'Source -> Destination'.]

Generalization from «blueprint» ExtAddress to «featureType» VersionedObject
[Direction is 'Source -> Destination'.]

Generalization from «blueprint» ExtLandCover to «featureType» VersionedObject
[Direction is 'Source -> Destination'.]

Generalization from «blueprint» ExtLegalBuffer to «featureType» VersionedObject
[Direction is 'Source -> Destination'.]

Realization from S121_VersionedObject to «featureType» VersionedObject
[Name is Realize. Direction is 'Source -> Destination'.]

Generalization from «featureType» LA_SpatialUnit to «featureType» VersionedObject
[Direction is 'Source -> Destination'.]

Generalization from «blueprint» ExtPhysicalBuildingUnit to «featureType» VersionedObject
[Direction is 'Source -> Destination'.]

ATTRIBUTES

beginLifespanVersion : DateTime Public

start time of a specific instance version

[Is static False. Containment is Not Specified.]

endLifespanVersion : DateTime Public

ATTRIBUTES

Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

end time of a specific instance version

[Is static False. Containment is Not Specified.]

quality : DQ_Element Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

quality of a specific instance version

[Is static False. Containment is Not Specified.]

source : CI_ResponsibleParty Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

responsible organization of a specific instance version

[Is static False. Containment is Not Specified.]

1.3.147 S121_PartyMember

AssociationClass in package 'S121_Party'

S121_PartyMember derived from LA_PartyMember

Note: This class is a relationship class - i.e. it provides an attribute on a relationship. A party member is a fraction of a group party.

Note: ISO 19152 LADM stereotypes this the LA_PartyMember object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed.

S121_PartyMember
Version Phase Proposed
CHS created on 17/11/2016. Last modified 27/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from S121_PartyMember to S121_VersionedObject

[Direction is 'Source -> Destination'.]

ATTRIBUTES

share : Fraction Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the fraction of the whole

[Is static False. Containment is Not Specified.]

1.3.148 S121_Party

Class in package 'S121_Party'

S121_Party is a a person or organisation that plays a role in a **rights** transaction

S121_Party realized from LA_Party

Note: ISO 19152 LADM stereotypes this the LA_Party object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed.

S121_Party
Version Phase Mandatory
CHS created on 27/03/2015. Last modified 27/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from S121_Party to S121_VersionedObject
[Direction is 'Source -> Destination'.]

Realization from S121_Party to «featureType» LA_Party
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from S121_Party to «metaclass» S100_GF_InformationType
[Name is Realize. Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from S121_GroupParty to S121_Party
[Direction is 'Source -> Destination'.]

Realization from Party Instance to S121_Party
[Name is Instance. Direction is 'Source -> Destination'.]

ATTRIBUTES

extPID : Oid Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the identifier of the party in an external registration
[Is static False. Containment is Not Specified.]

name : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the name of the party
[Is static False. Containment is Not Specified.]

pID : Oid Public

the identifier of the party
[Is static False. Containment is Not Specified.]

role : CharacterString Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

ATTRIBUTES

type : S121_PartyType Public

the type of the party

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified)

Source: Public source (Class) S121_Source
Cardinality: [0..*]

Target: Public party (Class) S121_Party
Cardinality: [1..*]

AssociationClass (direction: Unspecified) member

Source: Public group (Class) S121_GroupParty
Cardinality: [0..1]

Target: Public parties (Class) S121_Party
Cardinality: [2..*]

Association (direction: Unspecified) baunitAsParty

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Target: Public party (Class) S121_Party
Cardinality: [0..*]

Association (direction: Unspecified) rrrParty

Source: Public rrr (Class) S121_RRR
Cardinality: [0..*]

Target: Public party (Class) S121_Party
Cardinality: [0..1]

1.3.149 S121_GroupParty

Class in package 'S121_Party'

S121_GroupParty is any number of **parties**, forming together a distinct entity, with each **party** registered.

S121_GroupParty realized from LA_GroupParty

Note: ISO 19152 LADM stereotypes this the LA_GroupParty object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed.

S121_GroupParty
Version Phase Proposed
CHS created on 27/03/2015. Last modified 27/11/2016
Extends S121_Party, S121_VersionedObject

CONSTRAINTS

Invariant. sum(LA_PartyMember.share)=1 per group

[Approved, Weight is 0.]

OUTGOING STRUCTURAL RELATIONSHIPS

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_GroupParty to «featureType» LA_GroupParty
[Direction is 'Source -> Destination'.]

Generalization from S121_GroupParty to S121_VersionedObject
[Direction is 'Source -> Destination'.]

Generalization from S121_GroupParty to S121_Party
[Direction is 'Source -> Destination'.]

ATTRIBUTES

groupID : Oid Public

the identifier of a group party
[Is static False. Containment is Not Specified.]

type : S121_GroupPartyType Public

the type of the group party
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

AssociationClass (direction: Unspecified) member

Source: Public group (Class) S121_GroupParty
Cardinality: [0..1]

Target: Public parties (Class) S121_Party
Cardinality: [2..*]

1.3.150 S121_FeatureUnit

Abstract «FeatureType» in package 'S121_Feature'

The Feature Unit is a feature type which derives from the S100 General Feture Model. The S121_FeatureUnit takes on spatial attributes through a relation to the S121_SpatialAttributeType. This is an abstract class. It is implemented through its subtypes S121_Location, S121_Limit, S121_Zone, S121_Space.

S121_FeatureUnit
Version Phase Proposed
CHS created on 03/11/2016. Last modified 27/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from «FeatureType» S121_FeatureUnit to «metaclass» S121_GF_FeatureType
[Name is Realize. Direction is 'Source -> Destination'.]

Generalization from «FeatureType» S121_FeatureUnit to S121_VersionedObject
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from «MLB» Limit Point to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Inland Waters to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «FeatureType» S121_Space to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» International Boundary to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Baseline Point to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Inland Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» The Area to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Baseline to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Boundary Point to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «HYDRO» Exclusive Economic Zone to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Territorial Sea Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Disputed Area to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «HYDRO» Straight Baseline to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» High sea to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Exclusive Economic Zone Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Aggregation from «FeatureAttribute» S121_SpatialAttributeType to «FeatureType» S121_FeatureUnit
[Direction is 'Unspecified'.]

Generalization from «MLB» Normal Baseline to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «FeatureType» S121_Zone to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Contiguous Zone Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «HYDRO» Contiguous Zone to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «HYDRO» Continental Shelf Area to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Continental Shelf Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «FeatureType» S121_Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Internal Waters to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «FeatureType» S121_Location to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «HYDRO» Territorial Sea Area to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

ATTRIBUTES

context : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

fuID : Oid Public

the spatial unit identifier

[Is static False. Containment is Not Specified.]

label : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

ATTRIBUTES

releasability : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

This attribute may be used to differentiate between "official", "development", "internal use" or "in construction" status for particular features. This may be a code list in the future.

[Is static False. Containment is Not Specified.]

type : S121_FeatureType Public

[Is static False. Containment is Not Specified.]

typeName : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

short textual description of the spatial unit

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified)

Source: Public (Abstract) S121_FeatureUnit «FeatureType»
Cardinality: [0..*]

Target: Public (Class) S121_BAUnit
Cardinality: [1..*]

Association (direction: Unspecified) fuSource

Source: Public fu (Abstract) S121_FeatureUnit «FeatureType»
Cardinality: [0..*]

Target: Public source (Class) S121_Source
Cardinality: [0..*]

1.3.151 S121_SpatialAttributeType

Abstract «FeatureAttribute» in package 'S121_Feature'

The Spatial Attribute Type as defined for S121 inherits from S100_GF_SpatialAttributeType. This means that the geometry types inherited from S-100 apply. Only the geometry types GM_Point, GM_MultiPoint, GM_Curve, GM_Surface, CV_Coverage, GM_Curve (arcByCentrePoint and circleByCentrePoint may be used. This is an abstract class. It is implemented through its subtypes S121_Point, S121_Curve, S121_Surface, S121_Volume and S121_Composite.

S121_SpatialAttributeType
Version Phase Proposed
S121 PT created on 27/03/2015. Last modified 27/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «FeatureAttribute» S121_SpatialAttributeType to S121_VersionedObject

[Direction is 'Source -> Destination'.]

Realization from «FeatureAttribute» S121_SpatialAttributeType to «metaclass» S121_GF_SpatialAttributeType

[Name is Realize. Direction is 'Source -> Destination'.]

OUTGOING STRUCTURAL RELATIONSHIPS

Aggregation from «FeatureAttribute» S121_SpatialAttributeType to «FeatureType» S121_FeatureUnit
[Direction is 'Unspecified'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from «Geometry» S121_Curve to «FeatureAttribute» S121_SpatialAttributeType
[Direction is 'Source -> Destination'.]

Generalization from «Geometry» S121_Composite to «FeatureAttribute» S121_SpatialAttributeType
[Direction is 'Source -> Destination'.]

Generalization from «Geometry» S121_Surface to «FeatureAttribute» S121_SpatialAttributeType
[Direction is 'Source -> Destination'.]

Generalization from «Geometry» S121_Point to «FeatureAttribute» S121_SpatialAttributeType
[Direction is 'Source -> Destination'.]

ATTRIBUTES

label : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

short textual description of the spatial unit
[Is static False. Containment is Not Specified.]

locationByText : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

referenceSystem : S100_IO_IdentifiedObject Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Spatial Referencing System

Constraints:
requirement : Pre-condition
[Is static False. Containment is Not Specified.]

saID : Oid Public
[Is static False. Containment is Not Specified.]

scaleMaximum : PositiveInteger Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Stereotype is «S100_GF_SpatialAttributeType». Is static False. Containment is Not Specified.]

scaleMinimum : PositiveInteger Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Stereotype is «S100_GF_SpatialAttributeType». Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified) saSource

Source: Public source (Class) S121_Source
Cardinality: [0..*]

Target: Public sa (Abstract)
S121_SpatialAttributeType «FeatureAttribute»
Cardinality: [0..*]

1.3.152 S121_BAUnit

Class in package 'S121_Administrative'

The Basic Administrative Unit is an information object to “which (one or more) unique and homogeneous rights, responsibilities or restrictions are associated”. It is an information object since it does not directly take on spatial attributes. The S121_BAUnit is derived from both the S121_GF_ThematicAttributeType and the LA_BAUnit defined in ISO 19152.

S121_BAUnit
Version Phase Proposed
CHS created on 27/03/2015. Last modified 27/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from S121_BAUnit to S121_VersionedObject
[Direction is 'Source -> Destination'.]

Realization from S121_BAUnit to «metaclass» S100_GF_InformationType
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from S121_BAUnit to «metaclass» S121_GF_ThematicAttributeType
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from S121_BAUnit to «featureType» LA_BAUnit
[Name is Realize. Direction is 'Source -> Destination'.]

ATTRIBUTES

context : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

name : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

type : S121_BAUnitType Public

the use type of the basic administrative unit
[Is static False. Containment is Not Specified.]

uID : Oid Public

ATTRIBUTES

An ID used in relationships between elements of the RRR structure and the Basic Administrative Unit.
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified)

Source: Public (Class) S121_BAUnit
Target: Public (Class) S121_Zone «FeatureType»

Association (direction: Unspecified)

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]
Target: Public rrr (Class) S121_RRR
Cardinality: [1..*]

Association (direction: Unspecified)

Source: Public (Class) S121_BAUnit
Target: Public (Class) S121_Space «FeatureType»

Association (direction: Unspecified) relationBAUnit

Source: Public unit1 (Class) S121_BAUnit
Cardinality: [0..*]
Target: Public unit2 (Class) S121_BAUnit
Cardinality: [0..*]

Association (direction: Unspecified) baunitAsParty

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]
Target: Public party (Class) S121_Party
Cardinality: [0..*]

Association (direction: Unspecified)

Source: Public (Abstract) S121_FeatureUnit «FeatureType»
Cardinality: [0..*]
Target: Public (Class) S121_BAUnit
Cardinality: [1..*]

Association (direction: Unspecified) unitSource

Source: Public source (Class) S121_Source
Cardinality: [0..*]
Target: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Association (direction: Unspecified) relationBAUnit

Source: Public unit1 (Class) S121_BAUnit
Cardinality: [0..*]
Target: Public unit2 (Class) S121_BAUnit
Cardinality: [0..*]

1.3.153 S121_RRR

Class in package 'S121_Administrative'

S121_RRR realized from LA_RRR

An instance of a subclass of LA_RRR is a **right** (or social tenure relationship), a **restriction**, or a **responsibility**

Note: ISO 19152 LADM stereotypes this the LA_RRR object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed. In the S-100 environment the RRR objects are information objects that carry an object identifier "Oid". They can be referenced as objects from the attributes associated with an S-100 Feature Object. This allows Rights, Responsibilities and Restrictions to be re-used by several objects. Thagt is, several objects may reference the same RRR objects.

S121_RRR
Version Phase Proposed
CHS created on 27/03/2015. Last modified 27/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_RRR to «featureType» LA_RRR
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from S121_RRR to «metaclass» S100_GF_InformationType
[Name is Realize. Direction is 'Source -> Destination'.]

Generalization from S121_RRR to S121_VersionedObject
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from S121_Responsibility to S121_RRR
[Direction is 'Source -> Destination'.]

Realization from Rights Instance to S121_RRR
[Name is Instance. Direction is 'Source -> Destination'.]

Generalization from S121_Right to S121_RRR
[Direction is 'Source -> Destination'.]

Generalization from S121_Restriction to S121_RRR
[Direction is 'Source -> Destination'.]

ATTRIBUTES

description : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

description regarding the right, restriction or responsibility
[Is static False. Containment is Not Specified.]

rID : Oid Public

The RRR identifier
[Is static False. Containment is Not Specified.]

share : Fraction Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

ATTRIBUTES

a share in an instance of a subclass of LA_RRR

[Is static False. Containment is Not Specified.]

shareCheck : Boolean Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

boolean indicating whether the constraint is applicable

[Is static False. Containment is Not Specified.]

timeSpec : S100_GF_DateTimeAttributeClass Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

operational use of a right in time sharing

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified) rrrParty

Source: Public rrr (Class) S121_RRR
Cardinality: [0..*]

Target: Public party (Class) S121_Party
Cardinality: [0..1]

Association (direction: Unspecified) rrrSource

Source: Public source (Class) S121_Source
Cardinality: [1..*]

Target: Public rrr (Class) S121_RRR
Cardinality: [0..*]

Association (direction: Unspecified)

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Target: Public rrr (Class) S121_RRR
Cardinality: [1..*]

1.3.154 S121_Right

Class in package 'S121_Administrative'

S121_Right is an action, activity or class of actions that a system participant may perform on or using an associated resource.

S121_Right is realized from LA_Right

For the S-121 code lists have been specialized to the marine environment. These code lists are currently generic or partial and the contents need to be defined as part of the S-121 project development. Code lists are used, rather than character strings in order to ensure consistency.

Note: ISO 19152 LADM stereotypes this the LA_Right object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed. In the S-100 environment the RRR objects are information objects that carry an object identifier "Oid". They can be referenced as objects from the attributes associated with an S-100 Feature Object.

S121_Right
Version Phase Proposed
CHS created on 27/03/2015. Last modified 27/11/2016

Extends S121_RRR

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from S121_Right to S121_RRR

[Direction is 'Source -> Destination'.]

Realization from S121_Right to «featureType» LA_Right

[Direction is 'Source -> Destination'.]

ATTRIBUTES

type : S121_RightType Public

the type of the right

[Is static False. Containment is Not Specified.]

1.3.155 S121_Restriction

Class in package 'S121_Administrative'

S121_Restriction is a formal or informal entitlement to refrain from doing something.

S121_Restriction is realized from LA_Restriction

For the S-121 code lists have been specialized to the marine environment. These code lists are currently generic or partial and the contents need to be defined as part of the S-121 project development. Code lists are used, rather than character strings in order to ensure consistency.

Note: ISO 19152 LADM stereotypes this the LA_Restriction object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed. In the S-100 environment the RRR objects are information objects that carry an object identifier "Oid". They can be referenced as objects from the attributes associated with an S-100 Feature Object.

S121_Restriction
Version 1 Phase 1 Proposed
CHS created on 27/03/2015. Last modified 27/11/2016
Extends S121_RRR

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from S121_Restriction to S121_RRR

[Direction is 'Source -> Destination'.]

Realization from S121_Restriction to «featureType» LA_Restriction

[Direction is 'Source -> Destination'.]

ATTRIBUTES

partyRequired : Boolean Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

indicates whether a party is required for the registration of the restriction in the association to LA_Party

ATTRIBUTES
[Is static False. Containment is Not Specified.]
type : CharacterString Public the type of the restriction [Is static False. Containment is Not Specified.]

1.3.156 S121_Responsibility

Class in package 'S121_Administrative'

S121_Responsibility is a formal or informal obligation to do something

S121_Responsibility realized from LA_Responsibility

For the S-121 code lists have been specialized to the marine environment. These code lists are currently generic or partial and the contents need to be defined as part of the S-121 project development. Code lists are used, rather than character strings in order to ensure consistency.

Note: ISO 19152 LADM stereotypes this the LA_Responsibility object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed. In the S-100 environment the RRR objects are information objects that carry an object identifier "Oid". They can be referenced as objects from the attributes associated with an S-100 Feature Object. This allows Rights, Responsibilities and Restrictions to be re-used by several objects. Thagt is, several objects may reference the same RRR objects.

S121_Responsibility
Version 1 Phase 1 Proposed
CHS created on 27/03/2015. Last modified 27/11/2016
Extends S121_RRR

OUTGOING STRUCTURAL RELATIONSHIPS
Generalization from S121_Responsibility to S121_RRR [Direction is 'Source -> Destination'.]
Realization from S121_Responsibility to «featureType» LA_Responsibility [Direction is 'Source -> Destination'.]

ATTRIBUTES
type : S121_ResponsibilityType Public [Is static False. Containment is Not Specified.]

1.3.157 S121 Objects from ISO 19152 diagram

Class diagram in package 'S121 Information Structure'

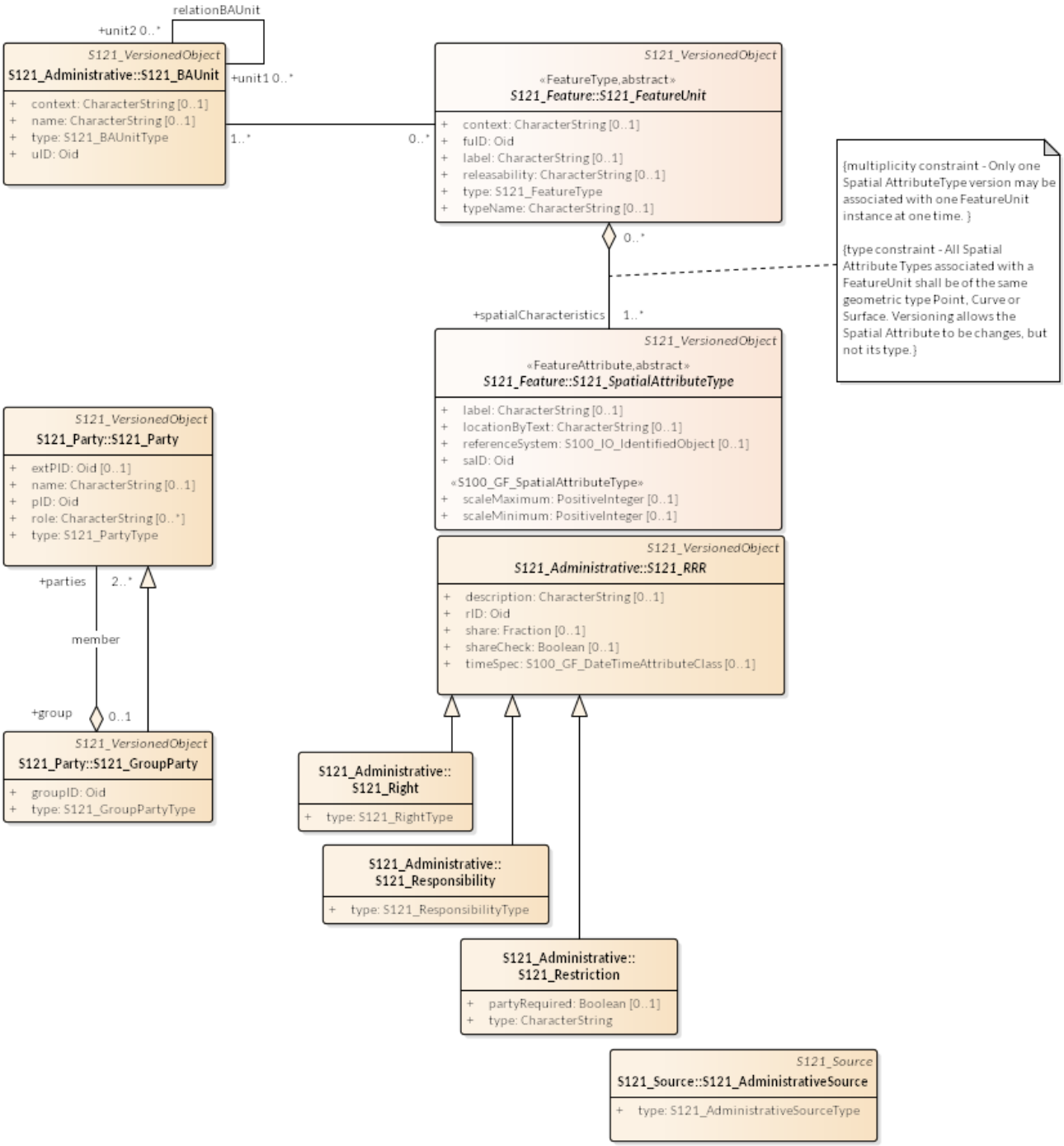

Figure 37: S121 Objects from ISO 19152

1.3.158 S121_Party

Class in package 'S121_Party'

S121_Party is a a person or organisation that plays a role in a **rights** transaction

S121_Party realized from LA_Party

Note: ISO 19152 LADM stereotypes this the LA_Party object as a "featureType". Since it is not a feature in the same

sense as the term feature is used in IHO S-100, the stereotype has been removed.

S121_Party
Version Phase Mandatory
CHS created on 27/03/2015. Last modified 27/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from S121_Party to S121_VersionedObject
[Direction is 'Source -> Destination'.]

Realization from S121_Party to «featureType» LA_Party
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from S121_Party to «metaclass» S100_GF_InformationType
[Name is Realize. Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from S121_GroupParty to S121_Party
[Direction is 'Source -> Destination'.]

Realization from Party Instance to S121_Party
[Name is Instance. Direction is 'Source -> Destination'.]

ATTRIBUTES

extPID : Oid Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the identifier of the party in an external registration
[Is static False. Containment is Not Specified.]

name : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the name of the party
[Is static False. Containment is Not Specified.]

pID : Oid Public

the identifier of the party
[Is static False. Containment is Not Specified.]

role : CharacterString Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

type : S121_PartyType Public

the type of the party
[Is static False. Containment is Not Specified.]

ATTRIBUTES

ASSOCIATIONS

Association (direction: Unspecified)

Source: Public source (Class) S121_Source
Cardinality: [0..*]

Target: Public party (Class) S121_Party
Cardinality: [1..*]

AssociationClass (direction: Unspecified) member

Source: Public group (Class) S121_GroupParty
Cardinality: [0..1]

Target: Public parties (Class) S121_Party
Cardinality: [2..*]

Association (direction: Unspecified) baunitAsParty

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Target: Public party (Class) S121_Party
Cardinality: [0..*]

Association (direction: Unspecified) rrrParty

Source: Public rrr (Class) S121_RRR
Cardinality: [0..*]

Target: Public party (Class) S121_Party
Cardinality: [0..1]

1.3.159 S121_GroupParty

Class in package 'S121_Party'

S121_GroupParty is any number of **parties**, forming together a distinct entity, with each **party** registered.

S121_GroupParty realized from LA_GroupParty

Note: ISO 19152 LADM stereotypes this the LA_GroupParty object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed.

S121_GroupParty
Version Phase Proposed
CHS created on 27/03/2015. Last modified 27/11/2016
Extends S121_Party, S121_VersionedObject

CONSTRAINTS

Invariant. sum(LA_PartyMember.share)=1 per group

[Approved, Weight is 0.]

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_GroupParty to «featureType» LA_GroupParty

[Direction is 'Source -> Destination'.]

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from S121_GroupParty to S121_VersionedObject
[Direction is 'Source -> Destination'.]

Generalization from S121_GroupParty to S121_Party
[Direction is 'Source -> Destination'.]

ATTRIBUTES

groupID : Oid Public

the identifier of a group party
[Is static False. Containment is Not Specified.]

type : S121_GroupPartyType Public

the type of the group party
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

AssociationClass (direction: Unspecified) member

Source: Public group (Class) S121_GroupParty
Cardinality: [0..1]

Target: Public parties (Class) S121_Party
Cardinality: [2..*]

1.3.160 S121_FeatureUnit

Abstract «FeatureType» in package 'S121_Feature'

The Feature Unit is a feature type which derives from the S100 General Feture Model. The S121_FeatureUnit takes on spatial attributes through a relation to the S121_SpatialAttributeType. This is an abstract class. It is implemented through its subtypes S121_Location, S121_Limit, S121_Zone, S121_Space.

S121_FeatureUnit
Version Phase Proposed
CHS created on 03/11/2016. Last modified 27/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from «FeatureType» S121_FeatureUnit to «metaclass» S121_GF_FeatureType
[Name is Realize. Direction is 'Source -> Destination'.]

Generalization from «FeatureType» S121_FeatureUnit to S121_VersionedObject
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from «MLB» Limit Point to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Inland Waters to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «FeatureType» S121_Space to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» International Boundary to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Baseline Point to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Inland Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» The Area to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Baseline to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Boundary Point to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «HYDRO» Exclusive Economic Zone to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Territorial Sea Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Disputed Area to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «HYDRO» Straight Baseline to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» High sea to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Exclusive Economic Zone Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Aggregation from «FeatureAttribute» S121_SpatialAttributeType to «FeatureType» S121_FeatureUnit
[Direction is 'Unspecified'.]

Generalization from «MLB» Normal Baseline to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «FeatureType» S121_Zone to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Contiguous Zone Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «HYDRO» Contiguous Zone to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «HYDRO» Continental Shelf Area to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Continental Shelf Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «FeatureType» S121_Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Internal Waters to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «FeatureType» S121_Location to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «HYDRO» Territorial Sea Area to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

ATTRIBUTES

context : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

fuID : Oid Public

the spatial unit identifier

[Is static False. Containment is Not Specified.]

label : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

ATTRIBUTES

releasability : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

This attribute may be used to differentiate between "official", "development", "internal use" or "in construction" status for particular features. This may be a code list in the future.

[Is static False. Containment is Not Specified.]

type : S121_FeatureType Public

[Is static False. Containment is Not Specified.]

typeName : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

short textual description of the spatial unit

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified)

Source: Public (Abstract) S121_FeatureUnit «FeatureType»
Cardinality: [0..*]

Target: Public (Class) S121_BAUnit
Cardinality: [1..*]

Association (direction: Unspecified) fuSource

Source: Public fu (Abstract) S121_FeatureUnit «FeatureType»
Cardinality: [0..*]

Target: Public source (Class) S121_Source
Cardinality: [0..*]

1.3.161 S121_SpatialAttributeType

Abstract «FeatureAttribute» in package 'S121_Feature'

The Spatial Attribute Type as defined for S121 inherits from S100_GF_SpatialAttributeType. This means that the geometry types inherited from S-100 apply. Only the geometry types GM_Point, GM_MultiPoint, GM_Curve, GM_Surface, CV_Coverage, GM_Curve (arcByCentrePoint and circleByCentrePoint may be used. This is an abstract class. It is implemented through its subtypes S121_Point, S121_Curve, S121_Surface, S121_Volume and S121_Composite.

S121_SpatialAttributeType
Version Phase Proposed
S121 PT created on 27/03/2015. Last modified 27/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «FeatureAttribute» S121_SpatialAttributeType to S121_VersionedObject

[Direction is 'Source -> Destination'.]

Realization from «FeatureAttribute» S121_SpatialAttributeType to «metaclass» S121_GF_SpatialAttributeType

[Name is Realize. Direction is 'Source -> Destination'.]

OUTGOING STRUCTURAL RELATIONSHIPS

Aggregation from «FeatureAttribute» S121_SpatialAttributeType to «FeatureType» S121_FeatureUnit
[Direction is 'Unspecified'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from «Geometry» S121_Curve to «FeatureAttribute» S121_SpatialAttributeType
[Direction is 'Source -> Destination'.]

Generalization from «Geometry» S121_Composite to «FeatureAttribute» S121_SpatialAttributeType
[Direction is 'Source -> Destination'.]

Generalization from «Geometry» S121_Surface to «FeatureAttribute» S121_SpatialAttributeType
[Direction is 'Source -> Destination'.]

Generalization from «Geometry» S121_Point to «FeatureAttribute» S121_SpatialAttributeType
[Direction is 'Source -> Destination'.]

ATTRIBUTES

label : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

short textual description of the spatial unit
[Is static False. Containment is Not Specified.]

locationByText : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

referenceSystem : S100_IO_IdentifiedObject Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Spatial Referencing System

Constraints:
requirement : Pre-condition
[Is static False. Containment is Not Specified.]

saID : Oid Public
[Is static False. Containment is Not Specified.]

scaleMaximum : PositiveInteger Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Stereotype is «S100_GF_SpatialAttributeType». Is static False. Containment is Not Specified.]

scaleMinimum : PositiveInteger Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Stereotype is «S100_GF_SpatialAttributeType». Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified) saSource

Source: Public source (Class) S121_Source
Cardinality: [0..*]

Target: Public sa (Abstract)
S121_SpatialAttributeType «FeatureAttribute»
Cardinality: [0..*]

1.3.162 S121_BAUnit

Class in package 'S121_Administrative'

The Basic Administrative Unit is an information object to “which (one or more) unique and homogeneous rights, responsibilities or restrictions are associated”. It is an information object since it does not directly take on spatial attributes. The S121_BAUnit is derived from both the S121_GF_ThematicAttributeType and the LA_BAUnit defined in ISO 19152.

S121_BAUnit
Version Phase Proposed
CHS created on 27/03/2015. Last modified 27/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from S121_BAUnit to S121_VersionedObject
[Direction is 'Source -> Destination'.]

Realization from S121_BAUnit to «metaclass» S100_GF_InformationType
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from S121_BAUnit to «metaclass» S121_GF_ThematicAttributeType
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from S121_BAUnit to «featureType» LA_BAUnit
[Name is Realize. Direction is 'Source -> Destination'.]

ATTRIBUTES

context : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

name : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

type : S121_BAUnitType Public

the use type of the basic administrative unit
[Is static False. Containment is Not Specified.]

uID : Oid Public

ATTRIBUTES

An ID used in relationships between elements of the RRR structure and the Basic Administrative Unit.
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified)

Source: Public (Class) S121_BAUnit
Target: Public (Class) S121_Zone «FeatureType»

Association (direction: Unspecified)

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]
Target: Public rrr (Class) S121_RRR
Cardinality: [1..*]

Association (direction: Unspecified)

Source: Public (Class) S121_BAUnit
Target: Public (Class) S121_Space «FeatureType»

Association (direction: Unspecified) relationBAUnit

Source: Public unit1 (Class) S121_BAUnit
Cardinality: [0..*]
Target: Public unit2 (Class) S121_BAUnit
Cardinality: [0..*]

Association (direction: Unspecified) baunitAsParty

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]
Target: Public party (Class) S121_Party
Cardinality: [0..*]

Association (direction: Unspecified)

Source: Public (Abstract) S121_FeatureUnit «FeatureType»
Cardinality: [0..*]
Target: Public (Class) S121_BAUnit
Cardinality: [1..*]

Association (direction: Unspecified) unitSource

Source: Public source (Class) S121_Source
Cardinality: [0..*]
Target: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Association (direction: Unspecified) relationBAUnit

Source: Public unit1 (Class) S121_BAUnit
Cardinality: [0..*]
Target: Public unit2 (Class) S121_BAUnit
Cardinality: [0..*]

1.3.163 S121_RRR

Class in package 'S121_Administrative'

S121_RRR realized from LA_RRR

An instance of a subclass of LA_RRR is a **right** (or social tenure relationship), a **restriction**, or a **responsibility**

Note: ISO 19152 LADM stereotypes this the LA_RRR object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed. In the S-100 environment the RRR objects are information objects that carry an object identifier "Oid". They can be referenced as objects from the attributes associated with an S-100 Feature Object. This allows Rights, Responsibilities and Restrictions to be re-used by several objects. Thagt is, several objects may reference the same RRR objects.

S121_RRR
Version Phase Proposed
CHS created on 27/03/2015. Last modified 27/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_RRR to «featureType» LA_RRR
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from S121_RRR to «metaclass» S100_GF_InformationType
[Name is Realize. Direction is 'Source -> Destination'.]

Generalization from S121_RRR to S121_VersionedObject
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from S121_Responsibility to S121_RRR
[Direction is 'Source -> Destination'.]

Realization from Rights Instance to S121_RRR
[Name is Instance. Direction is 'Source -> Destination'.]

Generalization from S121_Right to S121_RRR
[Direction is 'Source -> Destination'.]

Generalization from S121_Restriction to S121_RRR
[Direction is 'Source -> Destination'.]

ATTRIBUTES

description : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

description regarding the right, restriction or responsibility
[Is static False. Containment is Not Specified.]

rID : Oid Public

The RRR identifier
[Is static False. Containment is Not Specified.]

share : Fraction Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

ATTRIBUTES

a share in an instance of a subclass of LA_RRR

[Is static False. Containment is Not Specified.]

shareCheck : Boolean Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

boolean indicating whether the constraint is applicable

[Is static False. Containment is Not Specified.]

timeSpec : S100_GF_DateTimeAttributeClass Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

operational use of a right in time sharing

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified) rrrParty

Source: Public rrr (Class) S121_RRR
Cardinality: [0..*]

Target: Public party (Class) S121_Party
Cardinality: [0..1]

Association (direction: Unspecified) rrrSource

Source: Public source (Class) S121_Source
Cardinality: [1..*]

Target: Public rrr (Class) S121_RRR
Cardinality: [0..*]

Association (direction: Unspecified)

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Target: Public rrr (Class) S121_RRR
Cardinality: [1..*]

1.3.164 S121_Right

Class in package 'S121_Administrative'

S121_Right is an action, activity or class of actions that a system participant may perform on or using an associated resource.

S121_Right is realized from LA_Right

For the S-121 code lists have been specialized to the marine environment. These code lists are currently generic or partial and the contents need to be defined as part of the S-121 project development. Code lists are used, rather than character strings in order to ensure consistency.

Note: ISO 19152 LADM stereotypes this the LA_Right object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed. In the S-100 environment the RRR objects are information objects that carry an object identifier "Oid". They can be referenced as objects from the attributes associated with an S-100 Feature Object.

S121_Right
Version Phase Proposed
CHS created on 27/03/2015. Last modified 27/11/2016

Extends S121_RRR

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from S121_Right to S121_RRR

[Direction is 'Source -> Destination'.]

Realization from S121_Right to «featureType» LA_Right

[Direction is 'Source -> Destination'.]

ATTRIBUTES

type : S121_RightType Public

the type of the right

[Is static False. Containment is Not Specified.]

1.3.165 S121_Restriction

Class in package 'S121_Administrative'

S121_Restriction is a formal or informal entitlement to refrain from doing something.

S121_Restriction is realized from LA_Restriction

For the S-121 code lists have been specialized to the marine environment. These code lists are currently generic or partial and the contents need to be defined as part of the S-121 project development. Code lists are used, rather than character strings in order to ensure consistency.

Note: ISO 19152 LADM stereotypes this the LA_Restriction object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed. In the S-100 environment the RRR objects are information objects that carry an object identifier "Oid". They can be referenced as objects from the attributes associated with an S-100 Feature Object.

S121_Restriction
Version 1 Phase 1 Proposed
CHS created on 27/03/2015. Last modified 27/11/2016
Extends S121_RRR

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from S121_Restriction to S121_RRR

[Direction is 'Source -> Destination'.]

Realization from S121_Restriction to «featureType» LA_Restriction

[Direction is 'Source -> Destination'.]

ATTRIBUTES

partyRequired : Boolean Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

indicates whether a party is required for the registration of the restriction in the association to LA_Party

ATTRIBUTES
[Is static False. Containment is Not Specified.]
type : CharacterString Public the type of the restriction [Is static False. Containment is Not Specified.]

1.3.166 S121_Responsibility

Class in package 'S121_Administrative'

S121_Responsibility is a formal or informal obligation to do something

S121_Responsibility realized from LA_Responsibility

For the S-121 code lists have been specialized to the marine environment. These code lists are currently generic or partial and the contents need to be defined as part of the S-121 project development. Code lists are used, rather than character strings in order to ensure consistency.

Note: ISO 19152 LADM stereotypes this the LA_Responsibility object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed. In the S-100 environment the RRR objects are information objects that carry an object identifier "Oid". They can be referenced as objects from the attributes associated with an S-100 Feature Object. This allows Rights, Responsibilities and Restrictions to be re-used by several objects. Thagt is, several objects may reference the same RRR objects.

S121_Responsibility
Version 1 Phase 1 Proposed
CHS created on 27/03/2015. Last modified 27/11/2016
Extends S121_RRR

OUTGOING STRUCTURAL RELATIONSHIPS
Generalization from S121_Responsibility to S121_RRR [Direction is 'Source -> Destination'.]
Realization from S121_Responsibility to «featureType» LA_Responsibility [Direction is 'Source -> Destination'.]

ATTRIBUTES
type : S121_ResponsibilityType Public [Is static False. Containment is Not Specified.]

1.3.167 S121_AdministrativeSource

Class in package 'S121_Source'

S121_AdministrativeSource is a **source** with the administrative description (where applicable) of the **parties** involved, the **rights**, **restrictions** and **responsibilities** created and the **basic administrative units** affected

S121_AdministrativeSource derived from LA_AdministrativeSource

Note: ISO 19152 LADM stereotypes this the LA_AdministrativeSource object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed.

S121_AdministrativeSource
Version Phase Proposed
CHS created on 27/03/2015. Last modified 27/11/2016
Extends S121_Source

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_AdministrativeSource to «metaclass» S100_GF_InformationType
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from S121_AdministrativeSource to «featureType» LA_AdministrativeSource
[Direction is 'Source -> Destination'.]

Generalization from S121_AdministrativeSource to S121_Source
[Direction is 'Source -> Destination'.]

ATTRIBUTES

type : S121_AdministrativeSourceType Public

the type of document

[Is static False. Containment is Not Specified.]

1.3.168 S121 Using LADM Conceptual Model diagram

Class diagram in package 'S121 Information Structure'

S121 Using LADM Conceptual Model
Version
CHS created on 28/03/2015. Last modified 27/11/2016

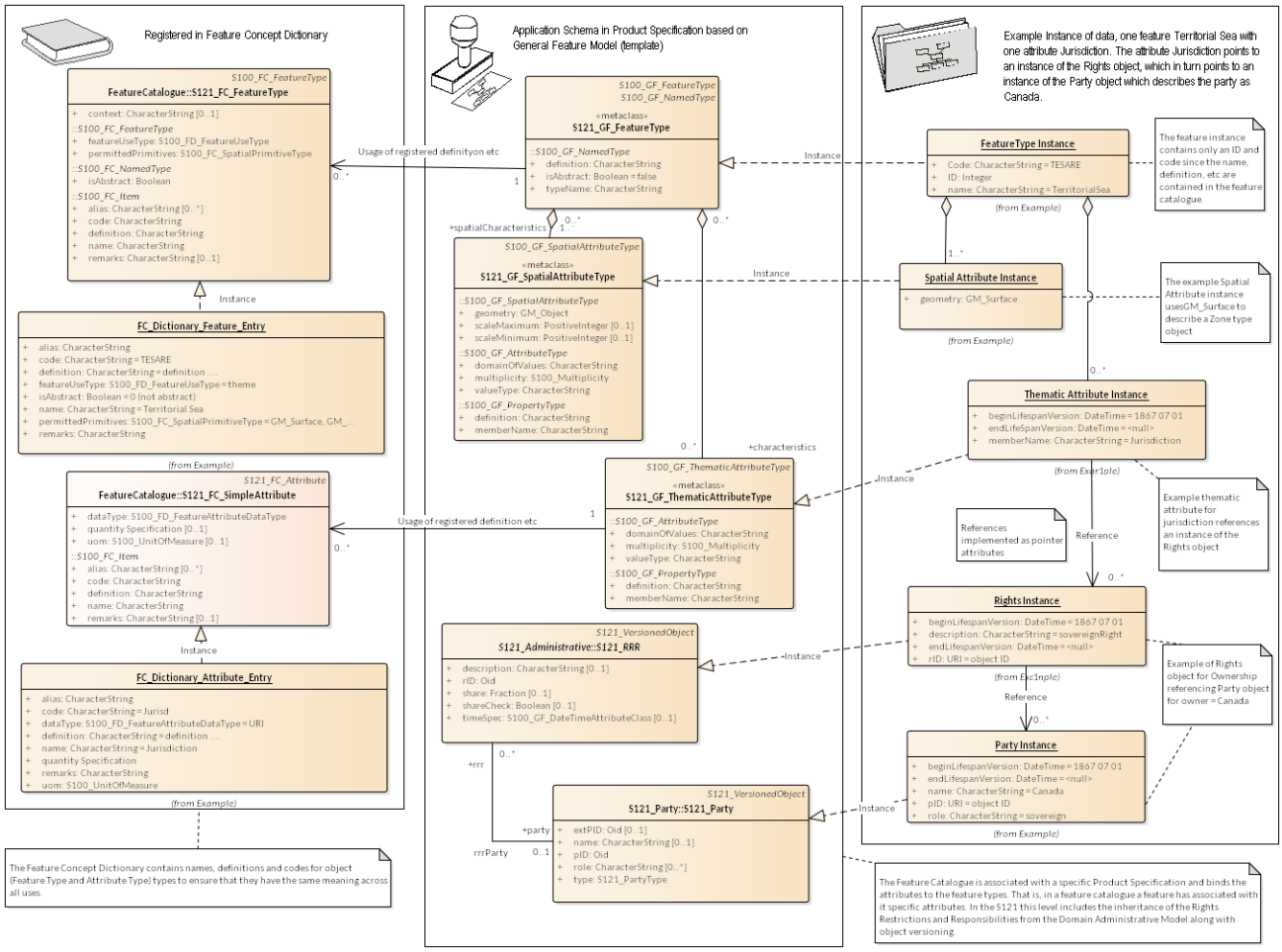

Figure 38: S121 Using LADM Conceptual Model

1.3.169 S121_Party

Class in package 'S121_Party'

S121_Party is a a person or organisation that plays a role in a **rights** transaction

S121_Party realized from LA_Party

Note: ISO 19152 LADM stereotypes this the LA_Party object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed.

S121_Party
Version Phase Mandatory
CHS created on 27/03/2015. Last modified 27/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS
⇐ Generalization from S121_Party to S121_VersionedObject [Direction is 'Source -> Destination'.]
⇐ Realization from S121_Party to «featureType» LA_Party [Name is Realize. Direction is 'Source -> Destination'.]

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_Party to «metaclass» S100_GF_InformationType
[Name is Realize. Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from S121_GroupParty to S121_Party
[Direction is 'Source -> Destination'.]

Realization from Party Instance to S121_Party
[Name is Instance. Direction is 'Source -> Destination'.]

ATTRIBUTES

extPID : Oid Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the identifier of the party in an external registration
[Is static False. Containment is Not Specified.]

name : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the name of the party
[Is static False. Containment is Not Specified.]

pID : Oid Public

the identifier of the party
[Is static False. Containment is Not Specified.]

role : CharacterString Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

type : S121_PartyType Public

the type of the party
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified)

Source: Public source (Class) S121_Source
Cardinality: [0..*]

Target: Public party (Class) S121_Party
Cardinality: [1..*]

AssociationClass (direction: Unspecified) member

Source: Public group (Class) S121_GroupParty
Cardinality: [0..1]

Target: Public parties (Class) S121_Party
Cardinality: [2..*]

ASSOCIATIONS

Association (direction: Unspecified) baunitAsParty

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Target: Public party (Class) S121_Party
Cardinality: [0..*]

Association (direction: Unspecified) rrrParty

Source: Public rrr (Class) S121_RRR
Cardinality: [0..*]

Target: Public party (Class) S121_Party
Cardinality: [0..1]

1.3.170 S121_RRR

Class in package 'S121_Administrative'

S121_RRR realized from LA_RRR

An instance of a subclass of LA_RRR is a **right** (or social tenure relationship), a **restriction**, or a **responsibility**

Note: ISO 19152 LADM stereotypes this the LA_RRR object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed. In the S-100 environment the RRR objects are information objects that carry an object identifier "Oid". They can be referenced as objects from the attributes associated with an S-100 Feature Object. This allows Rights, Responsibilities and Restrictions to be re-used by several objects. Thagt is, several objects may reference the same RRR objects.

S121_RRR
Version Phase Proposed
CHS created on 27/03/2015. Last modified 27/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_RRR to «featureType» LA_RRR
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from S121_RRR to «metaclass» S100_GF_InformationType
[Name is Realize. Direction is 'Source -> Destination'.]

Generalization from S121_RRR to S121_VersionedObject
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from S121_Responsibility to S121_RRR
[Direction is 'Source -> Destination'.]

Realization from Rights Instance to S121_RRR
[Name is Instance. Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from S121_Right to S121_RRR

[Direction is 'Source -> Destination'.]

Generalization from S121_Restriction to S121_RRR

[Direction is 'Source -> Destination'.]

ATTRIBUTES

description : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

description regarding the right, restriction or responsibility

[Is static False. Containment is Not Specified.]

rID : Oid Public

The RRR identifier

[Is static False. Containment is Not Specified.]

share : Fraction Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

a share in an instance of a subclass of LA_RRR

[Is static False. Containment is Not Specified.]

shareCheck : Boolean Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

boolean indicating whether the constraint is applicable

[Is static False. Containment is Not Specified.]

timeSpec : S100_GF_DateTimeAttributeClass Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

operational use of a right in time sharing

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified) rrrParty

Source: Public rrr (Class) S121_RRR
Cardinality: [0..*]

Target: Public party (Class) S121_Party
Cardinality: [0..1]

Association (direction: Unspecified) rrrSource

Source: Public source (Class) S121_Source
Cardinality: [1..*]

Target: Public rrr (Class) S121_RRR
Cardinality: [0..*]

Association (direction: Unspecified)

Source: Public unit (Class) S121_BAUnit

Target: Public rrr (Class) S121_RRR

ASSOCIATIONS	
Cardinality: [0..*]	Cardinality: [1..*]

1.3.171 S121_FC_FeatureType

Class in package 'FeatureCatalogue'

Derived from S100_FC_FeatureType.

Class that defines all properties of a feature type in the S121. This is the Feature type as stored in the Feature Catalogue.

S121_FC_FeatureType
Version Phase Proposed
CHS created on 16/02/2015. Last modified 27/11/2016
Extends S100_FC_FeatureType

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from S121_FC_FeatureType to S100_FC_FeatureType
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from S121_FC_FeatureType_RI to S121_FC_FeatureType
[Direction is 'Source -> Destination'.]

Realization from FC_Dictionary_Feature_Entry to S121_FC_FeatureType
[Name is Instance. Direction is 'Source -> Destination'.]

ATTRIBUTES

context : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Categorization of the context of the Feature Type (topic area).
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

DirectedLine (direction: Source -> Destination) «directedLine»

Source: Public (Class) S121_FC_FeatureType
Target: Public (Boundary) Boundary

Association (direction: Unspecified)

Source: Public superType (Class) S121_FC_FeatureType
Cardinality: [0..1]

Indicates the feature type from which a feature type is derived. The sub type will inherit all properties from its super type: name, definition and code will usually be overridden by the sub type,

Target: Public subType (Class) S121_FC_FeatureType
Cardinality: [0..*]

Indicates the feature types which are derived from a feature type.

ASSOCIATIONS

although new properties may be added to the sub type.

Association (direction: Source -> Destination) Usage of registered definityon etc

Source: Public (Metaclass) S121_GF_FeatureType «metaclass»
Cardinality: [1]

Target: Public (Class) S121_FC_FeatureType
Cardinality: [0..*]

Association (direction: Unspecified)

Source: Public superType (Class) S121_FC_FeatureType
Cardinality: [0..1]

Indicates the feature type from which a feature type is derived. The sub type will inherit all properties from its super type: name, definition and code will usually be overridden by the sub type, although new properties may be added to the sub type.

Target: Public subType (Class) S121_FC_FeatureType
Cardinality: [0..*]

Indicates the feature types which are derived from a feature type.

1.3.172 S121_FC_SimpleAttribute

Class in package 'FeatureCatalogue'

S121_FC_SimpleAttribute: derived from S100_FC_SimpleAttribute:.

S100_FC_SimpleAttribute: Attribute that carries a value.

S121_FC_SimpleAttribute
Version Phase Proposed
CHS created on 25/06/2015. Last modified 27/11/2016
Extends S121_FC_Attribute

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from S121_FC_SimpleAttribute to «abstract» S121_FC_Attribute
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from S121_FC_AttributeType_RI to S121_FC_SimpleAttribute
[Direction is 'Source -> Destination'.]

Realization from FC_Dictionary_Attribute_Entry to S121_FC_SimpleAttribute
[Name is Instance. Direction is 'Source -> Destination'.]

Aggregation from S121_FC_ListedValue to S121_FC_SimpleAttribute
[Direction is 'Source -> Destination'.]

ATTRIBUTES

dataType : S100_FD_FeatureAttributeDataType Public

The data type of this feature attribute.

ATTRIBUTES

[Is static False. Containment is Not Specified.]

quantity Specification : Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

specification of the quantity

[Is static False. Containment is Not Specified.]

uom : S100_UnitOfMeasure Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Unit of measure used for values of this feature attribute.

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

DirectedLine (direction: Source -> Destination) «directedLine»

Source: Public (Class) S121_FC_SimpleAttribute Target: Public (Boundary) Boundary

Association (direction: Source -> Destination) Usage of registered definition etc

Source: Public (Metaclass) S121_GF_ThematicAttributeType «metaclass»
Cardinality: [1]

Target: Public (Class) S121_FC_SimpleAttribute
Cardinality: [0..*]

1.3.173 FC_Dictionary_Attribute_Entry

Object in package 'Example'

Example Feature Concept Dictionary Entry for Attribute Type "Surveyed"

FC_Dictionary_Attribute_Entry
Version Phase Proposed
CHS created on 01/07/2015. Last modified 27/11/2016

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from FC_Dictionary_Attribute_Entry to S121_FC_SimpleAttribute

[Name is Instance. Direction is 'Source -> Destination'.]

ATTRIBUTES

alias : CharacterString Public

Optional alias for attribute, in this example none

[Is static False. Containment is Not Specified.]

code : CharacterString Public = Jurisd

code for the attribute, in this example "jurdis"

[Is static False. Containment is Not Specified.]

ATTRIBUTES

dataType : S100_FD_FeatureAttributeDataType Public = URI

In this example an indication that attribute type is a reference to an object type by a URI or Object ID (Oid)

[Is static False. Containment is Not Specified.]

definition : CharacterString Public = definition ....

definition of the attribute

[Is static False. Containment is Not Specified.]

name : CharacterString Public = Jurisdiction

name of the attribute, in this example the attribute is Jurisdiction

[Is static False. Containment is Not Specified.]

quantity Specification : Public

[Is static False. Containment is Not Specified.]

remarks : CharacterString Public

Optional remarks for definition, in this example none

[Is static False. Containment is Not Specified.]

uom : S100_UnitOfMeasure Public
Alias: Unit of Measure

optional unit of measure not used with a reference data type as in this example

[Is static False. Containment is Not Specified.]

1.3.174 FC_Dictionary_Feature_Entry

Object in package 'Example'

Example Feature Concept Dictionary Entry for Feature Type "Territorial Sea"

FC_Dictionary_Feature_Entry
Version Phase Proposed
CHS created on 01/07/2015. Last modified 27/11/2016

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from FC_Dictionary_Feature_Entry to S121_FC_FeatureType

[Name is Instance. Direction is 'Source -> Destination'.]

ATTRIBUTES

alias : CharacterString Public

Example optional feature type alias for Territorial Sea for example Feature Concept Dictionary Entry (in this case not used)

[Is static False. Containment is Not Specified.]

ATTRIBUTES

code : CharacterString Public = TESARE

Example feature type code = TESARE for example Feature Concept Dictionary Entry

[Is static False. Containment is Not Specified.]

definition : CharacterString Public = definition ....

Example feature type definition for Territorial Sea for example Feature Concept Dictionary Entry

[Is static False. Containment is Not Specified.]

featureUseType : S100_FD_FeatureUseType Public = theme

Example featureUseType = theme (MLB) for example Feature Concept Dictionary Entry

[Is static False. Containment is Not Specified.]

isAbstract : Boolean Public = 0 (not abstract)

isAbstract attribute for example Feature Concept Dictionary Entry

[Is static False. Containment is Not Specified.]

name : CharacterString Public = Territorial Sea

Example feature type name = Territorial Sea for example Feature Concept Dictionary Entry

[Is static False. Containment is Not Specified.]

permittedPrimitives : S100_FC_SpatialPrimitiveType Public = GM_Surface, GM_Curve, GM_Point (P,L,A)

Example permittedSpatialAttributes for example Feature Concept Dictionary Entry allowing GM_Surface, and allowing degenerate cases of GM_Curve and GM_Point (P,L,A)

[Is static False. Containment is Not Specified.]

remarks : CharacterString Public

Example optional feature type remarks for example Feature Concept Dictionary Entry (in this case not used)

[Is static False. Containment is Not Specified.]

1.3.175 Party Instance

Object in package 'Example'

Example Rights object for right of Jurisdiction

Party Instance
Version Phase Proposed
CHS created on 02/07/2015. Last modified 27/11/2016

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from Party Instance to S121_Party

[Name is Instance. Direction is 'Source -> Destination'.]

ATTRIBUTES

beginLifespanVersion : DateTime Public = 1867 07 01

Example start date for attribute

[Is static False. Containment is Not Specified.]

endLifespanVersion : DateTime Public = <null>

Example end date <null> means permanent or open-ended

[Is static False. Containment is Not Specified.]

name : CharacterString Public = Canada

Example Party Name = Canada

[Is static False. Containment is Not Specified.]

pID : URI Public = object ID

ID of object - in real case this will be an ID address or number

[Is static False. Containment is Not Specified.]

role : CharacterString Public = sovereign

Example role of party

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination) Reference

Source: Public (Object) Rights Instance
Cardinality: [1]

Target: Public (Object) Party Instance
Cardinality: [0..*]

1.3.176 Rights Instance

Object in package 'Example'

Example Rights object for right of Jurisdiction

Rights Instance
Version Phase Proposed
CHS created on 02/07/2015. Last modified 27/11/2016

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from Rights Instance to S121_RRR

[Name is Instance. Direction is 'Source -> Destination'.]

ATTRIBUTES

ATTRIBUTES

beginLifespanVersion : DateTime Public = 1867 07 01

Example start date for attribute

[Is static False. Containment is Not Specified.]

description : CharacterString Public = sovereignRight

Example of sovereign right for a jurisdiction

[Is static False. Containment is Not Specified.]

endLifespanVersion : DateTime Public = <null>

Example end date <null> means permanent or open-ended

[Is static False. Containment is Not Specified.]

rID : URI Public = object ID

ID of object - in real case this will be an ID address or number

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination) Reference

Source: Public (Object) Rights Instance
Cardinality: [1]

Target: Public (Object) Party Instance
Cardinality: [0..*]

Association (direction: Source -> Destination) Reference

Source: Public (Object) Thematic Attribute Instance
Cardinality: [1]

Target: Public (Object) Rights Instance
Cardinality: [0..*]

1.3.177 FeatureCatalogue

Package in package 'S121 Information Structure'

FeatureCatalogue
Version 1.0 Phase 1.0 Proposed
CDO'Brien created on 27/11/2016. Last modified 27/11/2016

1.3.177.1 S121_FC_FeatureType

Class in package 'FeatureCatalogue'

Derived from S100_FC_FeatureType.

Class that defines all properties of a feature type in the S121. This is the Feature type as stored in the Feature Catalogue.

S121_FC_FeatureType
Version Phase Proposed
CHS created on 16/02/2015. Last modified 27/11/2016
Extends S100_FC_FeatureType

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from S121_FC_FeatureType to S100_FC_FeatureType
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from S121_FC_FeatureType_RI to S121_FC_FeatureType
[Direction is 'Source -> Destination'.]

Realization from FC_Dictionary_Feature_Entry to S121_FC_FeatureType
[Name is Instance. Direction is 'Source -> Destination'.]

ATTRIBUTES

context : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Categorization of the context of the Feature Type (topic area).
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

DirectedLine (direction: Source -> Destination) «directedLine»

Source: Public (Class) S121_FC_FeatureType
Target: Public (Boundary) Boundary

Association (direction: Unspecified)

Source: Public superType (Class) S121_FC_FeatureType
Cardinality: [0..1]

Indicates the feature type from which a feature type is derived. The sub type will inherit all properties from its super type: name, definition and code will usually be overridden by the sub type, although new properties may be added to the sub type.

Target: Public subType (Class) S121_FC_FeatureType
Cardinality: [0..*]

Indicates the feature types which are derived from a feature type.

Association (direction: Source -> Destination) Usage of registered definityon etc

Source: Public (Metaclass) S121_GF_FeatureType «metaclass»
Cardinality: [1]

Target: Public (Class) S121_FC_FeatureType
Cardinality: [0..*]

Association (direction: Unspecified)

Source: Public superType (Class) S121_FC_FeatureType
Cardinality: [0..1]

Indicates the feature type from which a feature type is derived. The sub type will inherit all properties from its super type: name,

Target: Public subType (Class) S121_FC_FeatureType
Cardinality: [0..*]

Indicates the feature types which are derived from

ASSOCIATIONS	
definition and code will usually be overridden by the sub type, although new properties may be added to the sub type.	a feature type.

1.3.177.2 S121_FC_Attribute

Abstract «abstract» in package 'FeatureCatalogue'

S121_FC_Attribute derived from S100_FC_Attribute

Abstract base class for the two kinds of attributes: simple attributes and complex attributes. Attributes carry the characteristics of named types.

S121_FC_Attribute
Version Phase Proposed
CHS created on 16/09/2015. Last modified 27/11/2016
Extends S100_FC_Attribute

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «abstract» S121_FC_Attribute to «abstract» S100_FC_Attribute
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from S121_FC_SimpleAttribute to «abstract» S121_FC_Attribute
[Direction is 'Source -> Destination'.]

Generalization from S121_FC_ComplexAttribute to «abstract» S121_FC_Attribute
[Direction is 'Source -> Destination'.]

ASSOCIATIONS

Association (direction: Source -> Destination)

Source: Public (Class) S121_FC_AttributeBinding

Target: Public (Abstract) S121_FC_Attribute «abstract»
Cardinality: [1]

1.3.177.3 S121_FC_AttributeBinding

Class in package 'FeatureCatalogue'

S121_FC_AttributeBinding derived from S100_FC_AttributeBinding

Class that is used to describe the specifics of how an attribute is bound to a particular named type or a complex attribute.

S121_FC_AttributeBinding
Version Phase Proposed
CHS created on 25/06/2015. Last modified 27/11/2016

OUTGOING STRUCTURAL RELATIONSHIPS

Aggregation from S121_FC_AttributeBinding to S121_FC_ComplexAttribute
[Direction is 'Source -> Destination'.]

ATTRIBUTES

multiplicity : S100_Multiplicity Public

Multiplicity defining how many instances of the attribute can be part of the named type or complex attribute
[Is static False. Containment is Not Specified.]

sequential : Boolean Public

Describes if the sequence of the attributes is meaningful or not. Applies only to attributes which may occur more than once.
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination)

Source: Public (Class) S121_FC_AttributeBinding

Target: Public (Abstract) S121_FC_Attribute «abstract»
Cardinality: [1]

Association (direction: Source -> Destination)

Source: Public (Class) S121_FC_AttributeBinding

Target: Public permittedValues (Class) S121_FC_ListedValue
Cardinality: [0..*]

1.3.177.4 S121_FC_ComplexAttribute

Class in package 'FeatureCatalogue'

S121_FC_ComplexAttribute derived from S100_FC_ComplexAttribute

A complex attribute consists of a list of subattributes which can be both simple and complex attributes.

S121_FC_ComplexAttribute
Version Phase Proposed
CHS created on 25/06/2015. Last modified 27/11/2016
Extends S121_FC_Attribute

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from S121_FC_ComplexAttribute to «abstract» S121_FC_Attribute
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

INCOMING STRUCTURAL RELATIONSHIPS

Aggregation from S121_FC_AttributeBinding to S121_FC_ComplexAttribute
[Direction is 'Source -> Destination'.]

1.3.177.5 S121_FC_ListedValue

Class in package 'FeatureCatalogue'

S121_FC_ListedValue derived from S100_FC_ListedValue

Value of an enumerated attribute domain, including its codes and definition.

S121_FC_ListedValue
Version Phase Proposed
CHS created on 25/06/2015. Last modified 27/11/2016

OUTGOING STRUCTURAL RELATIONSHIPS

Aggregation from S121_FC_ListedValue to S121_FC_SimpleAttribute
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from S121_FC_ListedValue_RI to S121_FC_ListedValue
[Direction is 'Source -> Destination'.]

ATTRIBUTES

alias : CharacterString Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

Equivalent name(s) of this listed value.
[Is static False. Containment is Not Specified.]

code : CharacterString Public

Code that uniquely identifies the listed value for the corresponding feature.
[Is static False. Containment is Not Specified.]

definition : CharacterString Public

Definition of the listed value in a natural language.
[Is static False. Containment is Not Specified.]

label : CharacterString Public

Descriptive label that uniquely identifies one value of the feature attribute.
[Is static False. Containment is Not Specified.]

remarks : CharacterString Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

ATTRIBUTES

Further explanations about the listed value.

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

DirectedLine (direction: Source -> Destination) «directedLine»

Source: Public (Class) S121_FC_ListedValue

Target: Public (Boundary) Boundary

Association (direction: Source -> Destination)

Source: Public (Class) S121_FC_AttributeBinding

Target: Public permittedValues (Class) S121_FC_ListedValue
Cardinality: [0..*]

1.3.177.6 S121_FC_SimpleAttribute

Class in package 'FeatureCatalogue'

S121_FC_SimpleAttribute: derived from S100_FC_SimpleAttribute:.

S100_FC_SimpleAttribute: Attribute that carries a value.

S121_FC_SimpleAttribute
Version Phase Proposed
CHS created on 25/06/2015. Last modified 27/11/2016
Extends S121_FC_Attribute

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from S121_FC_SimpleAttribute to «abstract» S121_FC_Attribute

[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from S121_FC_AttributeType_RI to S121_FC_SimpleAttribute

[Direction is 'Source -> Destination'.]

Realization from FC_Dictionary_Attribute_Entry to S121_FC_SimpleAttribute

[Name is Instance. Direction is 'Source -> Destination'.]

Aggregation from S121_FC_ListedValue to S121_FC_SimpleAttribute

[Direction is 'Source -> Destination'.]

ATTRIBUTES

dataType : S100_FD_FeatureAttributeDataType Public

The data type of this feature attribute.

[Is static False. Containment is Not Specified.]

ATTRIBUTES

quantity Specification : Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

specification of the quantity

[Is static False. Containment is Not Specified.]

uom : S100_UnitOfMeasure Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Unit of measure used for values of this feature attribute.

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

DirectedLine (direction: Source -> Destination) «directedLine»

Source: Public (Class) S121_FC_SimpleAttribute

Target: Public (Boundary) Boundary

Association (direction: Source -> Destination) Usage of registered definition etc

Source: Public (Metaclass) S121_GF_ThematicAttributeType «metaclass»
Cardinality: [1]

Target: Public (Class) S121_FC_SimpleAttribute
Cardinality: [0..*]

1.3.178 S121_Source

Package «ConceptualSchema» in package 'S121 Information Structure'

S121_Source
Version 1.0 Phase 1.0 Proposed
S121_PT created on 27/11/2016. Last modified 27/11/2016

1.3.178.1 S121_Source

Class in package 'S121_Source'

documentation of the source of the referenced information.

S121_Source
Version 1.0 Phase CD Proposed
S121 PT created on 23/02/2016. Last modified 27/11/2016

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_Source to «featureType» LA_Source
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from S121_Source to «metaclass» S100_GF_InformationType
[Name is Realize. Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from S121_SpatialSource to S121_Source
[Direction is 'Source -> Destination'.]

Generalization from S121_AdministrativeSource to S121_Source
[Direction is 'Source -> Destination'.]

ATTRIBUTES

acceptance : DateTime Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the date of force of law of the source by an authority
[Is static False. Containment is Not Specified.]

availabilityStatus : LA_AvailabilityStatusType Public
[Is static False. Containment is Not Specified.]

extArchiveID : ExtArchive Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the identifier of a source in an external registration
[Is static False. Containment is Not Specified.]

lifeSpanStamp : DateTime Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

ATTRIBUTES

the moment that the event represented by the instance of LA_Source is further processed in the LA system

[Is static False. Containment is Not Specified.]

maintype : CI_PresentationFormCode Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the type of document

[Is static False. Containment is Not Specified.]

name : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Document name - for example the document (legislation, treaty, title) that defines the object.

[Stereotype is «S121». Is static False. Containment is Not Specified.]

quality : DQ_Element Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

[Is static False. Containment is Not Specified.]

recordation : DateTime Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the date of registration (recordation) of the source by registering authority

[Is static False. Containment is Not Specified.]

registryNumber : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Unique official identifier of the record in a registry. For example, in states with registers of legislative instruments, versioning is controlled by the registry ID.

[Stereotype is «S121». Is static False. Containment is Not Specified.]

sID : Oid Public

the identifier of the source

[Is static False. Containment is Not Specified.]

source : S121_ResponsibleParty Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

[Is static False. Containment is Not Specified.]

submission : DateTime Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the date of submission of the source by a party

[Is static False. Containment is Not Specified.]

URL : S121_OnlineResource Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

URL - this is official the URL (or equivalent online resource) where the document is distributed.

[Stereotype is «S121». Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified)

Source: Public source (Class) S121_Source
Cardinality: [0..*]

Target: Public party (Class) S121_Party
Cardinality: [1..*]

Association (direction: Unspecified) rrrSource

Source: Public source (Class) S121_Source
Cardinality: [1..*]

Target: Public rrr (Class) S121_RRR
Cardinality: [0..*]

Association (direction: Unspecified) unitSource

Source: Public source (Class) S121_Source
Cardinality: [0..*]

Target: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Association (direction: Unspecified) saSource

Source: Public source (Class) S121_Source
Cardinality: [0..*]

Target: Public sa (Abstract) S121_SpatialAttributeType «FeatureAttribute»
Cardinality: [0..*]

Association (direction: Unspecified) fuSource

Source: Public fu (Abstract) S121_FeatureUnit «FeatureType»
Cardinality: [0..*]

Target: Public source (Class) S121_Source
Cardinality: [0..*]

1.3.178.2 S121_SpatialSource

Class in package 'S121_Source'

documentation of the source of the referenced information.

S121_SpatialSource
Version 1.0 Phase CD Proposed
S121 PT created on 22/02/2016. Last modified 27/11/2016
Extends S121_Source

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from S121_SpatialSource to S121_Source
[Direction is 'Source -> Destination'.]

Realization from S121_SpatialSource to «featureType» LA_SpatialSource
[Direction is 'Source -> Destination'.]

ATTRIBUTES

type : S121_SpatialSourceType Public
[Is static False. Containment is Not Specified.]

1.3.178.3 S121_Address

Class «DataType» in package 'S121_Source'

Location of the responsible individual or organisation

S121_Address
Version Phase Proposed
CHS created on 03/06/2015. Last modified 27/11/2016

ATTRIBUTES

administrativeArea : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: , Is ordered: False)

State, province of the physical address

[Is static False. Containment is .]

city : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: , Is ordered: False)

City of the physical address

[Is static False. Containment is .]

country : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: , Is ordered: False)

Country of the physical address

[Is static False. Containment is .]

deliveryPoint : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Address line for the physical address (Street name, box number, suite)

[Is static False. Containment is .]

electronicMailAddress : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Address of the electronic mailbox of the responsible organisation or individual

[Is static False. Containment is .]

postalCode : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: , Is ordered: False)

ZIP or other postal code

[Is static False. Containment is .]

1.3.178.4 S121_Contact

Class «DataType» in package 'S121_Source'

Information required enabling contact with the responsible person and/or organisation

S121_Contact
Version Phase Proposed
CHS created on 03/06/2015. Last modified 27/11/2016

ATTRIBUTES

address : S121_Address Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Physical and email address at which the organisation or individual may be contacted
[Is static False. Containment is Not Specified.]

onlineResource : S121_OnlineResource Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Online information that can be used to contact the individual or organisation
[Is static False. Containment is Not Specified.]

phone : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Telephone numbers at which the organisation or individual may be contacted
[Is static False. Containment is Not Specified.]

1.3.178.5 S121_AdministrativeSourceType

Class «codeList» in package 'S121_Source'

Type of AdministrativeSource

S121_AdministrativeSourceType
Version Phase Proposed
PT S121 created on 18/11/2016. Last modified 27/11/2016

ATTRIBUTES

Domestic Administrative : Public

Source based under a legislative framework by the authority given under domestic legislation for instance petroleum permits
[Is static False. Containment is Not Specified.]

Domestic legislative instrument : Public

These cover primary and secondary legislative processes and domestic implementations of treaties.

For example
- Domestic – Declaration
- Domestic – Public Notice
- Domestic – Proclamation
- Domestic – Order in Council
- Domestic – Legislation
- Domestic – Legislative Instrument

[Is static False. Containment is Not Specified.]

ATTRIBUTES

International Agreement : Public

For example:Treaty, Agreement, MOU Memorandum of Understanding, Exchange of letters

[Is static False. Containment is Not Specified.]

1.3.178.6 S121_OnlineResource

Class «DataType» in package 'S121_Source'

Information about online sources from which the dataset, specification, or community profile name and extended metadata elements can be obtained.

S121_OnlineResource
Version Phase Proposed
CHS created on 03/06/2015. Last modified 27/11/2016

ATTRIBUTES

applicationProfile : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: , Is ordered: False)

Name of an application profile that can be used with the resource

[Is static False. Containment is .]

description : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: , Is ordered: False)

Description of what the resource is/does

[Is static False. Containment is .]

function : CI_OnLineFunctionCode Public
Multiplicity: ([0..1], Allow duplicates: , Is ordered: False)

Function performed by the resource

[Is static False. Containment is .]

linkageURL : CharacterString Public

Method, source, or location for online access.
Example: a Uniform Resource Locator (URL) such as http://www,gii.getty.edu/tgn_browser/

[Is static False. Containment is Not Specified.]

name : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: , Is ordered: False)

Name of the resource

[Is static False. Containment is .]

protocol : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: , Is ordered: False)

Connection protocol to be used

[Is static False. Containment is .]

1.3.178.7 S121_AdministrativeSource

Class in package 'S121_Source'

S121_AdministrativeSource is a **source** with the administrative description (where applicable) of the **parties** involved, the **rights**, **restrictions** and **responsibilities** created and the **basic administrative units** affected

S121_AdministrativeSource derived from LA_AdministrativeSource

Note: ISO 19152 LADM stereotypes this the LA_AdministrativeSource object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed.

S121_AdministrativeSource
Version Phase Proposed
CHS created on 27/03/2015. Last modified 27/11/2016
Extends S121_Source

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_AdministrativeSource to «metaclass» S100_GF_InformationType
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from S121_AdministrativeSource to «featureType» LA_AdministrativeSource
[Direction is 'Source -> Destination'.]

Generalization from S121_AdministrativeSource to S121_Source
[Direction is 'Source -> Destination'.]

ATTRIBUTES

type : S121_AdministrativeSourceType Public

the type of document

[Is static False. Containment is Not Specified.]

1.3.179 S121_Administrative

Package «ConceptualSchema» in package 'S121 Information Structure'

S121_Administrative
Version 1.0 Phase 1.0 Proposed
created on 27/11/2016. Last modified 27/11/2016

1.3.179.1 S121_BAUnit

Class in package 'S121_Administrative'

The Basic Administrative Unit is an information object to “which (one or more) unique and homogeneous rights, responsibilities or restrictions are associated”. It is an information object since it does not directly take on spatial attributes. The S121_BAUnit is derived from both the S121_GF_ThematicAttributeType and the LA_BAUnit defined in ISO 19152.

S121_BAUnit
Version Phase Proposed
CHS created on 27/03/2015. Last modified 27/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from S121_BAUnit to S121_VersionedObject
[Direction is 'Source -> Destination'.]

Realization from S121_BAUnit to «metaclass» S100_GF_InformationType
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from S121_BAUnit to «metaclass» S121_GF_ThematicAttributeType
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from S121_BAUnit to «featureType» LA_BAUnit
[Name is Realize. Direction is 'Source -> Destination'.]

ATTRIBUTES

context : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

name : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

type : S121_BAUnitType Public

the use type of the basic administrative unit
[Is static False. Containment is Not Specified.]

uID : Oid Public

ATTRIBUTES

An ID used in relationships between elements of the RRR structure and the Basic Administrative Unit.
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified)

Source: Public (Class) S121_BAUnit
Target: Public (Class) S121_Zone «FeatureType»

Association (direction: Unspecified)

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]
Target: Public rrr (Class) S121_RRR
Cardinality: [1..*]

Association (direction: Unspecified)

Source: Public (Class) S121_BAUnit
Target: Public (Class) S121_Space «FeatureType»

Association (direction: Unspecified) relationBAUnit

Source: Public unit1 (Class) S121_BAUnit
Cardinality: [0..*]
Target: Public unit2 (Class) S121_BAUnit
Cardinality: [0..*]

Association (direction: Unspecified) baunitAsParty

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]
Target: Public party (Class) S121_Party
Cardinality: [0..*]

Association (direction: Unspecified)

Source: Public (Abstract) S121_FeatureUnit «FeatureType»
Cardinality: [0..*]
Target: Public (Class) S121_BAUnit
Cardinality: [1..*]

Association (direction: Unspecified) unitSource

Source: Public source (Class) S121_Source
Cardinality: [0..*]
Target: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Association (direction: Unspecified) relationBAUnit

Source: Public unit1 (Class) S121_BAUnit
Cardinality: [0..*]
Target: Public unit2 (Class) S121_BAUnit
Cardinality: [0..*]

1.3.179.2 S121_BAUnitType

Class «codeList» in package 'S121_Administrative'

This code list describes the basic administrative unit domains in the realm of Maritime Limit and Boundaries which includes:
Sovereignty Unit,
Sovereign Rights Unit,

Joint Development Unit,
Other Jurisdiction and Regulatory Units.

S121_BAUnitType
Version 1.0 Phase 1.0 Proposed
created on 18/11/2016. Last modified 27/11/2016

ATTRIBUTES
JointDevelopmentUnit : Public [Is static False. Containment is Not Specified.]
OtherRegulatoryUnit : Public Other Jurisdiction and Regulatory Areas. [Is static False. Containment is Not Specified.]
SovereignRightsUnit : Public [Is static False. Containment is Not Specified.]
SovereigntyUnit : Public [Is static False. Containment is Not Specified.]

1.3.179.3 S121_RightType

Class «codeList» in package 'S121_Administrative'

Type of right (soverignRight, accessRight, harvestRight, easementRight)

S121_RightType
Version Phase Proposed
PT S121 created on 21/02/2016. Last modified 27/11/2016

ATTRIBUTES
accessRight : Public right of access including passage [Is static False. Containment is Not Specified.]
easementRight : Public the right to establish infrastructure (e.g. lay a cable) [Is static False. Containment is Not Specified.]
harvestRight : Public the right to harvest a marine resource such as fishing, mineral mining or oil [Is static False. Containment is Not Specified.]
soverignRight : Public The right of a exclusivity of jurisdiction (The coastal State has the exclusive right of decision in regard to the rules which are

ATTRIBUTES

to apply within the zone) A handbook on the new law of the sea. RJ Dupuy, D Vignes, Martinus Nijhoff Publishers, Dordrecht, (1991)

[Is static False. Containment is Not Specified.]

soverignty : Public

Absolute prescriptive and enforcement power, limited only by coastal state international obligations (ABLOS)

[Is static False. Containment is Not Specified.]

1.3.179.4 S121_SpatialSourceType

Class «codeList» in package 'S121_Administrative'

Type of SpatialSource

S121_SpatialSourceType
Version Phase Proposed
PT S121 created on 18/11/2016. Last modified 27/11/2016

ATTRIBUTES

to be determined : Public

[Is static False. Containment is Not Specified.]

1.3.179.5 S121_RestrictionType

Class «codeList» in package 'S121_Administrative'

Type of restriction (timeBasedRestriction, passageRestriction, accessRestriction, useRestriction, jurisdictionRestriction, resourceRestriction)

S121_RestrictionType
Version 1.0 Phase 1.0 Proposed
created on 21/02/2016. Last modified 27/11/2016

ATTRIBUTES

accessRestriction : Public

restriction on the right of access

[Is static False. Containment is Not Specified.]

jurisdictionRestriction : Public

restriction on jurisdiction (e.g. limits on sovereign right)

[Is static False. Containment is Not Specified.]

passageRestriction : Public

restriction on the right of access for passage

[Is static False. Containment is Not Specified.]

ATTRIBUTES
resourceRestriction : Public restriction on the right of harvest of a resource [Is static False. Containment is Not Specified.]
timeBasedRestriction : Public restriction on any right based on time [Is static False. Containment is Not Specified.]
useRestriction : Public restriction on use (such as rules for safe anchorage) [Is static False. Containment is Not Specified.]

1.3.179.6 S121_ResponsibilityType

Class «codeList» in package 'S121_Administrative'

Type of responsibility (maintenanceResponsibility)

S121_ResponsibilityType
Version Phase Proposed
created on 21/02/2016. Last modified 27/11/2016

ATTRIBUTES
maintenanceResponsibility : Public Responsibility to maintain a facility or other entity. [Is static False. Containment is Not Specified.]

1.3.179.7 S121_ResponsibleParty

Class «DataType» in package 'S121_Administrative'

The datatype S121_ResponsibleParty realizes CI_ResponsibleParty.

It uses a simplified form of CI_ContactInfo

It includes direct attributes replacing the reference to CI_Contact and makes CI_RoleCode optional

S121_ResponsibleParty
Version 1 Phase 1 Proposed
CHS created on 26/03/2015. Last modified 27/11/2016

OUTGOING STRUCTURAL RELATIONSHIPS

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from «DataType» S121_ResponsibleParty to «datatype» CI_ResponsibleParty
[Direction is 'Source -> Destination'.]

ATTRIBUTES

contactInfo : S121_Contact Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Contact Information of the responsible party
[Is static False. Containment is Not Specified.]

individualName : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Name of the responsible individual
[Is static False. Containment is Not Specified.]

organizationName : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Name of the organization
[Is static False. Containment is Not Specified.]

positionName : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Role or position of the responsible person
[Is static False. Containment is Not Specified.]

role : CI_RoleCode Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Function performed by the responsible party
[Is static False. Containment is .]

1.3.179.8 S121_RRR

Class in package 'S121_Administrative'

S121_RRR realized from LA_RRR

An instance of a subclass of LA_RRR is a **right** (or social tenure relationship), a **restriction**, or a **responsibility**

Note: ISO 19152 LADM stereotypes this the LA_RRR object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed. In the S-100 environment the RRR objects are information objects that carry an object identifier "Oid". They can be referenced as objects from the attributes associated with an S-100 Feature Object. This allows Rights, Responsibilities and Restrictions to be re-used by several objects. Thagt is, several objects may reference the same RRR objects.

S121_RRR
Version Phase Proposed
CHS created on 27/03/2015. Last modified 27/11/2016

Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_RRR to «featureType» LA_RRR
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from S121_RRR to «metaclass» S100_GF_InformationType
[Name is Realize. Direction is 'Source -> Destination'.]

Generalization from S121_RRR to S121_VersionedObject
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from S121_Responsibility to S121_RRR
[Direction is 'Source -> Destination'.]

Realization from Rights Instance to S121_RRR
[Name is Instance. Direction is 'Source -> Destination'.]

Generalization from S121_Right to S121_RRR
[Direction is 'Source -> Destination'.]

Generalization from S121_Restriction to S121_RRR
[Direction is 'Source -> Destination'.]

ATTRIBUTES

description : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

description regarding the right, restriction or responsibility
[Is static False. Containment is Not Specified.]

rID : Oid Public

The RRR identifier
[Is static False. Containment is Not Specified.]

share : Fraction Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

a share in an instance of a subclass of LA_RRR
[Is static False. Containment is Not Specified.]

shareCheck : Boolean Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

boolean indicating whether the constraint is applicable
[Is static False. Containment is Not Specified.]

ATTRIBUTES

timeSpec : S100_GF_DateTimeAttributeClass Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

operational use of a right in time sharing

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified) rrrParty

Source: Public rrr (Class) S121_RRR
Cardinality: [0..*]

Target: Public party (Class) S121_Party
Cardinality: [0..1]

Association (direction: Unspecified) rrrSource

Source: Public source (Class) S121_Source
Cardinality: [1..*]

Target: Public rrr (Class) S121_RRR
Cardinality: [0..*]

Association (direction: Unspecified)

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Target: Public rrr (Class) S121_RRR
Cardinality: [1..*]

1.3.179.9 S121_Right

Class in package 'S121_Administrative'

S121_Right is an action, activity or class of actions that a system participant may perform on or using an associated resource.

S121_Right is realized from LA_Right

For the S-121 code lists have been specialized to the marine environment. These code lists are currently generic or partial and the contents need to be defined as part of the S-121 project development. Code lists are used, rather than character strings in order to ensure consistency.

Note: ISO 19152 LADM stereotypes this the LA_Right object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed. In the S-100 environment the RRR objects are information objects that carry an object identifier "Oid". They can be referenced as objects from the attributes associated with an S-100 Feature Object.

S121_Right
Version Phase Proposed
CHS created on 27/03/2015. Last modified 27/11/2016
Extends S121_RRR

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from S121_Right to S121_RRR

[Direction is 'Source -> Destination'.]

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_Right to «featureType» LA_Right

[Direction is 'Source -> Destination'.]

ATTRIBUTES

type : S121_RightType Public

the type of the right

[Is static False. Containment is Not Specified.]

1.3.179.10 S121_Restriction

Class in package 'S121_Administrative'

S121_Restriction is a formal or informal entitlement to refrain from doing something.

S121_Restriction is realized from LA_Restriction

For the S-121 code lists have been specialized to the marine environment. These code lists are currently generic or partial and the contents need to be defined as part of the S-121 project development. Code lists are used, rather than character strings in order to ensure consistency.

Note: ISO 19152 LADM stereotypes this the LA_Restriction object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed. In the S-100 environment the RRR objects are information objects that carry an object identifier "Oid". They can be referenced as objects from the attributes associated with an S-100 Feature Object.

S121_Restriction
Version 1 Phase 1 Proposed
CHS created on 27/03/2015. Last modified 27/11/2016
Extends S121_RRR

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from S121_Restriction to S121_RRR

[Direction is 'Source -> Destination'.]

Realization from S121_Restriction to «featureType» LA_Restriction

[Direction is 'Source -> Destination'.]

ATTRIBUTES

partyRequired : Boolean Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

indicates whether a party is required for the registration of the restriction in the association to LA_Party

[Is static False. Containment is Not Specified.]

type : CharacterString Public

the type of the restriction

[Is static False. Containment is Not Specified.]

ATTRIBUTES

1.3.179.11 S121_Responsibility

Class in package 'S121_Administrative'

S121_Responsibility is a formal or informal obligation to do something

S121_Responsibility realized from LA_Responsibility

For the S-121 code lists have been specialized to the marine environment. These code lists are currently generic or partial and the contents need to be defined as part of the S-121 project development. Code lists are used, rather than character strings in order to ensure consistency.

Note: ISO 19152 LADM stereotypes this the LA_Responsibility object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed. In the S-100 environment the RRR objects are information objects that carry an object identifier "Oid". They can be referenced as objects from the attributes associated with an S-100 Feature Object. This allows Rights, Responsibilities and Restrictions to be re-used by several objects. Thagt is, several objects may reference the same RRR objects.

S121_Responsibility
Version 1 Phase 1 Proposed
CHS created on 27/03/2015. Last modified 27/11/2016
Extends S121_RRR

OUTGOING STRUCTURAL RELATIONSHIPS
Generalization from S121_Responsibility to S121_RRR [Direction is 'Source -> Destination'.]
Realization from S121_Responsibility to «featureType» LA_Responsibility [Direction is 'Source -> Destination'.]

ATTRIBUTES
type : S121_ResponsibilityType Public [Is static False. Containment is Not Specified.]

1.3.180 S121_Feature

Package «ConceptualSchema» in package 'S121 Information Structure'

S121_Feature
Version 1.0 Phase 1.0 Proposed
created on 27/11/2016. Last modified 27/11/2016

1.3.180.1 S121_Limit

Class «FeatureType» in package 'S121_Feature'

Name: Limit
AlphaCode: MLBLIM
camelCaseCode: Limit
NumericCode:
Use Type: theme
Definition: The MLB_Limit object is an object that defines any limits or boundaries either relating to terrestrial, marine or both environments.
Permitted Primitives: P, L
References:
Remarks:

S121_Limit
Version Phase Proposed
S-121 PT created on 26/03/2015. Last modified 01/12/2016
Extends S121_FeatureUnit

OUTGOING STRUCTURAL RELATIONSHIPS

- Generalization from «FeatureType» S121_Limit to «FeatureType» S121_FeatureUnit
  [Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

- Realization from «MLB» Exclusive Economic Zone Limit to «FeatureType» S121_Limit
  [Direction is 'Source -> Destination'.]
- Realization from «MLB» Baseline to «FeatureType» S121_Limit
  [Direction is 'Source -> Destination'.]
- Realization from «MLB» Contiguous Zone Limit to «FeatureType» S121_Limit
  [Direction is 'Source -> Destination'.]
- Realization from «MLB» Inland Limit to «FeatureType» S121_Limit
  [Direction is 'Source -> Destination'.]
- Realization from «MLB» International Boundary to «FeatureType» S121_Limit
  [Direction is 'Source -> Destination'.]
- Aggregation from «Geometry» S121_Curve to «FeatureType» S121_Limit
  [Name is SpatialAttribute. Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from «HYDRO» Straight Baseline to «FeatureType» S121_Limit
[Direction is 'Source -> Destination'.]

Realization from «MLB» Territorial Sea Limit to «FeatureType» S121_Limit
[Direction is 'Source -> Destination'.]

Realization from «MLB» Continental Shelf Limit to «FeatureType» S121_Limit
[Direction is 'Source -> Destination'.]

Realization from «MLB» Normal Baseline to «FeatureType» S121_Limit
[Direction is 'Source -> Destination'.]

ATTRIBUTES

arctyp : S121_LimitArcType Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Definition: Type of computation used to define an arc (line). (Geodesic or loxodrome).
[Is static False. Containment is Not Specified.]

limtyp : S121_LimitType Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Definition: Type of delineation (Boundary, Limit or Construction).
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified) plus

Source: Public zone (Class) S121_Zone «FeatureType»
Cardinality: [0..*]

Target: Public limit (Class) S121_Limit «FeatureType»
Cardinality: [0..*]

Association (direction: Unspecified) minus

Source: Public zone (Class) S121_Zone «FeatureType»
Cardinality: [0..*]

Target: Public limit (Class) S121_Limit «FeatureType»
Cardinality: [0..*]

Association (direction: Unspecified) points

Source: Public location (Class) S121_Location «FeatureType»
Cardinality: [2..*]

Target: Public limit (Class) S121_Limit «FeatureType»
Cardinality: [0..*]

1.3.180.2 S121_Location

Class «FeatureType» in package 'S121_Feature'

Name: Location
AlphaCode: MLOCTN
camelCaseCode: Limit
NumericCode:
Use Type: theme
Definition: The Location object is an object that defines the underlying structure of location.
Permitted Primitives: P
Remarks: To portray a geodesic or loxodrome curve correctly, additional vertices may be included in the dataset. These are densified locations. These vertices would not have formed part of the original source information. The loctyp attribute can be used to differentiate between a defined vertex (e.g. declared in a treaty) with a vertex densified to ensure correct GIS depiction. A computed location is also not part of the original source information, but is calculated as the result of the original source guidance, such as the intersection between arcs, geodesics, or loxodromes. A construction vertex is any arbitrary position established to support computation.
References:

S121_Location
Version Phase Proposed
S-121 PT created on 26/03/2015. Last modified 01/12/2016
Extends S121_FeatureUnit

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «FeatureType» S121_Location to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Realization from «FeatureType» S121_Location to «featureType» LA_Point
[Name is Realize. Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from «MLB» Boundary Point to «FeatureType» S121_Location
[Direction is 'Source -> Destination'.]

Realization from «MLB» Baseline Point to «FeatureType» S121_Location
[Direction is 'Source -> Destination'.]

Aggregation from «Geometry» S121_Point to «FeatureType» S121_Location
[Name is SpatialAttribute. Direction is 'Source -> Destination'.]

Realization from «MLB» Limit Point to «FeatureType» S121_Location
[Direction is 'Source -> Destination'.]

ATTRIBUTES

interpolationRole : LA_InterpolationType Public

the role of point in the structure of a straight line or curve
[Is static False. Containment is Not Specified.]

pointType : S121_LocationType Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Definition: Computational origin of the element (defined, densified, computed or construction)
[Is static False. Containment is Not Specified.]

ATTRIBUTES

transAndResult : LA _Transformation Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

transformation and transformed location

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified) points

Source: Public location (Class) S121_Location «FeatureType»
Cardinality: [2..*]

Target: Public limit (Class) S121_Limit «FeatureType»
Cardinality: [0..*]

1.3.180.3 S121_Zone

Class «FeatureType» in package 'S121_Feature'

Name: Zone
AlphaCode: MZONE
camelCaseCode: Zone
NumericCode:
Use Type: theme
Definition: The Zone object is an object that defines an area which is logically delimited by instances of delineation (limit_boundary) objects.
Permitted Primitives: P,L,A
Remarks: Maritime, terrestrial or inter-tidal zone objects are the three real objects that inherit from this object.
References:

S121_Zone
Version Phase Proposed
S-121 PT created on 26/03/2015. Last modified 01/12/2016
Extends S121_FeatureUnit

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from «FeatureType» S121_Zone to «featureType» LA_SpatialUnit
[Name is Realize. Direction is 'Source -> Destination'.]

Generalization from «FeatureType» S121_Zone to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from «HYDRO» Territorial Sea Area to «FeatureType» S121_Zone
[Direction is 'Source -> Destination'.]

Realization from «HYDRO» Exclusive Economic Zone to «FeatureType» S121_Zone
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Aggregation from «Geometry» S121_Surface to «FeatureType» S121_Zone
[Name is SpatialAttribute. Direction is 'Source -> Destination'.]

Realization from «MLB» High sea to «FeatureType» S121_Zone
[Direction is 'Source -> Destination'.]

Realization from «HYDRO» Continental Shelf Area to «FeatureType» S121_Zone
[Direction is 'Source -> Destination'.]

Realization from «MLB» Internal Waters to «FeatureType» S121_Zone
[Direction is 'Source -> Destination'.]

Realization from «HYDRO» Contiguous Zone to «FeatureType» S121_Zone
[Direction is 'Source -> Destination'.]

Realization from «MLB» The Area to «FeatureType» S121_Zone
[Direction is 'Source -> Destination'.]

Realization from «MLB» Disputed Area to «FeatureType» S121_Zone
[Direction is 'Source -> Destination'.]

Realization from «MLB» Inland Waters to «FeatureType» S121_Zone
[Direction is 'Source -> Destination'.]

ATTRIBUTES

area : LA_AreaValue Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

the area value
[Is static False. Containment is Not Specified.]

referencePoint : GM_Point Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the coordinates of a point inside the spatial unit
[Is static False. Containment is Not Specified.]

surfaceRelation : LA_SurfaceRelationType Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

verdom : S121_VerticalDomainType Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

Definition: verdom - Category of vertical domain of the object delimited. (e.g. airspace, land_surface, water_surface, water_column, seabed_surface, subsoil). Any particular object may span more than one vertical domain.
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified) plus

Source: Public zone (Class) S121_Zone «FeatureType»
Cardinality: [0..*]

Target: Public limit (Class) S121_Limit «FeatureType»
Cardinality: [0..*]

Association (direction: Unspecified) minus

Source: Public zone (Class) S121_Zone «FeatureType»
Cardinality: [0..*]

Target: Public limit (Class) S121_Limit «FeatureType»
Cardinality: [0..*]

Association (direction: Unspecified)

Source: Public (Class) S121_BAUnit

Target: Public (Class) S121_Zone «FeatureType»

Association (direction: Unspecified) vertExtent

Source: Public space (Class) S121_Space «FeatureType»
Cardinality: [0..1]

Target: Public zone (Class) S121_Zone «FeatureType»
Cardinality: [0..*]

OPERATIONS

areaClosed () : Boolean Public
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

computeArea () : Area Public
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

createArea () : GM_MultiSurface Public
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

1.3.180.4 S121_Space

Class «FeatureType» in package 'S121_Feature'

Name: Space
AlphaCode: MSPACE
camelCaseCode: Space
NumericCode:
Use Type: theme
Definition: The Space object is an object that defines an volume which is logically delimited by instances of zone objects.
Permitted Primitives: P,L,A
Remarks: A Space is an objects of 2 dimensions with a height description located in 2 or 3 dimensional space. This is sometimes called 2 1/2 dimensions. A Space has the same geometry as a Zone with the attributes of vertical position. The vertical position may be explicit numerical attributes of height above a reference or a textual description.
References:

S121_Space

Version Phase Proposed
S-121 PT created on 26/03/2015. Last modified 01/12/2016
Extends S121_FeatureUnit

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «FeatureType» S121_Space to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Realization from «FeatureType» S121_Space to «featureType» LA_SpatialUnit
[Name is Realize. Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Aggregation from «Geometry» S121_Volume to «FeatureType» S121_Space
[Name is SpatialAttribute. Direction is 'Source -> Destination'.]

ATTRIBUTES

referencePoint : GM_Point Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the coordinates of a point inside the spatial unit
[Is static False. Containment is Not Specified.]

verdom : S121_VerticalDomainType Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

Definition: verdom - Category of vertical domain of the object delimited. (e.g. airspace, land_surface, water_surface, water_column, seabed_surface, subsoil). Any particular object may span more than one vertical domain.
[Is static False. Containment is Not Specified.]

volume : LA_VolumeValue Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

the volume value (in case of bounded 3D description)
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified) vertExtent

Source: Public space (Class) S121_Space «FeatureType»
Cardinality: [0..1]

Target: Public zone (Class) S121_Zone «FeatureType»
Cardinality: [0..*]

Association (direction: Unspecified)

Source: Public (Class) S121_BAUnit

Target: Public (Class) S121_Space «FeatureType»

OPERATIONS

computeVolume () : Volume Public

OPERATIONS
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]
createVolume () : GM_MultiSolid Public [Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]
volumeClosed () : Boolean Public [Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

1.3.180.5 S121_FeatureUnit

Abstract «FeatureType» in package 'S121_Feature'

The Feature Unit is a feature type which derives from the S100 General Feture Model. The S121_FeatureUnit takes on spatial attributes through a relation to the S121_SpatialAttributeType. This is an abstract class. It is implemented through its subtypes S121_Location, S121_Limit, S121_Zone, S121_Space.

S121_FeatureUnit
Version Phase Proposed
CHS created on 03/11/2016. Last modified 27/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS
Realization from «FeatureType» S121_FeatureUnit to «metaclass» S121_GF_FeatureType [Name is Realize. Direction is 'Source -> Destination'.]
Generalization from «FeatureType» S121_FeatureUnit to S121_VersionedObject [Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS
Generalization from «MLB» Limit Point to «FeatureType» S121_FeatureUnit [Direction is 'Source -> Destination'.]
Generalization from «MLB» Inland Waters to «FeatureType» S121_FeatureUnit [Direction is 'Source -> Destination'.]
Generalization from «FeatureType» S121_Space to «FeatureType» S121_FeatureUnit [Direction is 'Source -> Destination'.]
Generalization from «MLB» International Boundary to «FeatureType» S121_FeatureUnit [Direction is 'Source -> Destination'.]
Generalization from «MLB» Baseline Point to «FeatureType» S121_FeatureUnit [Direction is 'Source -> Destination'.]
Generalization from «MLB» Inland Limit to «FeatureType» S121_FeatureUnit [Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from «MLB» The Area to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Baseline to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Boundary Point to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «HYDRO» Exclusive Economic Zone to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Territorial Sea Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Disputed Area to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «HYDRO» Straight Baseline to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» High sea to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Exclusive Economic Zone Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Aggregation from «FeatureAttribute» S121_SpatialAttributeType to «FeatureType» S121_FeatureUnit
[Direction is 'Unspecified'.]

Generalization from «MLB» Normal Baseline to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «FeatureType» S121_Zone to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Contiguous Zone Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «HYDRO» Contiguous Zone to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «HYDRO» Continental Shelf Area to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from «MLB» Continental Shelf Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «FeatureType» S121_Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Internal Waters to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «FeatureType» S121_Location to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «HYDRO» Territorial Sea Area to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

ATTRIBUTES

context : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

fuID : Oid Public

the spatial unit identifier
[Is static False. Containment is Not Specified.]

label : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

releasability : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

This attribute may be used to differentiate between "official", "development", "internal use" or "in construction" status for particular features. This may be a code list in the future.
[Is static False. Containment is Not Specified.]

type : S121_FeatureType Public
[Is static False. Containment is Not Specified.]

typeName : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

short textual description of the spatial unit
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified)

ASSOCIATIONS

Source: Public (Abstract) S121_FeatureUnit «FeatureType»
Cardinality: [0..*]

Target: Public (Class) S121_BAUnit
Cardinality: [1..*]

Association (direction: Unspecified) fuSource

Source: Public fu (Abstract) S121_FeatureUnit «FeatureType»
Cardinality: [0..*]

Target: Public source (Class) S121_Source
Cardinality: [0..*]

1.3.180.6 S121_FeatureType

Class «codeList» in package 'S121_Feature'

This code list includes types that have a common characteristic related to the marine environment. The code list is registered in the Feature Concept Dictionary as listed values and as such can be expanded to include all aspects of the legal context. The initial contents are: **MLB** (Marine Limits and Boundaries), and **A76** (UNCLOS article 76). This code list can be extended.

S121_FeatureType
Version 1.0 Phase 1.0 Proposed
created on 21/02/2016. Last modified 27/11/2016

ATTRIBUTES

A76 : Public

UNCLOS article 76

[Is static False. Containment is Not Specified.]

MLB : Public

Marine Limits and Boundaries

[Is static False. Containment is Not Specified.]

1.3.180.7 S121_LimitArcType

Class «CodeList» in package 'S121_Feature'

Definition: Category of computation used to define an arc (line). (Geodesic or Loxodrome).

S121_LimitArcType
Version 1 Phase Proposed
CHS created on 10/07/2015. Last modified 27/11/2016

ATTRIBUTES

geodesic : Public

A path of shortest distance along the surface of an ellipsoid, namely a segment of a great circle.

[Is static False. Containment is Not Specified.]

ATTRIBUTES
loxodrome : Public An arc crossing all meridians of longitude at the same angle; a path with constant bearing. [Is static False. Containment is Not Specified.]

1.3.180.8 S121_LocationType

Class «CodeList» in package 'S121_Feature'

Definition: Category of location types (defined, densified, computed or construction)

S121_LocationType
Version Phase Proposed
CHS created on 08/07/2015. Last modified 27/11/2016
Alias pointType

ATTRIBUTES
computed : Public a point is computed in accordance with the definition described in the source through proper geodetic calculations; for example, the intersection of two arcs over an ellipsoidal surface. A point may be established to support construction computations. [Is static False. Containment is Not Specified.]
construction : Public point established to support construction computations. [Is static False. Containment is Not Specified.]
defined : Public a point is derived from a legislative document or other definitive source. [Is static False. Containment is Not Specified.]
densified : Public a point is part of a densification of the vertices in a line to ensure the geometry of a feature is correctly represented. [Is static False. Containment is Not Specified.]

1.3.180.9 S121_VerticalDomainType

Class «CodeList» in package 'S121_Feature'

Definition: Category of vertical domain of the object delimited. (e.g. airspace, land_surface, water_surface, water_column, seabed_surface, subsoil). The code list may be extended. Any particular object may span more than one jurisdiction domain, for example, an **inter-tidal space** may span the airspace and water column. The **Territorial Sea** spans all of the vertical domains; however, the **EEZ** is the water surface, water column, seabed surface and subsoil.

S121_VerticalDomainType
Version Phase Proposed
IHO S121 PT created on 17/03/2014. Last modified 27/11/2016

ATTRIBUTES
airspace : Public The airspace is a space composed of air . [Is static False. Containment is Not Specified.]
landSurface : Public landSurface is the interface between earth and air. [Is static False. Containment is Not Specified.]
seabedSurface : Public seabedSurface is the interface between the submerged land and the ocean. IHO S-32 defines the Sea Floor as " The BOTTOM of the OCEAN where there is a smooth and gentle GRADIENT... " The sea bed is inclusive of the sea floor and all submerged lands. [Is static False. Containment is Not Specified.]
subsoil : Public The subsoil is an area composed of earth (soil). [Is static False. Containment is Not Specified.]
waterColumn : Public The waterColumn is a space (volume) from the seabedSurface up to the waterSurface. [Is static False. Containment is Not Specified.]
waterSurface : Public The waterSurface is the interface between the airspace and waterColumn. [Is static False. Containment is Not Specified.]

1.3.180.10 S121_LimitType

Class «CodeList» in package 'S121_Feature'

Definition: Category of limit types (boundary, limit or construction)

S121_LimitType
Version Phase Proposed
CHS created on 17/03/2014. Last modified 27/11/2016

ATTRIBUTES
boundary : Public element delimiting an object administered by a more than one owner; typically two sovereign states (countries). If there are two political entities involved, the delineated is a boundary, and if there is only one the delineation is a limit. [Is static False. Containment is Not Specified.]
internationalBoundary : Public

ATTRIBUTES

A type of boundary administered by two sovereign states (countries). This is a special case of boundary whose purpose is to allow the clear definition of critical sovereignty related elements.

[Is static False. Containment is Not Specified.]

limit : Public

element delimiting an object administered by a single owner; e.g. boundary of a management zone, that pertains to only one political entity, such as oil lease areas within a management zone for oil exploration. If there are two political entities involved, the delineation is a boundary, and if there is only one the delineation is a limit.

[Is static False. Containment is Not Specified.]

1.3.180.11 S121_SpatialAttributeType

Abstract «FeatureAttribute» in package 'S121_Feature'

The Spatial Attribute Type as defined for S121 inherits from S100_GF_SpatialAttributeType. This means that the geometry types inherited from S-100 apply. Only the geometry types GM_Point, GM_MultiPoint, GM_Curve, GM_Surface, CV_Coverage, GM_Curve (arcByCentrePoint and circleByCentrePoint may be used. This is an abstract class. It is implemented through its subtypes S121_Point, S121_Curve, S121_Surface, S121_Volume and S121_Composite.

S121_SpatialAttributeType
Version Phase Proposed
S121 PT created on 27/03/2015. Last modified 27/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «FeatureAttribute» S121_SpatialAttributeType to S121_VersionedObject

[Direction is 'Source -> Destination'.]

Realization from «FeatureAttribute» S121_SpatialAttributeType to «metaclass» S121_GF_SpatialAttributeType

[Name is Realize. Direction is 'Source -> Destination'.]

Aggregation from «FeatureAttribute» S121_SpatialAttributeType to «FeatureType» S121_FeatureUnit

[Direction is 'Unspecified'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from «Geometry» S121_Curve to «FeatureAttribute» S121_SpatialAttributeType

[Direction is 'Source -> Destination'.]

Generalization from «Geometry» S121_Composite to «FeatureAttribute» S121_SpatialAttributeType

[Direction is 'Source -> Destination'.]

Generalization from «Geometry» S121_Surface to «FeatureAttribute» S121_SpatialAttributeType

[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from «Geometry» S121_Point to «FeatureAttribute» S121_SpatialAttributeType
[Direction is 'Source -> Destination'.]

ATTRIBUTES

label : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

short textual description of the spatial unit
[Is static False. Containment is Not Specified.]

locationByText : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

referenceSystem : S100_IO_IdentifiedObject Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Spatial Referencing System

Constraints:
requirement : Pre-condition
[Is static False. Containment is Not Specified.]

saID : Oid Public
[Is static False. Containment is Not Specified.]

scaleMaximum : PositiveInteger Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Stereotype is «S100_GF_SpatialAttributeType». Is static False. Containment is Not Specified.]

scaleMinimum : PositiveInteger Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Stereotype is «S100_GF_SpatialAttributeType». Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified) saSource

Source: Public source (Class) S121_Source
Cardinality: [0..*]

Target: Public sa (Abstract)
S121_SpatialAttributeType «FeatureAttribute»
Cardinality: [0..*]

1.3.181 S121_Party

Package «ConceptualSchema» in package 'S121 Information Structure'

S121_Party
Version 1.0 Phase 1.0 Proposed
created on 27/11/2016. Last modified 27/11/2016

1.3.181.1 S121_PartyMember

AssociationClass in package 'S121_Party'

S121_PartyMember derived from LA_PartyMember

Note: This class is a relationship class - i.e. it provides an attribute on a relationship. A party member is a fraction of a group party.

Note: ISO 19152 LADM stereotypes this the LA_PartyMember object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed.

S121_PartyMember
Version Phase Proposed
CHS created on 17/11/2016. Last modified 27/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from S121_PartyMember to S121_VersionedObject
[Direction is 'Source -> Destination'.]

ATTRIBUTES

share : Fraction Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the fraction of the whole
[Is static False. Containment is Not Specified.]

1.3.181.2 S121_Party

Class in package 'S121_Party'

S121_Party is a a person or organisation that plays a role in a **rights** transaction

S121_Party realized from LA_Party

Note: ISO 19152 LADM stereotypes this the LA_Party object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed.

S121_Party
Version Phase Mandatory
CHS created on 27/03/2015. Last modified 27/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from S121_Party to S121_VersionedObject

[Direction is 'Source -> Destination'.]

Realization from S121_Party to «featureType» LA_Party

[Name is Realize. Direction is 'Source -> Destination'.]

Realization from S121_Party to «metaclass» S100_GF_InformationType

[Name is Realize. Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from S121_GroupParty to S121_Party

[Direction is 'Source -> Destination'.]

Realization from Party Instance to S121_Party

[Name is Instance. Direction is 'Source -> Destination'.]

ATTRIBUTES

extPID : Oid Public

Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the identifier of the party in an external registration

[Is static False. Containment is Not Specified.]

name : CharacterString Public

Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the name of the party

[Is static False. Containment is Not Specified.]

pID : Oid Public

the identifier of the party

[Is static False. Containment is Not Specified.]

role : CharacterString Public

Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

[Is static False. Containment is Not Specified.]

type : S121_PartyType Public

the type of the party

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified)

Source: Public source (Class) S121_Source Target: Public party (Class) S121_Party

ASSOCIATIONS

Cardinality: [0..*] Cardinality: [1..*]

AssociationClass (direction: Unspecified) member

Source: Public group (Class) S121_GroupParty
Cardinality: [0..1]

Target: Public parties (Class) S121_Party
Cardinality: [2..*]

Association (direction: Unspecified) baunitAsParty

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Target: Public party (Class) S121_Party
Cardinality: [0..*]

Association (direction: Unspecified) rrrParty

Source: Public rrr (Class) S121_RRR
Cardinality: [0..*]

Target: Public party (Class) S121_Party
Cardinality: [0..1]

1.3.181.3 S121_GroupParty

Class in package 'S121_Party'

S121_GroupParty is any number of **parties**, forming together a distinct entity, with each **party** registered.

S121_GroupParty realized from LA_GroupParty

Note: ISO 19152 LADM stereotypes this the LA_GroupParty object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed.

S121_GroupParty
Version Phase Proposed
CHS created on 27/03/2015. Last modified 27/11/2016
Extends S121_Party, S121_VersionedObject

CONSTRAINTS

Invariant. sum(LA_PartyMember.share)=1 per group
[Approved, Weight is 0.]

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_GroupParty to «featureType» LA_GroupParty
[Direction is 'Source -> Destination'.]

Generalization from S121_GroupParty to S121_VersionedObject
[Direction is 'Source -> Destination'.]

Generalization from S121_GroupParty to S121_Party
[Direction is 'Source -> Destination'.]

ATTRIBUTES

ATTRIBUTES

groupID : Oid Public

the identifier of a group party

[Is static False. Containment is Not Specified.]

type : S121_GroupPartyType Public

the type of the group party

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

AssociationClass (direction: Unspecified) member

Source: Public group (Class) S121_GroupParty
Cardinality: [0..1]

Target: Public parties (Class) S121_Party
Cardinality: [2..*]

1.3.182 Example

Package in package 'S121 Information Structure'

Example
Version 1.0 Phase 1.0 Proposed
CDO'Brien created on 27/11/2016. Last modified 27/11/2016

1.3.182.1 FC_Dictionary_Attribute_Entry

Object in package 'Example'

Example Feature Concept Dictionary Entry for Attribute Type "Surveyed"

FC_Dictionary_Attribute_Entry
Version Phase Proposed
CHS created on 01/07/2015. Last modified 27/11/2016

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from FC_Dictionary_Attribute_Entry to S121_FC_SimpleAttribute
[Name is Instance. Direction is 'Source -> Destination'.]

ATTRIBUTES

alias : CharacterString Public

Optional alias for attribute, in this example none
[Is static False. Containment is Not Specified.]

code : CharacterString Public = Jurisd

code for the attribute, in this example "jurdis"
[Is static False. Containment is Not Specified.]

dataType : S100_FD_FeatureAttributeDataType Public = URI

In this example an indication that attribute type is a reference to an object type by a URI or Object ID (Oid)
[Is static False. Containment is Not Specified.]

definition : CharacterString Public = definition ....

definition of the attribute
[Is static False. Containment is Not Specified.]

name : CharacterString Public = Jurisdiction

name of the attribute, in this example the attribute is Jurisdiction
[Is static False. Containment is Not Specified.]

quantity Specification : Public
[Is static False. Containment is Not Specified.]

ATTRIBUTES

remarks : CharacterString Public

Optional remarks for definition, in this example none

[Is static False. Containment is Not Specified.]

uom : S100_UnitOfMeasure Public
Alias: Unit of Measure

optional unit of measure not used with a reference data type as in this example

[Is static False. Containment is Not Specified.]

1.3.182.2 FC_Dictionary_Feature_Entry

Object in package 'Example'

Example Feature Concept Dictionary Entry for Feature Type "Territorial Sea"

FC_Dictionary_Feature_Entry
Version Phase Proposed
CHS created on 01/07/2015. Last modified 27/11/2016

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from FC_Dictionary_Feature_Entry to S121_FC_FeatureType

[Name is Instance. Direction is 'Source -> Destination'.]

ATTRIBUTES

alias : CharacterString Public

Example optional feature type alias for Territorial Sea for example Feature Concept Dictionary Entry (in this case not used)

[Is static False. Containment is Not Specified.]

code : CharacterString Public = TESARE

Example feature type code = TESARE for example Feature Concept Dictionary Entry

[Is static False. Containment is Not Specified.]

definition : CharacterString Public = definition ....

Example feature type definition for Territorial Sea for example Feature Concept Dictionary Entry

[Is static False. Containment is Not Specified.]

featureUseType : S100_FD_FeatureUseType Public = theme

Example featureUseType = theme (MLB) for example Feature Concept Dictionary Entry

[Is static False. Containment is Not Specified.]

isAbstract : Boolean Public = 0 (not abstract)

isAbstract attribute for example Feature Concept Dictionary Entry

[Is static False. Containment is Not Specified.]

ATTRIBUTES

name : CharacterString Public = Territorial Sea

Example feature type name = Territorial Sea for example Feature Concept Dictionary Entry

[Is static False. Containment is Not Specified.]

permittedPrimitives : S100_FC_SpatialPrimitiveType Public = GM_Surface, GM_Curve, GM_Point (P,L,A)

Example permittedSpatialAttributes for example Feature Concept Dictionary Entry allowing GM_Surface, and allowing degenerate cases of GM_Curve and GM_Point (P,L,A)

[Is static False. Containment is Not Specified.]

remarks : CharacterString Public

Example optional feature type remarks for example Feature Concept Dictionary Entry (in this case not used)

[Is static False. Containment is Not Specified.]

1.3.182.3 Party Instance

Object in package 'Example'

Example Rights object for right of Jurisdiction

Party Instance
Version Phase Proposed
CHS created on 02/07/2015. Last modified 27/11/2016

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from Party Instance to S121_Party

[Name is Instance. Direction is 'Source -> Destination'.]

ATTRIBUTES

beginLifespanVersion : DateTime Public = 1867 07 01

Example start date for attribute

[Is static False. Containment is Not Specified.]

endLifespanVersion : DateTime Public = <null>

Example end date <null> means permanent or open-ended

[Is static False. Containment is Not Specified.]

name : CharacterString Public = Canada

Example Party Name = Canada

[Is static False. Containment is Not Specified.]

pID : URI Public = object ID

ATTRIBUTES

ID of object - in real case this will be an ID address or number

[Is static False. Containment is Not Specified.]

role : CharacterString Public = sovereign

Example role of party

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination) Reference

Source: Public (Object) Rights Instance
Cardinality: [1]

Target: Public (Object) Party Instance
Cardinality: [0..*]

1.3.182.4 Rights Instance

Object in package 'Example'

Example Rights object for right of Jurisdiction

Rights Instance
Version Phase Proposed
CHS created on 02/07/2015. Last modified 27/11/2016

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from Rights Instance to S121_RRR

[Name is Instance. Direction is 'Source -> Destination'.]

ATTRIBUTES

beginLifespanVersion : DateTime Public = 1867 07 01

Example start date for attribute

[Is static False. Containment is Not Specified.]

description : CharacterString Public = sovereignRight

Example of sovereign right for a jurisdiction

[Is static False. Containment is Not Specified.]

endLifespanVersion : DateTime Public = <null>

Example end date <null> means permanent or open-ended

[Is static False. Containment is Not Specified.]

rID : URI Public = object ID

ID of object - in real case this will be an ID address or number

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination) Reference

Source: Public (Object) Rights Instance
Cardinality: [1]

Target: Public (Object) Party Instance
Cardinality: [0..*]

Association (direction: Source -> Destination) Reference

Source: Public (Object) Thematic Attribute Instance
Cardinality: [1]

Target: Public (Object) Rights Instance
Cardinality: [0..*]

1.3.183 S121_VersionedObject

Class in package 'S121 Information Structure'

this class is a realization of the ISO 19152 class VersionedObject. It is introduced in ISO 19152 LADM to manage and maintain historical data. This is a realization because the two optional attributes *quality* and *source* are not used ion S-121.

S121_VersionedObject
Version Phase Proposed
IHO S121 PT created on 24/02/2016. Last modified 23/11/2016

CONSTRAINTS

Invariant. endLifespanVersion (n-1) = startLifespanVersion (n)
[Approved, Weight is 0.]

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_VersionedObject to «featureType» VersionedObject
[Name is Realize. Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from S121_Party to S121_VersionedObject
[Direction is 'Source -> Destination'.]

Generalization from «FeatureAttribute» S121_SpatialAttributeType to S121_VersionedObject
[Direction is 'Source -> Destination'.]

Generalization from S121_BAUnit to S121_VersionedObject
[Direction is 'Source -> Destination'.]

Generalization from «FeatureAttribute» S121_SpatialAttributeType to S121_VersionedObject
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from «FeatureType» S121_FeatureUnit to S121_VersionedObject
[Direction is 'Source -> Destination'.]

Generalization from S121_Party to S121_VersionedObject
[Direction is 'Source -> Destination'.]

Generalization from S121_PartyMember to S121_VersionedObject
[Direction is 'Source -> Destination'.]

Generalization from S121_GroupParty to S121_VersionedObject
[Direction is 'Source -> Destination'.]

Generalization from S121_GroupParty to S121_VersionedObject
[Direction is 'Source -> Destination'.]

Generalization from «abstract» S121_RRR to S121_VersionedObject
[Direction is 'Source -> Destination'.]

Generalization from S121_RRR to S121_VersionedObject
[Direction is 'Source -> Destination'.]

Generalization from «FeatureType» S121_FeatureUnit to S121_VersionedObject
[Direction is 'Source -> Destination'.]

Generalization from S121_PartyMember to S121_VersionedObject
[Direction is 'Source -> Destination'.]

Generalization from S121_BAUnit to S121_VersionedObject
[Direction is 'Source -> Destination'.]

ATTRIBUTES

beginLifespanVersion : DateTime Public

start time of a specific instance version
[Is static False. Containment is Not Specified.]

endLifespanVersion : DateTime Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

end time of a specific instance version
[Is static False. Containment is Not Specified.]

1.3.184 S121_GF_ThematicAttributeType

Metaclass «metaclass» in package 'S121 Information Structure'

The class S121_GF_ThematicAttributeType is a subtype of S100_GF_ThematicAttributeType. It adds a relationship to S121_GF_FeatureType

The class S100_GF_ThematicAttributeType is a realisation of the ISO 19109 class GF_ThematicAttributeType. Thematic attribute types carry descriptive characteristics of objects other than those specified in ISO 19109 clauses 7.4.3 – 7.4.7. This class differs from the ISO 19109 class in the following ways:
1) GF_ThematicAttributeType is defined in ISO 19109 as a concrete class. The S-100 GFM realisation is an abstract class with two concrete subclasses – S100_GF_SimpleAttributeType and S100_GF_ComplexAttributeType.
2) Temporal information shall have their value type defined by the types Date, Time, DateTime or complex structures using combinations of the primitive temporal types.

S121_GF_ThematicAttributeType
Version Phase Proposed
CHS created on 01/07/2015. Last modified 27/11/2016
Extends S100_GF_ThematicAttributeType

OUTGOING STRUCTURAL RELATIONSHIPS

Aggregation from «metaclass» S121_GF_ThematicAttributeType to «metaclass» S121_GF_FeatureType
[Direction is 'Source -> Destination'.]

Generalization from «metaclass» S121_GF_ThematicAttributeType to «metaclass» S100_GF_ThematicAttributeType
[Direction is 'Source -> Destination'.]

Aggregation from «metaclass» S121_GF_ThematicAttributeType to «metaclass» S100_GF_InformationType
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from Thematic Attribute Instance to «metaclass» S121_GF_ThematicAttributeType
[Name is Instance. Direction is 'Source -> Destination'.]

Realization from S121_BAUnit to «metaclass» S121_GF_ThematicAttributeType
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from S121_BAUnit to «metaclass» S121_GF_ThematicAttributeType
[Name is Realize. Direction is 'Source -> Destination'.]

ASSOCIATIONS

Association (direction: Source -> Destination) Usage of registered definition etc

Source: Public (Metaclass) S121_GF_ThematicAttributeType «metaclass»
Cardinality: [1]

Target: Public (Class) S121_FC_SimpleAttribute
Cardinality: [0..*]

1.3.185 S121_GF_FeatureType

Metaclass «metaclass» in package 'S121 Information Structure'

The class S121_GF_FeatureType is a specialization of S100_GF_FeatureType.

The class S100_GF_FeatureType is a realisation of the ISO 19109 class GF_FeatureType. It differs from the ISO class in the following ways:
1. It is a sub-type of the class S100_GF_NamedType;
2. It does not realise the Generalization and Specialization associations with the class GF_InheritanceRelation. Instead, the class has an association with itself with the roles subType and superType. GF_InheritanceRelation is not realised in the S-100 GFM;
3. The multiplicity of the superType is 0..1 to represent the concept that a feature may have a maximum of one superType. This is in order to prevent multiple-inheritance in S-100;
4. The multiplicity of the role carrierOfCharacteristics with S100_GF_PropertyType (the S-100 realisation of GF_PropertyType) is changed from 0..* to 1..*. An S-100 feature must have properties.

S121_GF_FeatureType
Version Phase Proposed
CHS created on 30/06/2015. Last modified 01/12/2016
Extends S100_GF_FeatureType, S100_GF_NamedType

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «metaclass» S121_GF_FeatureType to «metaclass» S100_GF_NamedType
[Direction is 'Source -> Destination'.]

Generalization from «metaclass» S121_GF_FeatureType to «metaclass» S100_GF_FeatureType
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from «FeatureType» S121_FeatureUnit to «metaclass» S121_GF_FeatureType
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from FeatureType Instance to «metaclass» S121_GF_FeatureType
[Name is Instance. Direction is 'Source -> Destination'.]

Aggregation from «metaclass» S121_GF_ThematicAttributeType to «metaclass» S121_GF_FeatureType
[Direction is 'Source -> Destination'.]

Aggregation from «metaclass» S121_GF_SpatialAttributeType to «metaclass» S121_GF_FeatureType
[Direction is 'Unspecified'.]

Realization from «FeatureType» S121_FeatureUnit to «metaclass» S121_GF_FeatureType
[Name is Realize. Direction is 'Source -> Destination'.]

ASSOCIATIONS

Association (direction: Unspecified) inheritance

Role: superType - The more generic feature type from which this feature type is derived.
Role: subType - The more specific feature types which are derived from this feature type.

Source: Public subType (Metaclass) S121_GF_FeatureType «metaclass»
Cardinality: [0..*]

Target: Public superType (Metaclass) S121_GF_FeatureType «metaclass»
Cardinality: [0..1]

Association (direction: Source -> Destination) Usage of registered definityon etc

ASSOCIATIONS

Source: Public (Metaclass) S121_GF_FeatureType «metaclass»
Cardinality: [1]

Target: Public (Class) S121_FC_FeatureType
Cardinality: [0..*]

Association (direction: Unspecified) inheritance

Role: superType - The more generic feature type from which this feature type is derived.
Role: subType - The more specific feature types which are derived from this feature type.

Source: Public subType (Metaclass) S121_GF_FeatureType «metaclass»
Cardinality: [0..*]

Target: Public superType (Metaclass) S121_GF_FeatureType «metaclass»
Cardinality: [0..1]

1.3.186 S121_GF_SpatialAttributeType

Metaclass «metaclass» in package 'S121 Information Structure'

The class S100_GF_SpatialAttributeType is a realisation of the ISO 19109 class GF_SpatialAttributeType. A spatial attribute type shall have a GM_Object as its value type. GM_Object and its sub-types are defined in the Spatial Schema, S-100 Part 7.

S121_GF_SpatialAttributeType
Version 1 Phase 2 Proposed
IHO TSMAD created on 01/07/2015. Last modified 23/11/2016
Extends S100_GF_SpatialAttributeType

OUTGOING STRUCTURAL RELATIONSHIPS

Aggregation from «metaclass» S121_GF_SpatialAttributeType to «metaclass» S121_GF_FeatureType
[Direction is 'Unspecified'.]

Generalization from «metaclass» S121_GF_SpatialAttributeType to «metaclass» S100_GF_SpatialAttributeType
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from «FeatureAttribute» S121_SpatialAttributeType to «metaclass» S121_GF_SpatialAttributeType
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from Spatial Attribute Instance to «metaclass» S121_GF_SpatialAttributeType
[Direction is 'Source -> Destination'.]

Realization from «FeatureAttribute» S121_SpatialAttributeType to «metaclass» S121_GF_SpatialAttributeType
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from Spatial Attribute Instance to «metaclass» S121_GF_SpatialAttributeType
[Name is Instance. Direction is 'Source -> Destination'.]

1.4 S121 Implementation Model

Package in package 'S-121 Maritime Limits and Boundaries'

S121 Implementation Model
Version 1.0 Phase 1.0 Proposed
CDOBrien created on 07/11/2016. Last modified 07/11/2016

1.4.1S121 Implementation Model diagram

Class diagram in package 'S121 Implementation Model'

S121 Implementation Model
Version 1.0
CDOBrien created on 15/11/2016. Last modified 30/11/2016

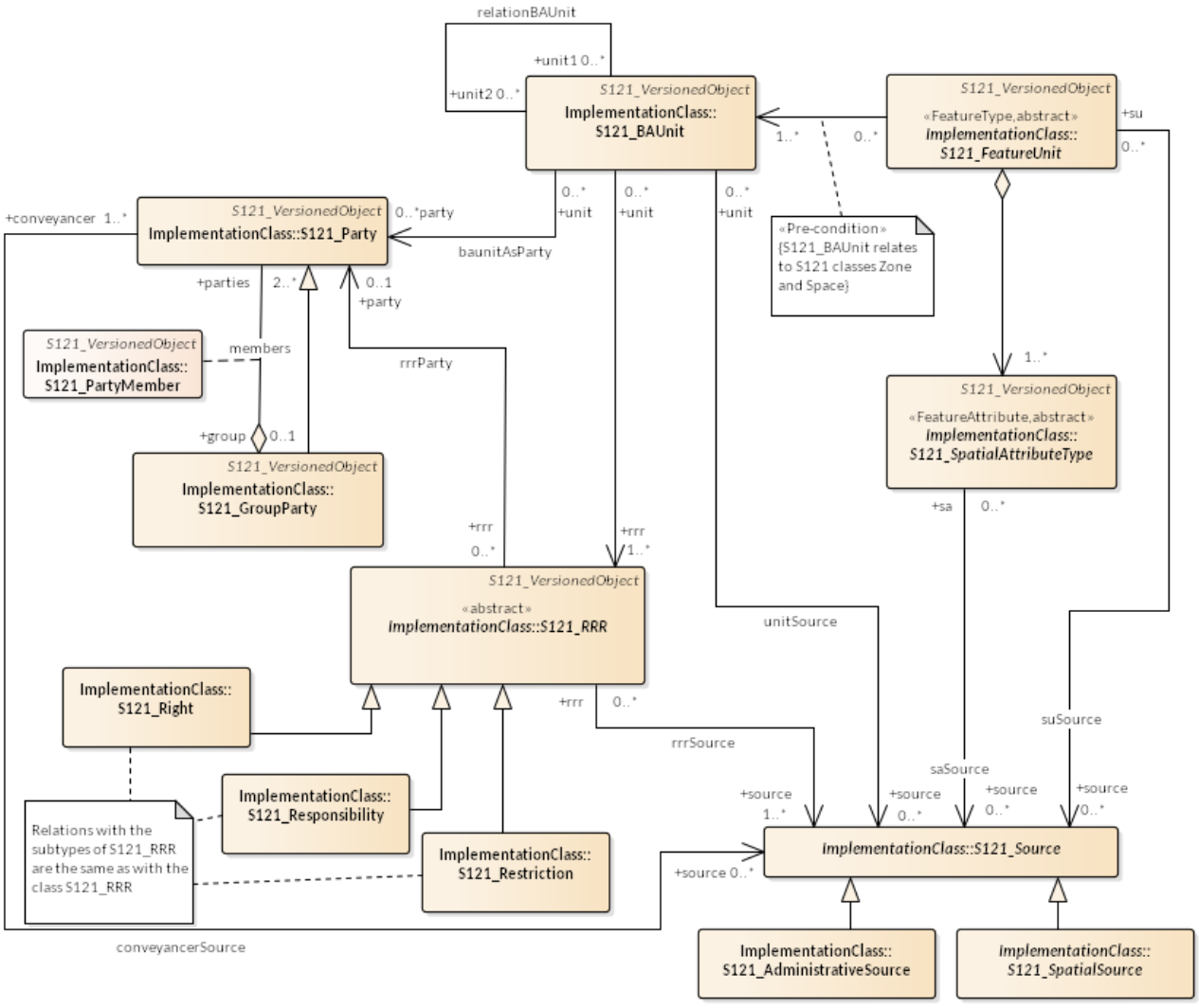

Figure 39: S121 Implementation Model

1.4.2S121_FeatureUnit

Abstract «FeatureType» in package 'ImplementationClass'

The Feature Unit is a feature type which relates to the administrative structure through the S121_BA_Unit. The

S121_FeatureUnit takes on spatial attributes through a relation to the S121_SpatialAttributeType. The S121_SpatialUnit is derived from both the S100_FeatureType .

S121_FeatureUnit
Version Phase Proposed
CHS created on 15/11/2016. Last modified 27/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «FeatureType» S121_FeatureUnit to S121_VersionedObject
[Direction is 'Source -> Destination'.]

Realization from «FeatureType» S121_FeatureUnit to «featureType» LA_SpatialUnit
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from «FeatureType» S121_FeatureUnit to «metaclass» S121_GF_FeatureType
[Name is Realize. Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Aggregation from «FeatureAttribute» S121_SpatialAttributeType to «FeatureType» S121_FeatureUnit
[Direction is 'Destination -> Source'.]

ATTRIBUTES

suID : Oid Public

the spatial unit identifier
[Is static False. Containment is Not Specified.]

type : S121_FeatureType Public
[Is static False. Containment is Not Specified.]

typeName : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

short textual description of the spatial unit
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination)

Source: Public (Abstract) S121_FeatureUnit «FeatureType»
Cardinality: [0..*]

Target: Public (Class) S121_BAUnit
Cardinality: [1..*]

Association (direction: Source -> Destination) suSource

Source: Public su (Abstract) S121_FeatureUnit «FeatureType»
Cardinality: [0..*]

Target: Public source (Class) S121_Source
Cardinality: [0..*]

1.4.3S121_SpatialAttributeType

Abstract «FeatureAttribute» in package 'ImplementationClass'

The Spatial Attribute Type as defined for S121 is derived from the class LA_SpatialUnit defined in ISO 19152. It also inherits from S100_GF_SpatialAttributeType. This means that the geometry types inherited from S-100 apply. Only the geometry types GM_Point, GM_MultiPoint, GM_Curve, GM_Surface, CV_Coverage, GM_Curve (arcByCentrePoint and circleByCentrePoint may be used.

S121_SpatialAttributeType
Version Phase Proposed
S121 PT created on 15/11/2016. Last modified 27/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS

Aggregation from «FeatureAttribute» S121_SpatialAttributeType to «FeatureType» S121_FeatureUnit
[Direction is 'Destination -> Source'.]

Generalization from «FeatureAttribute» S121_SpatialAttributeType to S121_VersionedObject
[Direction is 'Source -> Destination'.]

Realization from «FeatureAttribute» S121_SpatialAttributeType to «metaclass» S121_GF_SpatialAttributeType
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from «FeatureAttribute» S121_SpatialAttributeType to «featureType» LA_SpatialUnit
[Name is Realize. Direction is 'Source -> Destination'.]

ATTRIBUTES

geometry : GM_Object Public
[Stereotype is «S100_GF_SpatialAttributeType». Is static False. Containment is Not Specified.]

label : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

short textual description of the spatial unit

[Is static False. Containment is Not Specified.]

referencePoint : GM_Point Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the coordinates of a point inside the spatial unit

[Is static False. Containment is Not Specified.]

referenceSystem : S100_IO_IdentifiedObject Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Spatial Referencing System

Constraints:
requirement : Pre-condition

[Is static False. Containment is Not Specified.]

ATTRIBUTES

saID : Oid Public

the spatial unit identifier

[Is static False. Containment is Not Specified.]

scaleMaximum : PositiveInteger Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Stereotype is «S100_GF_SpatialAttributeType». Is static False. Containment is Not Specified.]

scaleMinimum : PositiveInteger Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Stereotype is «S100_GF_SpatialAttributeType». Is static False. Containment is Not Specified.]

surfaceRelation : LA_SurfaceRelationType Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Destination -> Source) saSource

Source: Public source (Class) S121_Source
Cardinality: [0..*]

Target: Public sa (Abstract)
S121_SpatialAttributeType «FeatureAttribute»
Cardinality: [0..*]

1.4.4S121_SpatialSource

Class in package 'ImplementationClass'

documentation of the source of the referenced information.

S121_SpatialSource
Version 1.0 Phase CD Proposed
S121 PT created on 15/11/2016. Last modified 23/11/2016
Extends S121_Source

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from S121_SpatialSource to S121_Source

[Direction is 'Source -> Destination'.]

ATTRIBUTES

type : S121_SpatialSourceType Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

1.4.5S121_Source

Class in package 'ImplementationClass'

documentation of the source of the referenced information.

S121_Source
Version 1.0 Phase CD Proposed
S121 PT created on 23/11/2016. Last modified 23/11/2016

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_Source to «metaclass» S100_GF_InformationType
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from S121_Source to «featureType» LA_Source
[Name is Realize. Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from S121_SpatialSource to S121_Source
[Direction is 'Source -> Destination'.]

Generalization from S121_AdministrativeSource to S121_Source
[Direction is 'Source -> Destination'.]

ATTRIBUTES

acceptance : DateTime Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the date of force of law of the source by an authority
[Is static False. Containment is Not Specified.]

availabilityStatus : LA_AvailabilityStatusType Public
[Is static False. Containment is Not Specified.]

extArchiveID : ExtArchive Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the identifier of a source in an external registration
[Is static False. Containment is Not Specified.]

lifeSpanStamp : DateTime Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the moment that the event represented by the instance of LA_Source is further processed in the LA system
[Is static False. Containment is Not Specified.]

maintype : CI_PresentationFormCode Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the type of document
[Is static False. Containment is Not Specified.]

ATTRIBUTES

name : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Document name - for example the document (legislation, treaty, title) that defines the object.
[Stereotype is «S121». Is static False. Containment is Not Specified.]

quality : DQ_Element Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

recordation : DateTime Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the date of registration (recordation) of the source by registering authority
[Is static False. Containment is Not Specified.]

registryNumber : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Unique official identifier of the record in a registry. For example, in states with registers of legislative instruments, versioning is controlled by the registry ID.
[Stereotype is «S121». Is static False. Containment is Not Specified.]

sID : Oid Public

the identifier of the source
[Is static False. Containment is Not Specified.]

source : S121_ResponsibleParty Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

submission : DateTime Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the date of submission of the source by a party
[Is static False. Containment is Not Specified.]

URL : S121_OnlineResource Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

URL - this is official the URL (or equivalent online resource) where the document is distributed.
[Stereotype is «S121». Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Destination -> Source) conveyancerSource

Source: Public source (Class) S121_Source
Cardinality: [0..*]

Target: Public conveyancer (Class) S121_Party
Cardinality: [1..*]

Association (direction: Destination -> Source) saSource

ASSOCIATIONS

Source: Public source (Class) S121_Source
Cardinality: [0..*]

Target: Public sa (Abstract) S121_SpatialAttributeType «FeatureAttribute»
Cardinality: [0..*]

Association (direction: Destination -> Source) unitSource

Source: Public source (Class) S121_Source
Cardinality: [0..*]

Target: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Association (direction: Destination -> Source) rrrSource

Source: Public source (Class) S121_Source
Cardinality: [1..*]

Target: Public rrr (Abstract) S121_RRR «abstract»
Cardinality: [0..*]

Association (direction: Source -> Destination) restrictionSource

Source: Public restriction (Class) S121_Restriction
Cardinality: [0..*]

Target: Public source (Class) S121_Source
Cardinality: [1..*]

Association (direction: Source -> Destination) rightSource

Source: Public right (Class) S121_Right
Cardinality: [0..*]

Target: Public source (Class) S121_Source
Cardinality: [1..*]

Association (direction: Source -> Destination) suSource

Source: Public su (Abstract) S121_FeatureUnit «FeatureType»
Cardinality: [0..*]

Target: Public source (Class) S121_Source
Cardinality: [0..*]

1.4.6S121_BAUnit

Class in package 'ImplementationClass'

The Basic Administrative Unit is an information object to “which (one or more) unique and homogeneous rights, responsibilities or restrictions are associated”. It is an information object since it does not directly take on spatial attributes. The S121_BAUnit is derived from both the S121_GF_ThematicAttributeType and the LA_BAUnit defined in ISO 19152.

S121_BAUnit
Version Phase Proposed
CHS created on 15/11/2016. Last modified 20/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_BAUnit to «featureType» LA_BAUnit
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from S121_BAUnit to «metaclass» S100_GF_InformationType
[Direction is 'Source -> Destination'.]

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from S121_BAUnit to S121_VersionedObject

[Direction is 'Source -> Destination'.]

Realization from S121_BAUnit to «metaclass» S121_GF_ThematicAttributeType

[Name is Realize. Direction is 'Source -> Destination'.]

ATTRIBUTES

type : S121_BAUnitType Public

the use type of the basic administrative unit

[Is static False. Containment is Not Specified.]

uID : Oid Public

An ID used in relationships between elements of the RRR structure and the Basic Administrative Unit.

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination)

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Target: Public restriction (Class) S121_Restriction
Cardinality: [1..*]

Association (direction: Unspecified) relationBAUnit

Source: Public unit1 (Class) S121_BAUnit
Cardinality: [0..*]

Target: Public unit2 (Class) S121_BAUnit
Cardinality: [0..*]

Association (direction: Source -> Destination) baunitAsParty

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Target: Public party (Class) S121_Party
Cardinality: [0..*]

Association (direction: Source -> Destination)

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Target: Public right (Class) S121_Right
Cardinality: [1..*]

Association (direction: Source -> Destination)

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Target: Public responsibility (Class) S121_Responsibility
Cardinality: [1..*]

Association (direction: Source -> Destination)

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Target: Public rrr (Abstract) S121_RRR «abstract»
Cardinality: [1..*]

ASSOCIATIONS

Association (direction: Source -> Destination)

Source: Public (Abstract) S121_FeatureUnit «FeatureType»
Cardinality: [0..*]

Target: Public (Class) S121_BAUnit
Cardinality: [1..*]

Association (direction: Unspecified) relationBAUnit

Source: Public unit1 (Class) S121_BAUnit
Cardinality: [0..*]

Target: Public unit2 (Class) S121_BAUnit
Cardinality: [0..*]

Association (direction: Destination -> Source) unitSource

Source: Public source (Class) S121_Source
Cardinality: [0..*]

Target: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

1.4.7S121_PartyMember

AssociationClass in package 'ImplementationClass'

S121_PartyMember derived from LA_PartyMember

Note: This class is a relationship class - i.e. it provides an attribute on a relationship. A party member is a fraction of a group party.

Note: ISO 19152 LADM stereotypes this the LA_PartyMember object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed.

S121_PartyMember
Version Phase Proposed
CHS created on 17/11/2016. Last modified 19/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from S121_PartyMember to S121_VersionedObject
[Direction is 'Source -> Destination'.]

ATTRIBUTES

share : Fraction Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the fraction of the whole

[Is static False. Containment is Not Specified.]

1.4.8S121_Party

Class in package 'ImplementationClass'

S121_Party is a a person or organisation that plays a role in a **rights** transaction

S121_Party realized from LA_Party

Note: ISO 19152 LADM stereotypes this the LA_Party object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed.

S121_Party
Version Phase Mandatory
CHS created on 15/11/2016. Last modified 19/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_Party to «metaclass» S100_GF_InformationType
[Direction is 'Source -> Destination'.]

Realization from S121_Party to «featureType» LA_Party
[Name is Realize. Direction is 'Source -> Destination'.]

Generalization from S121_Party to S121_VersionedObject
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from S121_GroupParty to S121_Party
[Direction is 'Source -> Destination'.]

ATTRIBUTES

extPID : Oid Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the identifier of the party in an external registration
[Is static False. Containment is Not Specified.]

name : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the name of the party
[Is static False. Containment is Not Specified.]

pID : Oid Public

the identifier of the party
[Is static False. Containment is Not Specified.]

role : CharacterString Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

type : S121_PartyType Public

the type of the party
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

AssociationClass (direction: Unspecified) members

Source: Public parties (Class) S121_Party
Cardinality: [2..*]
Target: Public group (Class) S121_GroupParty
Cardinality: [0..1]

Association (direction: Source -> Destination) party associated with right

Source: Public right (Class) S121_Right
Cardinality: [0..*]
Target: Public party (Class) S121_Party
Cardinality: [0..1]

Association (direction: Destination -> Source) conveyancerSource

Source: Public source (Class) S121_Source
Cardinality: [0..*]
Target: Public conveyancer (Class) S121_Party
Cardinality: [1..*]

Association (direction: Source -> Destination) baunitAsParty

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]
Target: Public party (Class) S121_Party
Cardinality: [0..*]

Association (direction: Source -> Destination) party associated with restriction

Source: Public restriction (Class) S121_Restriction
Cardinality: [0..*]
Target: Public party (Class) S121_Party
Cardinality: [0..1]

Association (direction: Source -> Destination) party associated with responsibility

Source: Public responsibility (Class) S121_Responsibility
Cardinality: [0..*]
Target: Public party (Class) S121_Party
Cardinality: [0..1]

Association (direction: Source -> Destination) rrrParty

Source: Public rrr (Abstract) S121_RRR «abstract»
Cardinality: [0..*]
Target: Public party (Class) S121_Party
Cardinality: [0..1]

1.4.9S121_GroupParty

Class in package 'ImplementationClass'

S121_GroupParty is any number of **parties**, forming together a distinct entity, with each **party** registered.

S121_GroupParty realized from LA_GroupParty

Note: ISO 19152 LADM stereotypes this the LA_GroupParty object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed.

S121_GroupParty
Version Phase Proposed
CHS created on 15/11/2016. Last modified 19/11/2016
Extends S121_Party, S121_VersionedObject

CONSTRAINTS

Invariant. sum(LA_PartyMember.share)=1 per group

[Approved, Weight is 0.]

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from S121_GroupParty to S121_VersionedObject

[Direction is 'Source -> Destination'.]

Generalization from S121_GroupParty to S121_Party

[Direction is 'Source -> Destination'.]

Realization from S121_GroupParty to «featureType» LA_GroupParty

[Direction is 'Source -> Destination'.]

ATTRIBUTES

groupID : Oid Public

the identifier of a group party

[Is static False. Containment is Not Specified.]

type : S121_GroupPartyType Public

the type of the group party

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination)

Source: Public restriction (Class) S121_Restriction
Cardinality: [0..*]

Target: Public group (Class) S121_GroupParty
Cardinality: [0..1]

Association (direction: Source -> Destination)

Source: Public right (Class) S121_Right
Cardinality: [0..*]

Target: Public group (Class) S121_GroupParty
Cardinality: [0..1]

AssociationClass (direction: Unspecified) members

Source: Public parties (Class) S121_Party
Cardinality: [2..*]

Target: Public group (Class) S121_GroupParty
Cardinality: [0..1]

Association (direction: Source -> Destination)

Source: Public responsibility (Class) S121_Responsibility
Cardinality: [0..*]

Target: Public group (Class) S121_GroupParty
Cardinality: [0..1]

1.4.10 S121_RRR

Abstract «abstract» in package 'ImplementationClass'

S121_RRR realized from LA_RRR

An instance of a subclass of LA_RRR is a **right** (or social tenure relationship), a **restriction**, or a **responsibility**

Note: ISO 19152 LADM stereotypes this the LA_RRR object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed. In the S-100 environment the RRR objects are information objects that carry an object identifier "Oid". They can be referenced as objects from the attributes associated with an S-100 Feature Object. This allows Rights, Responsibilities and Restrictions to be re-used by several objects. Thagt is, several objects may reference the same RRR objects.

S121_RRR
Version Phase Proposed
CHS created on 15/11/2016. Last modified 20/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from «abstract» S121_RRR to «featureType» LA_RRR
[Name is Realize. Direction is 'Source -> Destination'.]

Generalization from «abstract» S121_RRR to S121_VersionedObject
[Direction is 'Source -> Destination'.]

Realization from «abstract» S121_RRR to «metaclass» S100_GF_InformationType
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from S121_Responsibility to «abstract» S121_RRR
[Direction is 'Source -> Destination'.]

Generalization from S121_Right to «abstract» S121_RRR
[Direction is 'Source -> Destination'.]

Generalization from S121_Restriction to «abstract» S121_RRR
[Direction is 'Source -> Destination'.]

ATTRIBUTES

description : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

description regarding the right, restriction or responsibility
[Is static False. Containment is Not Specified.]

rID : Oid Public

The RRR identifier
[Is static False. Containment is Not Specified.]

ATTRIBUTES

share : Fraction Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

a share in an instance of a subclass of LA_RRR

[Is static False. Containment is Not Specified.]

shareCheck : Boolean Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

boolean indicating whether the constraint is applicable

[Is static False. Containment is Not Specified.]

timeSpec : S100_GF_DateTimeAttributeClass Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

operational use of a right in time sharing

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination) rrrParty

Source: Public rrr (Abstract) S121_RRR «abstract»
Cardinality: [0..*]

Target: Public party (Class) S121_Party
Cardinality: [0..1]

Association (direction: Destination -> Source) rrrSource

Source: Public source (Class) S121_Source
Cardinality: [1..*]

Target: Public rrr (Abstract) S121_RRR «abstract»
Cardinality: [0..*]

Association (direction: Source -> Destination)

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Target: Public rrr (Abstract) S121_RRR «abstract»
Cardinality: [1..*]

1.4.11 S121_Right

Class in package 'ImplementationClass'

S121_Right is an action, activity or class of actions that a system participant may perform on or using an associated resource.

S121_Right is realized from LA_Right

For the S-121 code lists have been specialized to the marine environment. These code lists are currently generic or partial and the contents need to be defined as part of the S-121 project development. Code lists are used, rather than character strings in order to ensure consistency.

Note: ISO 19152 LADM stereotypes this the LA_Right object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed. In the S-100 environment the RRR objects are information objects that carry an object identifier "Oid". They can be referenced as objects from the attributes associated with an S-100 Feature Object.

S121_Right
Version Phase Proposed
CHS created on 15/11/2016. Last modified 19/11/2016
Extends S121_RRR

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_Right to «featureType» LA_Right
[Direction is 'Source -> Destination'.]

Generalization from S121_Right to «abstract» S121_RRR
[Direction is 'Source -> Destination'.]

ATTRIBUTES

type : S121_RightType Public

the type of the right

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination) party associated with right

Source: Public right (Class) S121_Right
Cardinality: [0..*]
Target: Public party (Class) S121_Party
Cardinality: [0..1]

Association (direction: Source -> Destination)

Source: Public right (Class) S121_Right
Cardinality: [0..*]
Target: Public group (Class) S121_GroupParty
Cardinality: [0..1]

Association (direction: Source -> Destination) rightSource

Source: Public right (Class) S121_Right
Cardinality: [0..*]
Target: Public source (Class) S121_Source
Cardinality: [1..*]

Association (direction: Source -> Destination)

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]
Target: Public right (Class) S121_Right
Cardinality: [1..*]

1.4.12 S121_Restriction

Class in package 'ImplementationClass'

S121_Restriction is a formal or informal entitlement to refrain from doing something.

S121_Restriction is realized from LA_Restriction

For the S-121 code lists have been specialized to the marine environment. These code lists are currently generic or partial and the contents need to be defined as part of the S-121 project development. Code lists are used, rather than

character strings in order to ensure consistency.

Note: ISO 19152 LADM stereotypes this the LA_Restriction object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed. In the S-100 environment the RRR objects are information objects that carry an object identifier "Oid". They can be referenced as objects from the attributes associated with an S-100 Feature Object.

S121_Restriction
Version 1 Phase 1 Proposed
CHS created on 15/11/2016. Last modified 19/11/2016
Extends S121_RRR

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_Restriction to «featureType» LA_Restriction
[Direction is 'Source -> Destination'.]

Generalization from S121_Restriction to «abstract» S121_RRR
[Direction is 'Source -> Destination'.]

ATTRIBUTES

partyRequired : Boolean Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

indicates whether a party is required for the registration of the restriction in the association to LA_Party
[Is static False. Containment is Not Specified.]

type : CharacterString Public

the type of the restriction
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination)

Source: Public restriction (Class) S121_Restriction
Cardinality: [0..*]
Target: Public group (Class) S121_GroupParty
Cardinality: [0..1]

Association (direction: Source -> Destination) party associated with restriction

Source: Public restriction (Class) S121_Restriction
Cardinality: [0..*]
Target: Public party (Class) S121_Party
Cardinality: [0..1]

Association (direction: Source -> Destination) restrictionSource

Source: Public restriction (Class) S121_Restriction
Cardinality: [0..*]
Target: Public source (Class) S121_Source
Cardinality: [1..*]

Association (direction: Source -> Destination)

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]
Target: Public restriction (Class) S121_Restriction
Cardinality: [1..*]

1.4.13 S121_Responsibility

Class in package 'ImplementationClass'

S121_Responsibility is a formal or informal obligation to do something

S121_Responsibility realized from LA_Responsibility

For the S-121 code lists have been specialized to the marine environment. These code lists are currently generic or partial and the contents need to be defined as part of the S-121 project development. Code lists are used, rather than character strings in order to ensure consistency.

Note: ISO 19152 LADM stereotypes this the LA_Responsibility object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed. In the S-100 environment the RRR objects are information objects that carry an object identifier "Oid". They can be referenced as objects from the attributes associated with an S-100 Feature Object. This allows Rights, Responsibilities and Restrictions to be re-used by several objects. Thagt is, several objects may reference the same RRR objects.

S121_Responsibility
Version 1 Phase 1 Proposed
CHS created on 15/11/2016. Last modified 19/11/2016
Extends S121_RRR

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from S121_Responsibility to «abstract» S121_RRR
[Direction is 'Source -> Destination'.]

Realization from S121_Responsibility to «featureType» LA_Responsibility
[Direction is 'Source -> Destination'.]

ATTRIBUTES

type : S121_ResponsibilityType Public
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination) party associated with responsibility

Source: Public responsibility (Class) S121_Responsibility
Cardinality: [0..*]

Target: Public party (Class) S121_Party
Cardinality: [0..1]

Association (direction: Source -> Destination) responsibilitySource

Source: Public responsibility (Class) S121_Responsibility
Cardinality: [0..*]

Target: Public spurce (Class) S121_AdministrativeSource
Cardinality: [1..*]

Association (direction: Source -> Destination)

Source: Public responsibility (Class) S121_Responsibility
Cardinality: [0..*]

Target: Public group (Class) S121_GroupParty
Cardinality: [0..1]

ASSOCIATIONS

Association (direction: Source -> Destination)

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Target: Public responsibility (Class) S121_Responsibility
Cardinality: [1..*]

1.4.14 S121_AdministrativeSource

Class in package 'ImplementationClass'

S121_AdministrativeSource is a **source** with the administrative description (where applicable) of the **parties** involved, the **rights**, **restrictions** and **responsibilities** created and the **basic administrative units** affected

S121_AdministrativeSource derived from LA_AdministrativeSource

Note: ISO 19152 LADM stereotypes this the LA_AdministrativeSource object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed.

S121_AdministrativeSource
Version Phase Proposed
CHS created on 15/11/2016. Last modified 23/11/2016
Extends S121_Source

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_AdministrativeSource to «featureType» LA_AdministrativeSource
[Direction is 'Source -> Destination'.]

Realization from S121_AdministrativeSource to «metaclass» S100_GF_InformationType
[Name is Realize. Direction is 'Source -> Destination'.]

Generalization from S121_AdministrativeSource to S121_Source
[Direction is 'Source -> Destination'.]

ATTRIBUTES

type : S121_AdministrativeSourceType Public

the type of document

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination) responsibilitySource

Source: Public responsibility (Class) S121_Responsibility
Cardinality: [0..*]

Target: Public spurce (Class) S121_AdministrativeSource
Cardinality: [1..*]

1.4.15 S121 Implementation Model with Groups diagram

Class diagram in package 'S121 Implementation Model'

S121 Implementation Model with Groups
Version 1.0
CDOBrien created on 16/11/2016. Last modified 27/11/2016

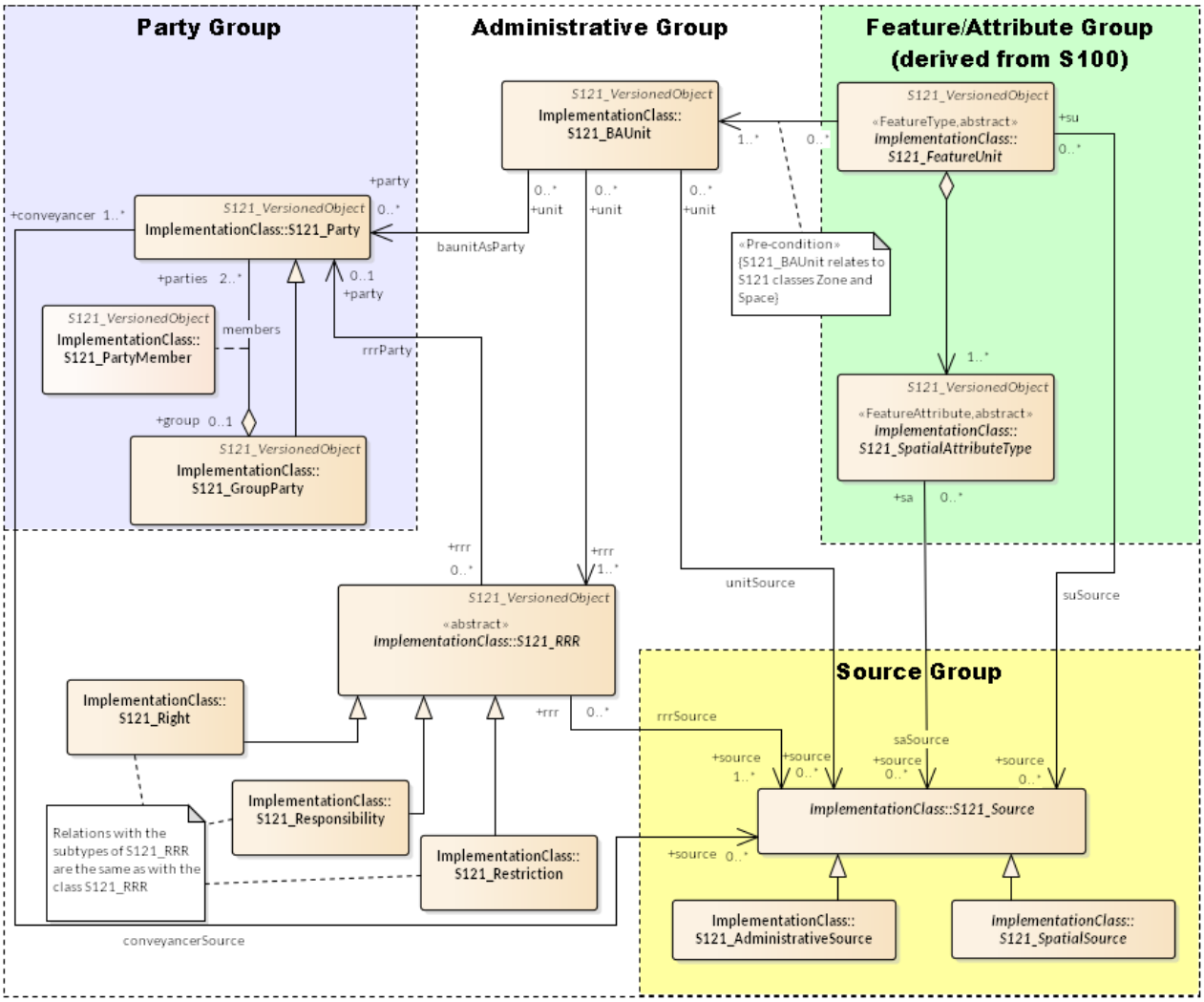

Figure 40: S121 Implementation Model with Groups

1.4.16 S121_FeatureUnit

Abstract «FeatureType» in package 'ImplementationClass'

The Feature Unit is a feature type which relates to the administrative structure through the S121_BA_Unit. The S121_FeatureUnit takes on spatial attributes through a relation to the S121_SpatialAttributeType. The S121_SpatialUnit is derived from both the S100_FeatureType .

S121_FeatureUnit
Version Phase Proposed
CHS created on 15/11/2016. Last modified 27/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «FeatureType» S121_FeatureUnit to S121_VersionedObject
[Direction is 'Source -> Destination'.]

Realization from «FeatureType» S121_FeatureUnit to «featureType» LA_SpatialUnit
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from «FeatureType» S121_FeatureUnit to «metaclass» S121_GF_FeatureType
[Name is Realize. Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Aggregation from «FeatureAttribute» S121_SpatialAttributeType to «FeatureType» S121_FeatureUnit
[Direction is 'Destination -> Source'.]

ATTRIBUTES

suID : Oid Public

the spatial unit identifier

[Is static False. Containment is Not Specified.]

type : S121_FeatureType Public

[Is static False. Containment is Not Specified.]

typeName : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

short textual description of the spatial unit

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination)

Source: Public (Abstract) S121_FeatureUnit «FeatureType»
Cardinality: [0..*]

Target: Public (Class) S121_BAUnit
Cardinality: [1..*]

Association (direction: Source -> Destination) suSource

Source: Public su (Abstract) S121_FeatureUnit «FeatureType»
Cardinality: [0..*]

Target: Public source (Class) S121_Source
Cardinality: [0..*]

1.4.17 S121_SpatialAttributeType

Abstract «FeatureAttribute» in package 'ImplementationClass'

The Spatial Attribute Type as defined for S121 is derived from the class LA_SpatialUnit defined in ISO 19152. It also inherits from S100_GF_SpatialAttributeType. This means that the geometry types inherited from S-100 apply. Only the

geometry types GM_Point, GM_MultiPoint, GM_Curve, GM_Surface, CV_Coverage, GM_Curve (arcByCentrePoint and circleByCentrePoint may be used.

S121_SpatialAttributeType
Version Phase Proposed
S121 PT created on 15/11/2016. Last modified 27/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS

Aggregation from «FeatureAttribute» S121_SpatialAttributeType to «FeatureType» S121_FeatureUnit
[Direction is 'Destination -> Source'.]

Generalization from «FeatureAttribute» S121_SpatialAttributeType to S121_VersionedObject
[Direction is 'Source -> Destination'.]

Realization from «FeatureAttribute» S121_SpatialAttributeType to «metaclass» S121_GF_SpatialAttributeType
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from «FeatureAttribute» S121_SpatialAttributeType to «featureType» LA_SpatialUnit
[Name is Realize. Direction is 'Source -> Destination'.]

ATTRIBUTES

geometry : GM_Object Public
[Stereotype is «S100_GF_SpatialAttributeType». Is static False. Containment is Not Specified.]

label : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

short textual description of the spatial unit
[Is static False. Containment is Not Specified.]

referencePoint : GM_Point Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the coordinates of a point inside the spatial unit
[Is static False. Containment is Not Specified.]

referenceSystem : S100_IO_IdentifiedObject Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Spatial Referencing System

Constraints:
requirement : Pre-condition
[Is static False. Containment is Not Specified.]

salD : Oid Public

the spatial unit identifier
[Is static False. Containment is Not Specified.]

scaleMaximum : PositiveInteger Public

ATTRIBUTES

Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Stereotype is «S100_GF_SpatialAttributeType». Is static False. Containment is Not Specified.]

scaleMinimum : PositiveInteger Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Stereotype is «S100_GF_SpatialAttributeType». Is static False. Containment is Not Specified.]

surfaceRelation : LA_SurfaceRelationType Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Destination -> Source) saSource

Source: Public source (Class) S121_Source
Cardinality: [0..*]

Target: Public sa (Abstract)
S121_SpatialAttributeType «FeatureAttribute»
Cardinality: [0..*]

1.4.18 S121_SpatialSource

Class in package 'ImplementationClass'

documentation of the source of the referenced information.

S121_SpatialSource
Version 1.0 Phase CD Proposed
S121 PT created on 15/11/2016. Last modified 23/11/2016
Extends S121_Source

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from S121_SpatialSource to S121_Source
[Direction is 'Source -> Destination'.]

ATTRIBUTES

type : S121_SpatialSourceType Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

1.4.19 S121_Source

Class in package 'ImplementationClass'

documentation of the source of the referenced information.

S121_Source
Version 1.0 Phase CD Proposed

S121 PT created on 23/11/2016. Last modified 23/11/2016

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_Source to «metaclass» S100_GF_InformationType
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from S121_Source to «featureType» LA_Source
[Name is Realize. Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from S121_SpatialSource to S121_Source
[Direction is 'Source -> Destination'.]

Generalization from S121_AdministrativeSource to S121_Source
[Direction is 'Source -> Destination'.]

ATTRIBUTES

acceptance : DateTime Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the date of force of law of the source by an authority
[Is static False. Containment is Not Specified.]

availabilityStatus : LA_AvailabilityStatusType Public
[Is static False. Containment is Not Specified.]

extArchiveID : ExtArchive Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the identifier of a source in an external registration
[Is static False. Containment is Not Specified.]

lifeSpanStamp : DateTime Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the moment that the event represented by the instance of LA_Source is further processed in the LA system
[Is static False. Containment is Not Specified.]

maintype : CI_PresentationFormCode Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the type of document
[Is static False. Containment is Not Specified.]

name : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Document name - for example the document (legislation, treaty, title) that defines the object.
[Stereotype is «S121». Is static False. Containment is Not Specified.]

ATTRIBUTES

quality : DQ_Element Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

recordation : DateTime Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the date of registration (recordation) of the source by registering authority
[Is static False. Containment is Not Specified.]

registryNumber : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Unique official identifier of the record in a registry. For example, in states with registers of legislative instruments, versioning is controlled by the registry ID.
[Stereotype is «S121». Is static False. Containment is Not Specified.]

sID : Oid Public

the identifier of the source
[Is static False. Containment is Not Specified.]

source : S121_ResponsibleParty Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

submission : DateTime Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the date of submission of the source by a party
[Is static False. Containment is Not Specified.]

URL : S121_OnlineResource Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

URL - this is official the URL (or equivalent online resource) where the document is distributed.
[Stereotype is «S121». Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Destination -> Source) conveyancerSource

Source: Public source (Class) S121_Source
Cardinality: [0..*]

Target: Public conveyancer (Class) S121_Party
Cardinality: [1..*]

Association (direction: Destination -> Source) saSource

Source: Public source (Class) S121_Source
Cardinality: [0..*]

Target: Public sa (Abstract) S121_SpatialAttributeType «FeatureAttribute»
Cardinality: [0..*]

Association (direction: Destination -> Source) unitSource

Source: Public source (Class) S121_Source

Target: Public unit (Class) S121_BAUnit

ASSOCIATIONS

Cardinality: [0..*] Cardinality: [0..*]

Association (direction: Destination -> Source) rrrSource

Source: Public source (Class) S121_Source
Cardinality: [1..*]
Target: Public rrr (Abstract) S121_RRR «abstract»
Cardinality: [0..*]

Association (direction: Source -> Destination) restrictionSource

Source: Public restriction (Class) S121_Restriction
Cardinality: [0..*]
Target: Public source (Class) S121_Source
Cardinality: [1..*]

Association (direction: Source -> Destination) rightSource

Source: Public right (Class) S121_Right
Cardinality: [0..*]
Target: Public source (Class) S121_Source
Cardinality: [1..*]

Association (direction: Source -> Destination) suSource

Source: Public su (Abstract) S121_FeatureUnit «FeatureType»
Cardinality: [0..*]
Target: Public source (Class) S121_Source
Cardinality: [0..*]

1.4.20 S121_BAUnit

Class in package 'ImplementationClass'

The Basic Administrative Unit is an information object to “which (one or more) unique and homogeneous rights, responsibilities or restrictions are associated”. It is an information object since it does not directly take on spatial attributes. The S121_BAUnit is derived from both the S121_GF_ThematicAttributeType and the LA_BAUnit defined in ISO 19152.

S121_BAUnit
Version Phase Proposed
CHS created on 15/11/2016. Last modified 20/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_BAUnit to «featureType» LA_BAUnit
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from S121_BAUnit to «metaclass» S100_GF_InformationType
[Direction is 'Source -> Destination'.]

Generalization from S121_BAUnit to S121_VersionedObject
[Direction is 'Source -> Destination'.]

Realization from S121_BAUnit to «metaclass» S121_GF_ThematicAttributeType
[Name is Realize. Direction is 'Source -> Destination'.]

ATTRIBUTES

type : S121_BAUnitType Public

the use type of the basic administrative unit

[Is static False. Containment is Not Specified.]

uID : Oid Public

An ID used in relationships between elements of the RRR structure and the Basic Administrative Unit.

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination)

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Target: Public restriction (Class) S121_Restriction
Cardinality: [1..*]

Association (direction: Unspecified) relationBAUnit

Source: Public unit1 (Class) S121_BAUnit
Cardinality: [0..*]

Target: Public unit2 (Class) S121_BAUnit
Cardinality: [0..*]

Association (direction: Source -> Destination) baunitAsParty

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Target: Public party (Class) S121_Party
Cardinality: [0..*]

Association (direction: Source -> Destination)

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Target: Public right (Class) S121_Right
Cardinality: [1..*]

Association (direction: Source -> Destination)

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Target: Public responsibility (Class) S121_Responsibility
Cardinality: [1..*]

Association (direction: Source -> Destination)

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Target: Public rrr (Abstract) S121_RRR «abstract»
Cardinality: [1..*]

Association (direction: Source -> Destination)

Source: Public (Abstract) S121_FeatureUnit «FeatureType»
Cardinality: [0..*]

Target: Public (Class) S121_BAUnit
Cardinality: [1..*]

Association (direction: Unspecified) relationBAUnit

Source: Public unit1 (Class) S121_BAUnit
Cardinality: [0..*]

Target: Public unit2 (Class) S121_BAUnit
Cardinality: [0..*]

ASSOCIATIONS

Association (direction: Destination -> Source) unitSource

Source: Public source (Class) S121_Source
Cardinality: [0..*]

Target: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

1.4.21 S121_PartyMember

AssociationClass in package 'ImplementationClass'

S121_PartyMember derived from LA_PartyMember

Note: This class is a relationship class - i.e. it provides an attribute on a relationship. A party member is a fraction of a group party.

Note: ISO 19152 LADM stereotypes this the LA_PartyMember object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed.

S121_PartyMember
Version Phase Proposed
CHS created on 17/11/2016. Last modified 19/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from S121_PartyMember to S121_VersionedObject
[Direction is 'Source -> Destination'.]

ATTRIBUTES

share : Fraction Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the fraction of the whole

[Is static False. Containment is Not Specified.]

1.4.22 S121_Party

Class in package 'ImplementationClass'

S121_Party is a a person or organisation that plays a role in a **rights** transaction

S121_Party realized from LA_Party

Note: ISO 19152 LADM stereotypes this the LA_Party object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed.

S121_Party
Version Phase Mandatory
CHS created on 15/11/2016. Last modified 19/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_Party to «metaclass» S100_GF_InformationType
[Direction is 'Source -> Destination'.]

Realization from S121_Party to «featureType» LA_Party
[Name is Realize. Direction is 'Source -> Destination'.]

Generalization from S121_Party to S121_VersionedObject
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from S121_GroupParty to S121_Party
[Direction is 'Source -> Destination'.]

ATTRIBUTES

extPID : Oid Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the identifier of the party in an external registration
[Is static False. Containment is Not Specified.]

name : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the name of the party
[Is static False. Containment is Not Specified.]

pID : Oid Public

the identifier of the party
[Is static False. Containment is Not Specified.]

role : CharacterString Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

type : S121_PartyType Public

the type of the party
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

AssociationClass (direction: Unspecified) members

Source: Public parties (Class) S121_Party
Cardinality: [2..*]

Target: Public group (Class) S121_GroupParty
Cardinality: [0..1]

Association (direction: Source -> Destination) party associated with right

ASSOCIATIONS

Source: Public right (Class) S121_Right
Cardinality: [0..*]
Target: Public party (Class) S121_Party
Cardinality: [0..1]

Association (direction: Destination -> Source) conveyancerSource

Source: Public source (Class) S121_Source
Cardinality: [0..*]
Target: Public conveyancer (Class) S121_Party
Cardinality: [1..*]

Association (direction: Source -> Destination) baunitAsParty

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]
Target: Public party (Class) S121_Party
Cardinality: [0..*]

Association (direction: Source -> Destination) party associated with restriction

Source: Public restriction (Class) S121_Restriction
Cardinality: [0..*]
Target: Public party (Class) S121_Party
Cardinality: [0..1]

Association (direction: Source -> Destination) party associated with responsibility

Source: Public responsibility (Class) S121_Responsibility
Cardinality: [0..*]
Target: Public party (Class) S121_Party
Cardinality: [0..1]

Association (direction: Source -> Destination) rrrParty

Source: Public rrr (Abstract) S121_RRR «abstract»
Cardinality: [0..*]
Target: Public party (Class) S121_Party
Cardinality: [0..1]

1.4.23 S121_GroupParty

Class in package 'ImplementationClass'

S121_GroupParty is any number of **parties**, forming together a distinct entity, with each **party** registered.

S121_GroupParty realized from LA_GroupParty

Note: ISO 19152 LADM stereotypes this the LA_GroupParty object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed.

S121_GroupParty
Version Phase Proposed
CHS created on 15/11/2016. Last modified 19/11/2016
Extends S121_Party, S121_VersionedObject

CONSTRAINTS

Invariant. sum(LA_PartyMember.share)=1 per group
[Approved, Weight is 0.]

OUTGOING STRUCTURAL RELATIONSHIPS

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from S121_GroupParty to S121_VersionedObject

[Direction is 'Source -> Destination'.]

Generalization from S121_GroupParty to S121_Party

[Direction is 'Source -> Destination'.]

Realization from S121_GroupParty to «featureType» LA_GroupParty

[Direction is 'Source -> Destination'.]

ATTRIBUTES

groupID : Oid Public

the identifier of a group party

[Is static False. Containment is Not Specified.]

type : S121_GroupPartyType Public

the type of the group party

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination)

Source: Public restriction (Class) S121_Restriction
Cardinality: [0..*]

Target: Public group (Class) S121_GroupParty
Cardinality: [0..1]

Association (direction: Source -> Destination)

Source: Public right (Class) S121_Right
Cardinality: [0..*]

Target: Public group (Class) S121_GroupParty
Cardinality: [0..1]

AssociationClass (direction: Unspecified) members

Source: Public parties (Class) S121_Party
Cardinality: [2..*]

Target: Public group (Class) S121_GroupParty
Cardinality: [0..1]

Association (direction: Source -> Destination)

Source: Public responsibility (Class) S121_Responsibility
Cardinality: [0..*]

Target: Public group (Class) S121_GroupParty
Cardinality: [0..1]

1.4.24 S121_RRR

Abstract «abstract» in package 'ImplementationClass'

S121_RRR realized from LA_RRR

An instance of a subclass of LA_RRR is a **right** (or social tenure relationship), a **restriction**, or a **responsibility**

Note: ISO 19152 LADM stereotypes this the LA_RRR object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed. In the S-100 environment the RRR objects are information objects that carry an object identifier "Oid". They can be referenced as objects from the attributes associated with an S-100 Feature Object. This allows Rights, Responsibilities and Restrictions to be re-used by several objects. Thagt is, several objects may reference the same RRR objects.

S121_RRR
Version Phase Proposed
CHS created on 15/11/2016. Last modified 20/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from «abstract» S121_RRR to «featureType» LA_RRR
[Name is Realize. Direction is 'Source -> Destination'.]

Generalization from «abstract» S121_RRR to S121_VersionedObject
[Direction is 'Source -> Destination'.]

Realization from «abstract» S121_RRR to «metaclass» S100_GF_InformationType
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from S121_Responsibility to «abstract» S121_RRR
[Direction is 'Source -> Destination'.]

Generalization from S121_Right to «abstract» S121_RRR
[Direction is 'Source -> Destination'.]

Generalization from S121_Restriction to «abstract» S121_RRR
[Direction is 'Source -> Destination'.]

ATTRIBUTES

description : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

description regarding the right, restriction or responsibility
[Is static False. Containment is Not Specified.]

rID : Oid Public

The RRR identifier
[Is static False. Containment is Not Specified.]

share : Fraction Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

a share in an instance of a subclass of LA_RRR
[Is static False. Containment is Not Specified.]

ATTRIBUTES

shareCheck : Boolean Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

boolean indicating whether the constraint is applicable

[Is static False. Containment is Not Specified.]

timeSpec : S100_GF_DateTimeAttributeClass Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

operational use of a right in time sharing

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination) rrrParty

Source: Public rrr (Abstract) S121_RRR «abstract»
Cardinality: [0..*]

Target: Public party (Class) S121_Party
Cardinality: [0..1]

Association (direction: Destination -> Source) rrrSource

Source: Public source (Class) S121_Source
Cardinality: [1..*]

Target: Public rrr (Abstract) S121_RRR «abstract»
Cardinality: [0..*]

Association (direction: Source -> Destination)

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Target: Public rrr (Abstract) S121_RRR «abstract»
Cardinality: [1..*]

1.4.25 S121_Right

Class in package 'ImplementationClass'

S121_Right is an action, activity or class of actions that a system participant may perform on or using an associated resource.

S121_Right is realized from LA_Right

For the S-121 code lists have been specialized to the marine environment. These code lists are currently generic or partial and the contents need to be defined as part of the S-121 project development. Code lists are used, rather than character strings in order to ensure consistency.

Note: ISO 19152 LADM stereotypes this the LA_Right object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed. In the S-100 environment the RRR objects are information objects that carry an object identifier "Oid". They can be referenced as objects from the attributes associated with an S-100 Feature Object.

S121_Right
Version Phase Proposed
CHS created on 15/11/2016. Last modified 19/11/2016
Extends S121_RRR

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_Right to «featureType» LA_Right

[Direction is 'Source -> Destination'.]

Generalization from S121_Right to «abstract» S121_RRR

[Direction is 'Source -> Destination'.]

ATTRIBUTES

type : S121_RightType Public

the type of the right

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination) party associated with right

Source: Public right (Class) S121_Right
Cardinality: [0..*]

Target: Public party (Class) S121_Party
Cardinality: [0..1]

Association (direction: Source -> Destination)

Source: Public right (Class) S121_Right
Cardinality: [0..*]

Target: Public group (Class) S121_GroupParty
Cardinality: [0..1]

Association (direction: Source -> Destination) rightSource

Source: Public right (Class) S121_Right
Cardinality: [0..*]

Target: Public source (Class) S121_Source
Cardinality: [1..*]

Association (direction: Source -> Destination)

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Target: Public right (Class) S121_Right
Cardinality: [1..*]

1.4.26 S121_Restriction

Class in package 'ImplementationClass'

S121_Restriction is a formal or informal entitlement to refrain from doing something.

S121_Restriction is realized from LA_Restriction

For the S-121 code lists have been specialized to the marine environment. These code lists are currently generic or partial and the contents need to be defined as part of the S-121 project development. Code lists are used, rather than character strings in order to ensure consistency.

Note: ISO 19152 LADM stereotypes this the LA_Restriction object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed. In the S-100 environment the RRR objects are information objects that carry an object identifier "Oid". They can be referenced as objects from the

attributes associated with an S-100 Feature Object.

S121_Restriction
Version 1 Phase 1 Proposed
CHS created on 15/11/2016. Last modified 19/11/2016
Extends S121_RRR

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_Restriction to «featureType» LA_Restriction
[Direction is 'Source -> Destination'.]

Generalization from S121_Restriction to «abstract» S121_RRR
[Direction is 'Source -> Destination'.]

ATTRIBUTES

partyRequired : Boolean Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

indicates whether a party is required for the registration of the restriction in the association to LA_Party
[Is static False. Containment is Not Specified.]

type : CharacterString Public

the type of the restriction
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination)

Source: Public restriction (Class) S121_Restriction
Cardinality: [0..*]
Target: Public group (Class) S121_GroupParty
Cardinality: [0..1]

Association (direction: Source -> Destination) party associated with restriction

Source: Public restriction (Class) S121_Restriction
Cardinality: [0..*]
Target: Public party (Class) S121_Party
Cardinality: [0..1]

Association (direction: Source -> Destination) restrictionSource

Source: Public restriction (Class) S121_Restriction
Cardinality: [0..*]
Target: Public source (Class) S121_Source
Cardinality: [1..*]

Association (direction: Source -> Destination)

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]
Target: Public restriction (Class) S121_Restriction
Cardinality: [1..*]

1.4.27 S121_Responsibility

Class in package 'ImplementationClass'

S121_Responsibility is a formal or informal obligation to do something

S121_Responsibility realized from LA_Responsibility

For the S-121 code lists have been specialized to the marine environment. These code lists are currently generic or partial and the contents need to be defined as part of the S-121 project development. Code lists are used, rather than character strings in order to ensure consistency.

Note: ISO 19152 LADM stereotypes this the LA_Responsibility object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed. In the S-100 environment the RRR objects are information objects that carry an object identifier "Oid". They can be referenced as objects from the attributes associated with an S-100 Feature Object. This allows Rights, Responsibilities and Restrictions to be re-used by several objects. Thagt is, several objects may reference the same RRR objects.

S121_Responsibility
Version 1 Phase 1 Proposed
CHS created on 15/11/2016. Last modified 19/11/2016
Extends S121_RRR

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from S121_Responsibility to «abstract» S121_RRR
[Direction is 'Source -> Destination'.]

Realization from S121_Responsibility to «featureType» LA_Responsibility
[Direction is 'Source -> Destination'.]

ATTRIBUTES

type : S121_ResponsibilityType Public
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination) party associated with responsibility

Source: Public responsibility (Class) S121_Responsibility
Cardinality: [0..*]

Target: Public party (Class) S121_Party
Cardinality: [0..1]

Association (direction: Source -> Destination) responsibilitySource

Source: Public responsibility (Class) S121_Responsibility
Cardinality: [0..*]

Target: Public spurce (Class) S121_AdministrativeSource
Cardinality: [1..*]

Association (direction: Source -> Destination)

Source: Public responsibility (Class) S121_Responsibility
Cardinality: [0..*]

Target: Public group (Class) S121_GroupParty
Cardinality: [0..1]

Association (direction: Source -> Destination)

Source: Public unit (Class) S121_BAUnit

Target: Public responsibility (Class)

ASSOCIATIONS

Cardinality: [0..*]

S121_Responsibility
Cardinality: [1..*]

1.4.28 S121_AdministrativeSource

Class in package 'ImplementationClass'

S121_AdministrativeSource is a **source** with the administrative description (where applicable) of the **parties** involved, the **rights**, **restrictions** and **responsibilities** created and the **basic administrative units** affected

S121_AdministrativeSource derived from LA_AdministrativeSource

Note: ISO 19152 LADM stereotypes this the LA_AdministrativeSource object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed.

S121_AdministrativeSource
Version Phase Proposed
CHS created on 15/11/2016. Last modified 23/11/2016
Extends S121_Source

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_AdministrativeSource to «featureType» LA_AdministrativeSource
[Direction is 'Source -> Destination'.]

Realization from S121_AdministrativeSource to «metaclass» S100_GF_InformationType
[Name is Realize. Direction is 'Source -> Destination'.]

Generalization from S121_AdministrativeSource to S121_Source
[Direction is 'Source -> Destination'.]

ATTRIBUTES

type : S121_AdministrativeSourceType Public

the type of document

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination) responsibilitySource

Source: Public responsibility (Class) S121_Responsibility
Cardinality: [0..*]

Target: Public spurce (Class)
S121_AdministrativeSource
Cardinality: [1..*]

1.4.29 S121 Minimized Implementation Model diagram

Class diagram in package 'S121 Implementation Model'

S121 Minimized Implementation Model
Version 1.0
CHS created on 17/11/2016. Last modified 27/11/2016

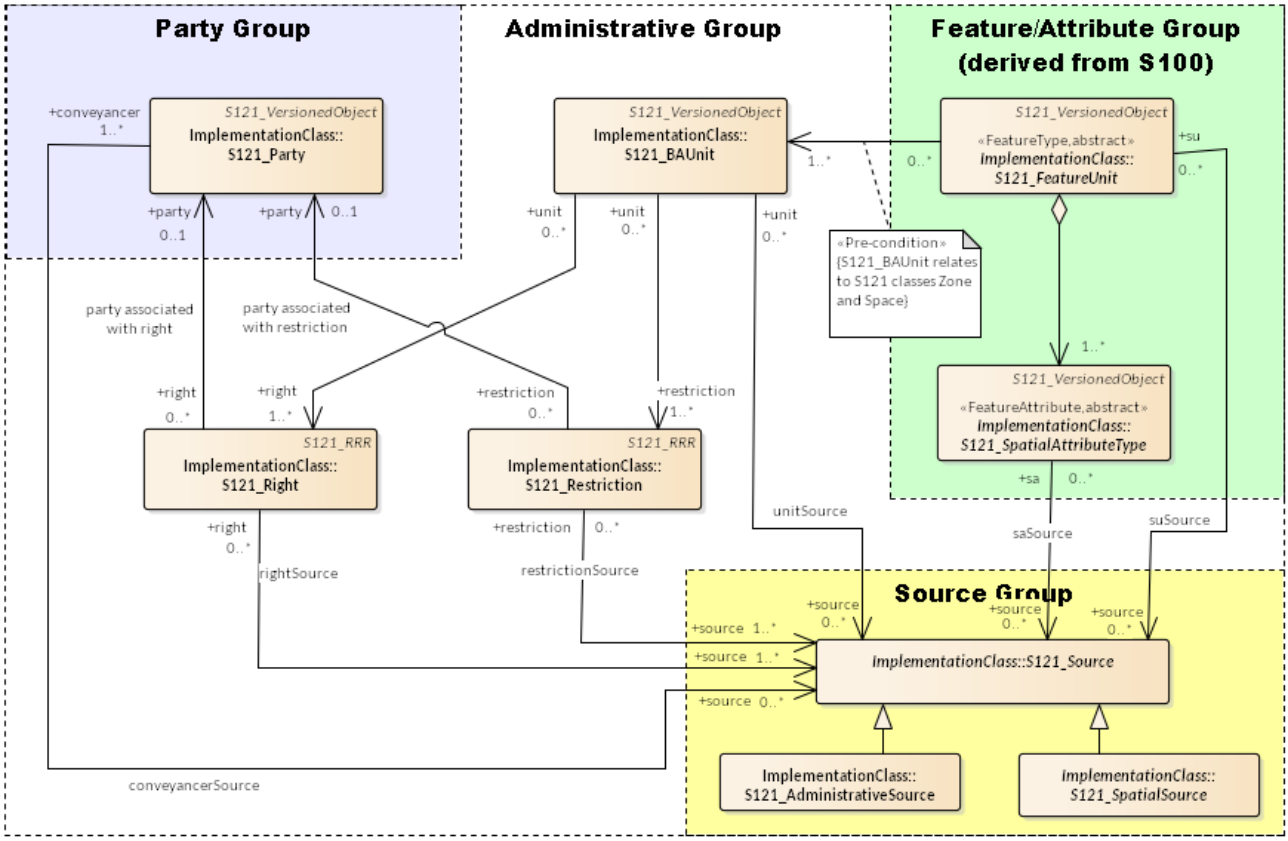

Figure 41: S121 Minimized Implementation Model

1.4.30 S121_FeatureUnit

Abstract «FeatureType» in package 'ImplementationClass'

The Feature Unit is a feature type which relates to the administrative structure through the S121_BA_Unit. The S121_FeatureUnit takes on spatial attributes through a relation to the S121_SpatialAttributeType. The S121_SpatialUnit is derived from both the S100_FeatureType .

S121_FeatureUnit
Version Phase Proposed
CHS created on 15/11/2016. Last modified 27/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS
Generalization from «FeatureType» S121_FeatureUnit to S121_VersionedObject [Direction is 'Source -> Destination'.]
Realization from «FeatureType» S121_FeatureUnit to «featureType» LA_SpatialUnit [Name is Realize. Direction is 'Source -> Destination'.]

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from «FeatureType» S121_FeatureUnit to «metaclass» S121_GF_FeatureType
[Name is Realize. Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Aggregation from «FeatureAttribute» S121_SpatialAttributeType to «FeatureType» S121_FeatureUnit
[Direction is 'Destination -> Source'.]

ATTRIBUTES

suID : Oid Public

the spatial unit identifier

[Is static False. Containment is Not Specified.]

type : S121_FeatureType Public

[Is static False. Containment is Not Specified.]

typeName : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

short textual description of the spatial unit

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination)

Source: Public (Abstract) S121_FeatureUnit «FeatureType»
Cardinality: [0..*]

Target: Public (Class) S121_BAUnit
Cardinality: [1..*]

Association (direction: Source -> Destination) suSource

Source: Public su (Abstract) S121_FeatureUnit «FeatureType»
Cardinality: [0..*]

Target: Public source (Class) S121_Source
Cardinality: [0..*]

1.4.31 S121_SpatialAttributeType

Abstract «FeatureAttribute» in package 'ImplementationClass'

The Spatial Attribute Type as defined for S121 is derived from the class LA_SpatialUnit defined in ISO 19152. It also inherits from S100_GF_SpatialAttributeType. This means that the geometry types inherited from S-100 apply. Only the geometry types GM_Point, GM_MultiPoint, GM_Curve, GM_Surface, CV_Coverage, GM_Curve (arcByCentrePoint and circleByCentrePoint may be used.

S121_SpatialAttributeType
Version Phase Proposed
S121 PT created on 15/11/2016. Last modified 27/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS

Aggregation from «FeatureAttribute» S121_SpatialAttributeType to «FeatureType» S121_FeatureUnit
[Direction is 'Destination -> Source'.]

Generalization from «FeatureAttribute» S121_SpatialAttributeType to S121_VersionedObject
[Direction is 'Source -> Destination'.]

Realization from «FeatureAttribute» S121_SpatialAttributeType to «metaclass» S121_GF_SpatialAttributeType
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from «FeatureAttribute» S121_SpatialAttributeType to «featureType» LA_SpatialUnit
[Name is Realize. Direction is 'Source -> Destination'.]

ATTRIBUTES

geometry : GM_Object Public
[Stereotype is «S100_GF_SpatialAttributeType». Is static False. Containment is Not Specified.]

label : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

short textual description of the spatial unit
[Is static False. Containment is Not Specified.]

referencePoint : GM_Point Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the coordinates of a point inside the spatial unit
[Is static False. Containment is Not Specified.]

referenceSystem : S100_IO_IdentifiedObject Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Spatial Referencing System

Constraints:
requirement : Pre-condition
[Is static False. Containment is Not Specified.]

salID : Oid Public

the spatial unit identifier
[Is static False. Containment is Not Specified.]

scaleMaximum : PositiveInteger Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Stereotype is «S100_GF_SpatialAttributeType». Is static False. Containment is Not Specified.]

scaleMinimum : PositiveInteger Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Stereotype is «S100_GF_SpatialAttributeType». Is static False. Containment is Not Specified.]

ATTRIBUTES

surfaceRelation : LA_SurfaceRelationType Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Destination -> Source) saSource

Source: Public source (Class) S121_Source
Cardinality: [0..*]

Target: Public sa (Abstract)
S121_SpatialAttributeType «FeatureAttribute»
Cardinality: [0..*]

1.4.32 S121_SpatialSource

Class in package 'ImplementationClass'

documentation of the source of the referenced information.

S121_SpatialSource
Version 1.0 Phase CD Proposed
S121 PT created on 15/11/2016. Last modified 23/11/2016
Extends S121_Source

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from S121_SpatialSource to S121_Source
[Direction is 'Source -> Destination'.]

ATTRIBUTES

type : S121_SpatialSourceType Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

1.4.33 S121_Source

Class in package 'ImplementationClass'

documentation of the source of the referenced information.

S121_Source
Version 1.0 Phase CD Proposed
S121 PT created on 23/11/2016. Last modified 23/11/2016

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_Source to «metaclass» S100_GF_InformationType
[Name is Realize. Direction is 'Source -> Destination'.]

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_Source to «featureType» LA_Source
[Name is Realize. Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from S121_SpatialSource to S121_Source
[Direction is 'Source -> Destination'.]

Generalization from S121_AdministrativeSource to S121_Source
[Direction is 'Source -> Destination'.]

ATTRIBUTES

acceptance : DateTime Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the date of force of law of the source by an authority
[Is static False. Containment is Not Specified.]

availabilityStatus : LA_AvailabilityStatusType Public
[Is static False. Containment is Not Specified.]

extArchiveID : ExtArchive Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the identifier of a source in an external registration
[Is static False. Containment is Not Specified.]

lifeSpanStamp : DateTime Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the moment that the event represented by the instance of LA_Source is further processed in the LA system
[Is static False. Containment is Not Specified.]

maintype : CI_PresentationFormCode Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the type of document
[Is static False. Containment is Not Specified.]

name : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Document name - for example the document (legislation, treaty, title) that defines the object.
[Stereotype is «S121». Is static False. Containment is Not Specified.]

quality : DQ_Element Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

recordation : DateTime Public

ATTRIBUTES

Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the date of registration (recordation) of the source by registering authority

[Is static False. Containment is Not Specified.]

registryNumber : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Unique official identifier of the record in a registry. For example, in states with registers of legislative instruments, versioning is controlled by the registry ID.

[Stereotype is «S121». Is static False. Containment is Not Specified.]

sID : Oid Public

the identifier of the source

[Is static False. Containment is Not Specified.]

source : S121_ResponsibleParty Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

[Is static False. Containment is Not Specified.]

submission : DateTime Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the date of submission of the source by a party

[Is static False. Containment is Not Specified.]

URL : S121_OnlineResource Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

URL - this is official the URL (or equivalent online resource) where the document is distributed.

[Stereotype is «S121». Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Destination -> Source) conveyancerSource

Source: Public source (Class) S121_Source
Cardinality: [0..*]

Target: Public conveyancer (Class) S121_Party
Cardinality: [1..*]

Association (direction: Destination -> Source) saSource

Source: Public source (Class) S121_Source
Cardinality: [0..*]

Target: Public sa (Abstract) S121_SpatialAttributeType «FeatureAttribute»
Cardinality: [0..*]

Association (direction: Destination -> Source) unitSource

Source: Public source (Class) S121_Source
Cardinality: [0..*]

Target: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Association (direction: Destination -> Source) rrrSource

Source: Public source (Class) S121_Source

Target: Public rrr (Abstract) S121_RRR «abstract»

ASSOCIATIONS

Cardinality: [1..*] Cardinality: [0..*]

Association (direction: Source -> Destination) restrictionSource

Source: Public restriction (Class) S121_Restriction
Cardinality: [0..*]
Target: Public source (Class) S121_Source
Cardinality: [1..*]

Association (direction: Source -> Destination) rightSource

Source: Public right (Class) S121_Right
Cardinality: [0..*]
Target: Public source (Class) S121_Source
Cardinality: [1..*]

Association (direction: Source -> Destination) suSource

Source: Public su (Abstract) S121_FeatureUnit «FeatureType»
Cardinality: [0..*]
Target: Public source (Class) S121_Source
Cardinality: [0..*]

1.4.34 S121_BAUnit

Class in package 'ImplementationClass'

The Basic Administrative Unit is an information object to “which (one or more) unique and homogeneous rights, responsibilities or restrictions are associated”. It is an information object since it does not directly take on spatial attributes. The S121_BAUnit is derived from both the S121_GF_ThematicAttributeType and the LA_BAUnit defined in ISO 19152.

S121_BAUnit
Version Phase Proposed
CHS created on 15/11/2016. Last modified 20/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_BAUnit to «featureType» LA_BAUnit
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from S121_BAUnit to «metaclass» S100_GF_InformationType
[Direction is 'Source -> Destination'.]

Generalization from S121_BAUnit to S121_VersionedObject
[Direction is 'Source -> Destination'.]

Realization from S121_BAUnit to «metaclass» S121_GF_ThematicAttributeType
[Name is Realize. Direction is 'Source -> Destination'.]

ATTRIBUTES

type : S121_BAUnitType Public

the use type of the basic administrative unit
[Is static False. Containment is Not Specified.]

ATTRIBUTES

uID : Oid Public

An ID used in relationships between elements of the RRR structure and the Basic Administrative Unit.

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination)

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Target: Public restriction (Class) S121_Restriction
Cardinality: [1..*]

Association (direction: Unspecified) relationBAUnit

Source: Public unit1 (Class) S121_BAUnit
Cardinality: [0..*]

Target: Public unit2 (Class) S121_BAUnit
Cardinality: [0..*]

Association (direction: Source -> Destination) baunitAsParty

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Target: Public party (Class) S121_Party
Cardinality: [0..*]

Association (direction: Source -> Destination)

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Target: Public right (Class) S121_Right
Cardinality: [1..*]

Association (direction: Source -> Destination)

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Target: Public responsibility (Class) S121_Responsibility
Cardinality: [1..*]

Association (direction: Source -> Destination)

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Target: Public rrr (Abstract) S121_RRR «abstract»
Cardinality: [1..*]

Association (direction: Source -> Destination)

Source: Public (Abstract) S121_FeatureUnit «FeatureType»
Cardinality: [0..*]

Target: Public (Class) S121_BAUnit
Cardinality: [1..*]

Association (direction: Unspecified) relationBAUnit

Source: Public unit1 (Class) S121_BAUnit
Cardinality: [0..*]

Target: Public unit2 (Class) S121_BAUnit
Cardinality: [0..*]

Association (direction: Destination -> Source) unitSource

Source: Public source (Class) S121_Source
Cardinality: [0..*]

Target: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

ASSOCIATIONS

1.4.35 S121_Party

Class in package 'ImplementationClass'

S121_Party is a a person or organisation that plays a role in a **rights** transaction

S121_Party realized from LA_Party

Note: ISO 19152 LADM stereotypes this the LA_Party object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed.

S121_Party
Version Phase Mandatory
CHS created on 15/11/2016. Last modified 19/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS
Realization from S121_Party to «metaclass» S100_GF_InformationType [Direction is 'Source -> Destination'.]
Realization from S121_Party to «featureType» LA_Party [Name is Realize. Direction is 'Source -> Destination'.]
Generalization from S121_Party to S121_VersionedObject [Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS
Generalization from S121_GroupParty to S121_Party [Direction is 'Source -> Destination'.]

ATTRIBUTES
extPID : Oid Public Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False) the identifier of the party in an external registration [Is static False. Containment is Not Specified.]
name : CharacterString Public Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False) the name of the party [Is static False. Containment is Not Specified.]
pID : Oid Public the identifier of the party [Is static False. Containment is Not Specified.]

ATTRIBUTES

role : CharacterString Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

type : S121_PartyType Public

the type of the party

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

AssociationClass (direction: Unspecified) members

Source: Public parties (Class) S121_Party
Cardinality: [2..*]
Target: Public group (Class) S121_GroupParty
Cardinality: [0..1]

Association (direction: Source -> Destination) party associated with right

Source: Public right (Class) S121_Right
Cardinality: [0..*]
Target: Public party (Class) S121_Party
Cardinality: [0..1]

Association (direction: Destination -> Source) conveyancerSource

Source: Public source (Class) S121_Source
Cardinality: [0..*]
Target: Public conveyancer (Class) S121_Party
Cardinality: [1..*]

Association (direction: Source -> Destination) baunitAsParty

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]
Target: Public party (Class) S121_Party
Cardinality: [0..*]

Association (direction: Source -> Destination) party associated with restriction

Source: Public restriction (Class) S121_Restriction
Cardinality: [0..*]
Target: Public party (Class) S121_Party
Cardinality: [0..1]

Association (direction: Source -> Destination) party associated with responsibility

Source: Public responsibility (Class) S121_Responsibility
Cardinality: [0..*]
Target: Public party (Class) S121_Party
Cardinality: [0..1]

Association (direction: Source -> Destination) rrrParty

Source: Public rrr (Abstract) S121_RRR «abstract»
Cardinality: [0..*]
Target: Public party (Class) S121_Party
Cardinality: [0..1]

1.4.36 S121_Right

Class in package 'ImplementationClass'

S121_Right is an action, activity or class of actions that a system participant may perform on or using an associated resource.

S121_Right is realized from LA_Right

For the S-121 code lists have been specialized to the marine environment. These code lists are currently generic or partial and the contents need to be defined as part of the S-121 project development. Code lists are used, rather than character strings in order to ensure consistency.

Note: ISO 19152 LADM stereotypes this the LA_Right object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed. In the S-100 environment the RRR objects are information objects that carry an object identifier "Oid". They can be referenced as objects from the attributes associated with an S-100 Feature Object.

S121_Right
Version Phase Proposed
CHS created on 15/11/2016. Last modified 19/11/2016
Extends S121_RRR

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_Right to «featureType» LA_Right
[Direction is 'Source -> Destination'.]

Generalization from S121_Right to «abstract» S121_RRR
[Direction is 'Source -> Destination'.]

ATTRIBUTES

type : S121_RightType Public

the type of the right
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination) party associated with right

Source: Public right (Class) S121_Right
Cardinality: [0..*]
Target: Public party (Class) S121_Party
Cardinality: [0..1]

Association (direction: Source -> Destination)

Source: Public right (Class) S121_Right
Cardinality: [0..*]
Target: Public group (Class) S121_GroupParty
Cardinality: [0..1]

Association (direction: Source -> Destination) rightSource

Source: Public right (Class) S121_Right
Cardinality: [0..*]
Target: Public source (Class) S121_Source
Cardinality: [1..*]

Association (direction: Source -> Destination)

Source: Public unit (Class) S121_BAUnit
Target: Public right (Class) S121_Right

ASSOCIATIONS

Cardinality: [0..*] Cardinality: [1..*]

1.4.37 S121_Restriction

Class in package 'ImplementationClass'

S121_Restriction is a formal or informal entitlement to refrain from doing something.

S121_Restriction is realized from LA_Restriction

For the S-121 code lists have been specialized to the marine environment. These code lists are currently generic or partial and the contents need to be defined as part of the S-121 project development. Code lists are used, rather than character strings in order to ensure consistency.

Note: ISO 19152 LADM stereotypes this the LA_Restriction object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed. In the S-100 environment the RRR objects are information objects that carry an object identifier "Oid". They can be referenced as objects from the attributes associated with an S-100 Feature Object.

S121_Restriction
Version 1 Phase 1 Proposed
CHS created on 15/11/2016. Last modified 19/11/2016
Extends S121_RRR

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_Restriction to «featureType» LA_Restriction
[Direction is 'Source -> Destination'.]

Generalization from S121_Restriction to «abstract» S121_RRR
[Direction is 'Source -> Destination'.]

ATTRIBUTES

partyRequired : Boolean Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

indicates whether a party is required for the registration of the restriction in the association to LA_Party
[Is static False. Containment is Not Specified.]

type : CharacterString Public

the type of the restriction
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination)

Source: Public restriction (Class) S121_Restriction
Cardinality: [0..*]

Target: Public group (Class) S121_GroupParty
Cardinality: [0..1]

ASSOCIATIONS

Association (direction: Source -> Destination) party associated with restriction

Source: Public restriction (Class) S121_Restriction
Cardinality: [0..*]

Target: Public party (Class) S121_Party
Cardinality: [0..1]

Association (direction: Source -> Destination) restrictionSource

Source: Public restriction (Class) S121_Restriction
Cardinality: [0..*]

Target: Public source (Class) S121_Source
Cardinality: [1..*]

Association (direction: Source -> Destination)

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Target: Public restriction (Class) S121_Restriction
Cardinality: [1..*]

1.4.38 S121_AdministrativeSource

Class in package 'ImplementationClass'

S121_AdministrativeSource is a **source** with the administrative description (where applicable) of the **parties** involved, the **rights**, **restrictions** and **responsibilities** created and the **basic administrative units** affected

S121_AdministrativeSource derived from LA_AdministrativeSource

Note: ISO 19152 LADM stereotypes this the LA_AdministrativeSource object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed.

S121_AdministrativeSource
Version Phase Proposed
CHS created on 15/11/2016. Last modified 23/11/2016
Extends S121_Source

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_AdministrativeSource to «featureType» LA_AdministrativeSource
[Direction is 'Source -> Destination'.]

Realization from S121_AdministrativeSource to «metaclass» S100_GF_InformationType
[Name is Realize. Direction is 'Source -> Destination'.]

Generalization from S121_AdministrativeSource to S121_Source
[Direction is 'Source -> Destination'.]

ATTRIBUTES

type : S121_AdministrativeSourceType Public

the type of document

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination) responsibilitySource

Source: Public responsibility (Class) S121_Responsibility
Cardinality: [0..*]

Target: Public spurce (Class) S121_AdministrativeSource
Cardinality: [1..*]

1.4.39 S121 Implementation Feature Type Group diagram

Class diagram in package 'S121 Implementation Model'

S121 Implementation Feature Type Group
Version 1.0
CDOBrien created on 16/11/2016. Last modified 30/11/2016

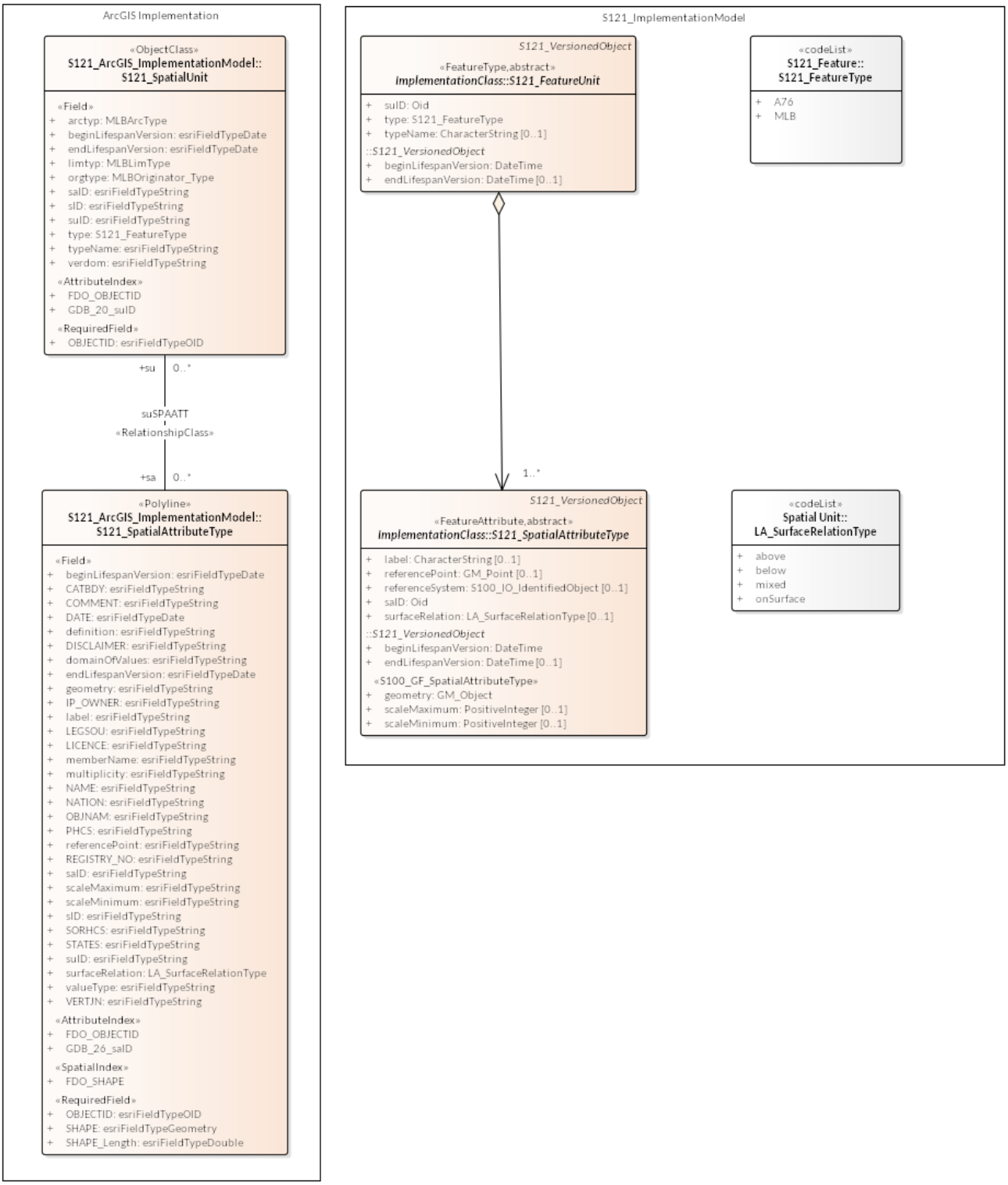

Figure 42: S121 Implementation Feature Type Group

1.4.40 S121_FeatureUnit

Abstract «FeatureType» in package 'ImplementationClass'

The Feature Unit is a feature type which relates to the administrative structure through the S121_BA_Unit. The S121_FeatureUnit takes on spatial attributes through a relation to the S121_SpatialAttributeType. The S121_SpatialUnit is derived from both the S100_FeatureType .

S121_FeatureUnit
Version Phase Proposed

CHS created on 15/11/2016. Last modified 27/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «FeatureType» S121_FeatureUnit to S121_VersionedObject
[Direction is 'Source -> Destination'.]

Realization from «FeatureType» S121_FeatureUnit to «featureType» LA_SpatialUnit
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from «FeatureType» S121_FeatureUnit to «metaclass» S121_GF_FeatureType
[Name is Realize. Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Aggregation from «FeatureAttribute» S121_SpatialAttributeType to «FeatureType» S121_FeatureUnit
[Direction is 'Destination -> Source'.]

ATTRIBUTES

suID : Oid Public

the spatial unit identifier

[Is static False. Containment is Not Specified.]

type : S121_FeatureType Public

[Is static False. Containment is Not Specified.]

typeName : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

short textual description of the spatial unit

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination)

Source: Public (Abstract) S121_FeatureUnit «FeatureType»
Cardinality: [0..*]

Target: Public (Class) S121_BAUnit
Cardinality: [1..*]

Association (direction: Source -> Destination) suSource

Source: Public su (Abstract) S121_FeatureUnit «FeatureType»
Cardinality: [0..*]

Target: Public source (Class) S121_Source
Cardinality: [0..*]

1.4.41 S121_SpatialAttributeType

Abstract «FeatureAttribute» in package 'ImplementationClass'

The Spatial Attribute Type as defined for S121 is derived from the class LA_SpatialUnit defined in ISO 19152. It also inherits from S100_GF_SpatialAttributeType. This means that the geometry types inherited from S-100 apply. Only the geometry types GM_Point, GM_MultiPoint, GM_Curve, GM_Surface, CV_Coverage, GM_Curve (arcByCentrePoint and circleByCentrePoint may be used.

S121_SpatialAttributeType
Version Phase Proposed
S121 PT created on 15/11/2016. Last modified 27/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS

Aggregation from «FeatureAttribute» S121_SpatialAttributeType to «FeatureType» S121_FeatureUnit
[Direction is 'Destination -> Source'.]

Generalization from «FeatureAttribute» S121_SpatialAttributeType to S121_VersionedObject
[Direction is 'Source -> Destination'.]

Realization from «FeatureAttribute» S121_SpatialAttributeType to «metaclass» S121_GF_SpatialAttributeType
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from «FeatureAttribute» S121_SpatialAttributeType to «featureType» LA_SpatialUnit
[Name is Realize. Direction is 'Source -> Destination'.]

ATTRIBUTES

geometry : GM_Object Public
[Stereotype is «S100_GF_SpatialAttributeType». Is static False. Containment is Not Specified.]

label : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

short textual description of the spatial unit
[Is static False. Containment is Not Specified.]

referencePoint : GM_Point Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the coordinates of a point inside the spatial unit
[Is static False. Containment is Not Specified.]

referenceSystem : S100_IO_IdentifiedObject Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Spatial Referencing System

Constraints:
requirement : Pre-condition
[Is static False. Containment is Not Specified.]

salD : Oid Public

the spatial unit identifier
[Is static False. Containment is Not Specified.]

ATTRIBUTES

scaleMaximum : PositiveInteger Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Stereotype is «S100_GF_SpatialAttributeType». Is static False. Containment is Not Specified.]

scaleMinimum : PositiveInteger Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Stereotype is «S100_GF_SpatialAttributeType». Is static False. Containment is Not Specified.]

surfaceRelation : LA_SurfaceRelationType Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Destination -> Source) saSource

Source: Public source (Class) S121_Source
Cardinality: [0..*]

Target: Public sa (Abstract)
S121_SpatialAttributeType «FeatureAttribute»
Cardinality: [0..*]

1.4.42 S121_FeatureType

Class «codeList» in package 'S121_Feature'

This code list includes types that have a common characteristic related to the marine environment. The code list is registered in the Feature Concept Dictionary as listed values and as such can be expanded to include all aspects of the legal context. The initial contents are: **MLB** (Marine Limits and Boundaries), and **A76** (UNCLOS article 76). This code list can be extended.

S121_FeatureType
Version 1.0 Phase 1.0 Proposed
created on 21/02/2016. Last modified 27/11/2016

ATTRIBUTES

A76 : Public

UNCLOS article 76

[Is static False. Containment is Not Specified.]

MLB : Public

Marine Limits and Boundaries

[Is static False. Containment is Not Specified.]

1.4.43 S121 Implementation Source Group diagram

Class diagram in package 'S121 Implementation Model'

S121 Implementation Source Group
Version 1.0
CDOBrien created on 17/11/2016. Last modified 27/11/2016

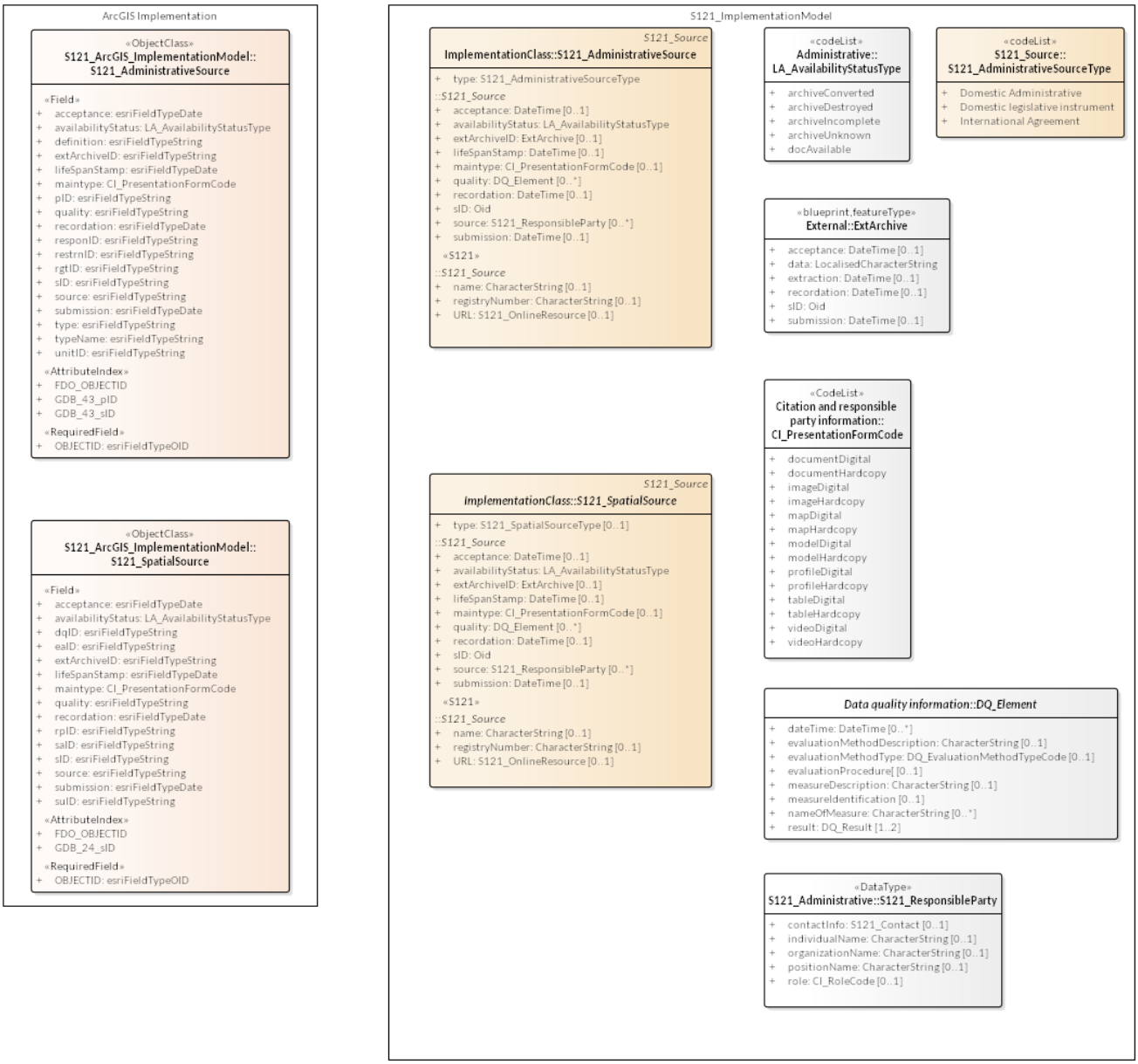

Figure 43: S121 Implementation Source Group

1.4.44 CI_PresentationFormCode

Class «CodeList» in package 'Citation and responsible party information'

Mode in which the data is represented

CI_PresentationFormCode
Version Phase Proposed
created on 29/03/2010. Last modified 19/11/2016

ATTRIBUTES
documentDigital : <undefined> Public

ATTRIBUTES

Piece of written or printed matter that provides a record or evidence of events, an agreement, ownership, identification, etc..

[Is static False. Containment is .]

documentHardcopy : <undefined> Public

Representation of a map which is printed on paper, photographic material, or other media and can be interpreted directly by the human user

[Is static False. Containment is .]

imageDigital : <undefined> Public

Permanent record of the likeness of any natural or man-made features, objects, and activities reproduced on photographic materials. This image can be acquired through the sensing of visual or any other segment of the electromagnetic spectrum by sensors, such as thermal infrared, and high resolution radar.

[Is static False. Containment is .]

imageHardcopy : <undefined> Public

[Is static False. Containment is .]

mapDigital : <undefined> Public

[Is static False. Containment is .]

mapHardcopy : <undefined> Public

[Is static False. Containment is .]

modelDigital : <undefined> Public

Representation in three dimensions of geospatial data

[Is static False. Containment is .]

modelHardcopy : <undefined> Public

[Is static False. Containment is .]

profileDigital : <undefined> Public

Vertical cross-section of geospatial data

[Is static False. Containment is .]

profileHardcopy : <undefined> Public

[Is static False. Containment is .]

tableDigital : <undefined> Public

[Is static False. Containment is .]

tableHardcopy : <undefined> Public

[Is static False. Containment is .]

videoDigital : <undefined> Public

[Is static False. Containment is .]

ATTRIBUTES
videoHardcopy : <undefined> Public [Is static False. Containment is .]

1.4.45 ExtArchive

Class «blueprint» in package 'External'

class ExtArchive is a 'blueprint' class for the external registration of sources

ExtArchive
Version 1.0 Phase 1.0 Proposed
Lokaal created on 03/11/2009. Last modified 17/11/2016

ATTRIBUTES
acceptance : DateTime Public Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False) the date of force of law of the source by the authority [Is static False. Containment is Not Specified.]
data : LocalisedCharacterString Public the content of the source [Is static False. Containment is Not Specified.]
extraction : DateTime Public Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False) [Is static False. Containment is Not Specified.]
recordation : DateTime Public Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False) the date of registration (recordation) of the source by registering authority [Is static False. Containment is Not Specified.]
sID : Oid Public the identifier of the source [Is static False. Containment is Not Specified.]
submission : DateTime Public Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False) the date of submission of the source by a party [Is static False. Containment is Not Specified.]

1.4.46 S121_SpatialSource

Class in package 'ImplementationClass'

documentation of the source of the referenced information.

S121_SpatialSource
Version 1.0 Phase CD Proposed
S121 PT created on 15/11/2016. Last modified 23/11/2016
Extends S121_Source

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from S121_SpatialSource to S121_Source
[Direction is 'Source -> Destination'.]

ATTRIBUTES

type : S121_SpatialSourceType Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

1.4.47 S121_AdministrativeSource

Class in package 'ImplementationClass'

S121_AdministrativeSource is a **source** with the administrative description (where applicable) of the **parties** involved, the **rights**, **restrictions** and **responsibilities** created and the **basic administrative units** affected

S121_AdministrativeSource derived from LA_AdministrativeSource

Note: ISO 19152 LADM stereotypes this the LA_AdministrativeSource object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed.

S121_AdministrativeSource
Version Phase Proposed
CHS created on 15/11/2016. Last modified 23/11/2016
Extends S121_Source

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_AdministrativeSource to «featureType» LA_AdministrativeSource
[Direction is 'Source -> Destination'.]

Realization from S121_AdministrativeSource to «metaclass» S100_GF_InformationType
[Name is Realize. Direction is 'Source -> Destination'.]

Generalization from S121_AdministrativeSource to S121_Source
[Direction is 'Source -> Destination'.]

ATTRIBUTES

type : S121_AdministrativeSourceType Public

the type of document

ATTRIBUTES

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination) responsibilitySource

Source: Public responsibility (Class) S121_Responsibility
Cardinality: [0..*]

Target: Public spurce (Class) S121_AdministrativeSource
Cardinality: [1..*]

1.4.48 S121_ResponsibleParty

Class «DataType» in package 'S121_Administrative'

The datatype S121_ResponsibleParty realizes CI_ResponsibleParty.

It uses a simplified form of CI_ContactInfo

It includes direct attributes replacing the reference to CI_Contact and makes CI_RoleCode optional

S121_ResponsibleParty
Version 1 Phase 1 Proposed
CHS created on 26/03/2015. Last modified 27/11/2016

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from «DataType» S121_ResponsibleParty to «datatype» CI_ResponsibleParty
[Direction is 'Source -> Destination'.]

ATTRIBUTES

contactInfo : S121_Contact Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Contact Information of the responsible party

[Is static False. Containment is Not Specified.]

individualName : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Name of the responsible individual

[Is static False. Containment is Not Specified.]

organizationName : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Name of the organization

[Is static False. Containment is Not Specified.]

positionName : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

ATTRIBUTES

Role or position of the responsible person

[Is static False. Containment is Not Specified.]

role : CI_RoleCode Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Function performed by the responsible party

[Is static False. Containment is .]

1.4.49 S121_AdministrativeSourceType

Class «codeList» in package 'S121_Source'

Type of AdministrativeSource

S121_AdministrativeSourceType
Version Phase Proposed
PT S121 created on 18/11/2016. Last modified 27/11/2016

ATTRIBUTES

Domestic Administrative : Public

Source based under a legislative framework by the authority given under domestic legislation for instance petroleum permits

[Is static False. Containment is Not Specified.]

Domestic legislative instrument : Public

These cover primary and secondary legislative processes and domestic implementations of treaties.

For example
- Domestic – Declaration
- Domestic – Public Notice
- Domestic – Proclamation
- Domestic – Order in Council
- Domestic – Legislation
- Domestic – Legislative Instrument

[Is static False. Containment is Not Specified.]

International Agreement : Public

For example:Treaty, Agreement, MOU Memorandum of Understanding, Exchange of letters

[Is static False. Containment is Not Specified.]

1.4.50 S121 Implementation Party Group diagram

Class diagram in package 'S121 Implementation Model'

S121 Implementation Party Group
Version 1.0
CDOBrien created on 16/11/2016. Last modified 27/11/2016

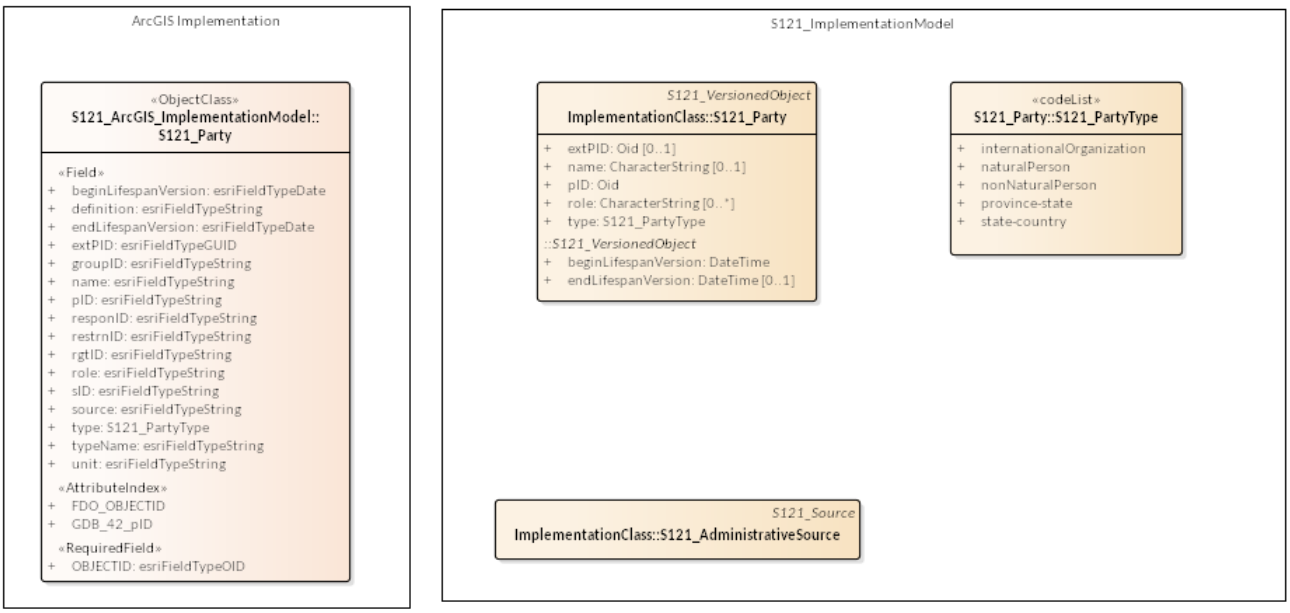

Figure 44: S121 Implementation Party Group

1.4.51 S121_Party

Class in package 'ImplementationClass'

S121_Party is a a person or organisation that plays a role in a **rights** transaction

S121_Party realized from LA_Party

Note: ISO 19152 LADM stereotypes this the LA_Party object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed.

S121_Party
Version Phase Mandatory
CHS created on 15/11/2016. Last modified 19/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS
Realization from S121_Party to «metaclass» S100_GF_InformationType [Direction is 'Source -> Destination'.]
Realization from S121_Party to «featureType» LA_Party [Name is Realize. Direction is 'Source -> Destination'.]
Generalization from S121_Party to S121_VersionedObject [Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from S121_GroupParty to S121_Party

[Direction is 'Source -> Destination'.]

ATTRIBUTES

extPID : Oid Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the identifier of the party in an external registration

[Is static False. Containment is Not Specified.]

name : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the name of the party

[Is static False. Containment is Not Specified.]

pID : Oid Public

the identifier of the party

[Is static False. Containment is Not Specified.]

role : CharacterString Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

[Is static False. Containment is Not Specified.]

type : S121_PartyType Public

the type of the party

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

AssociationClass (direction: Unspecified) members

Source: Public parties (Class) S121_Party
Cardinality: [2..*]

Target: Public group (Class) S121_GroupParty
Cardinality: [0..1]

Association (direction: Source -> Destination) party associated with right

Source: Public right (Class) S121_Right
Cardinality: [0..*]

Target: Public party (Class) S121_Party
Cardinality: [0..1]

Association (direction: Destination -> Source) conveyancerSource

Source: Public source (Class) S121_Source
Cardinality: [0..*]

Target: Public conveyancer (Class) S121_Party
Cardinality: [1..*]

Association (direction: Source -> Destination) baunitAsParty

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Target: Public party (Class) S121_Party
Cardinality: [0..*]

ASSOCIATIONS

Association (direction: Source -> Destination) party associated with restriction

Source: Public restriction (Class) S121_Restriction
Cardinality: [0..*]

Target: Public party (Class) S121_Party
Cardinality: [0..1]

Association (direction: Source -> Destination) party associated with responsibility

Source: Public responsibility (Class) S121_Responsibility
Cardinality: [0..*]

Target: Public party (Class) S121_Party
Cardinality: [0..1]

Association (direction: Source -> Destination) rrrParty

Source: Public rrr (Abstract) S121_RRR «abstract»
Cardinality: [0..*]

Target: Public party (Class) S121_Party
Cardinality: [0..1]

1.4.52 S121_AdministrativeSource

Class in package 'ImplementationClass'

S121_AdministrativeSource is a **source** with the administrative description (where applicable) of the **parties** involved, the **rights**, **restrictions** and **responsibilities** created and the **basic administrative units** affected

S121_AdministrativeSource derived from LA_AdministrativeSource

Note: ISO 19152 LADM stereotypes this the LA_AdministrativeSource object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed.

S121_AdministrativeSource
Version Phase Proposed
CHS created on 15/11/2016. Last modified 23/11/2016
Extends S121_Source

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_AdministrativeSource to «featureType» LA_AdministrativeSource
[Direction is 'Source -> Destination'.]

Realization from S121_AdministrativeSource to «metaclass» S100_GF_InformationType
[Name is Realize. Direction is 'Source -> Destination'.]

Generalization from S121_AdministrativeSource to S121_Source
[Direction is 'Source -> Destination'.]

ATTRIBUTES

type : S121_AdministrativeSourceType Public

the type of document
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination) responsibilitySource

Source: Public responsibility (Class) S121_Responsibility
Cardinality: [0..*]

Target: Public spurce (Class) S121_AdministrativeSource
Cardinality: [1..*]

1.4.53 S121 Implementation Administrative Group diagram

Class diagram in package 'S121 Implementation Model'

S121 Implementation Administrative Group
Version 1.0
CDOBrien created on 17/11/2016. Last modified 27/11/2016

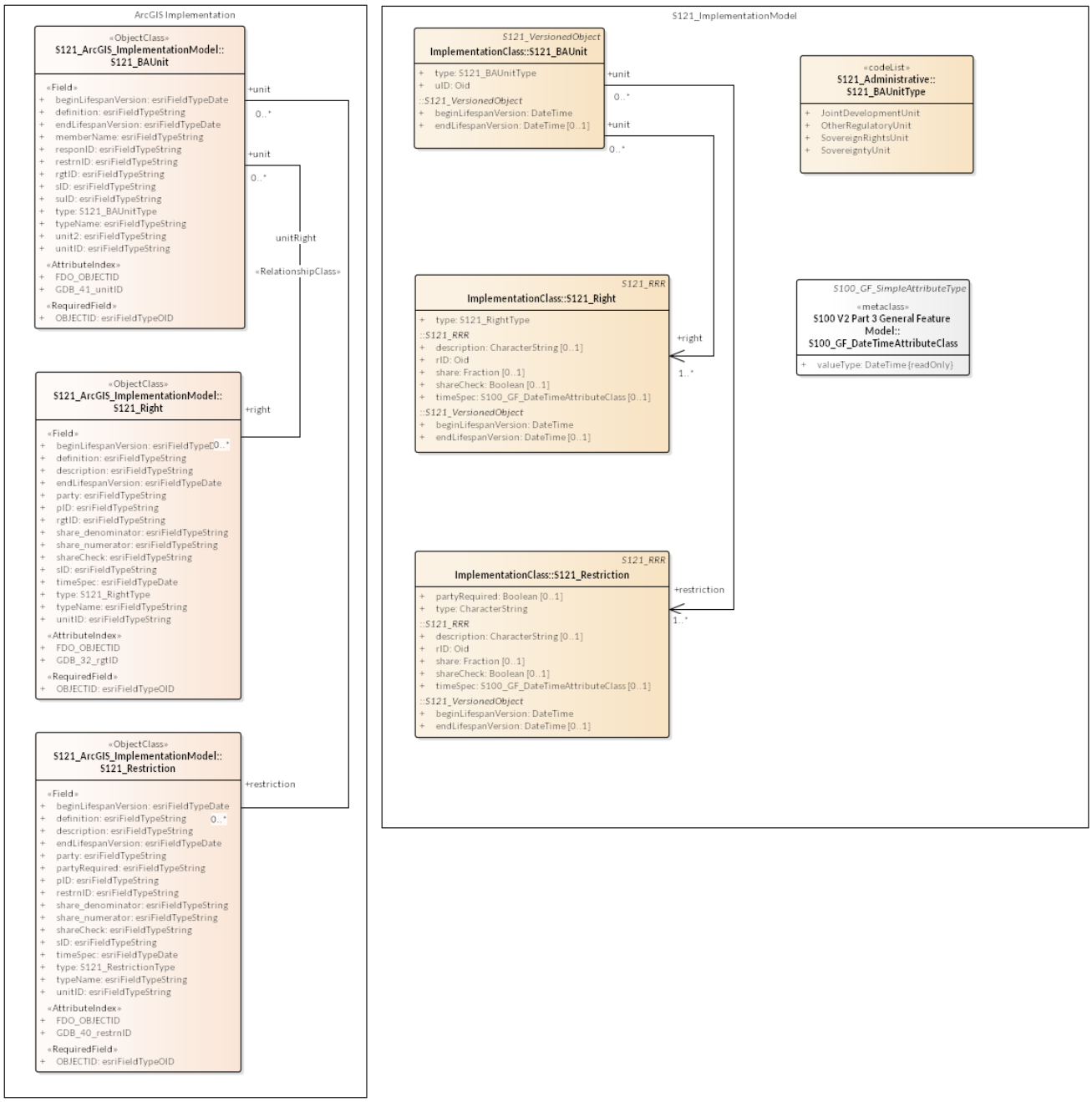

Figure 45: S121 Implementation Administrative Group

1.4.54 S121_BAUnit

Class in package 'ImplementationClass'

The Basic Administrative Unit is an information object to “which (one or more) unique and homogeneous rights, responsibilities or restrictions are associated”. It is an information object since it does not directly take on spatial attributes. The S121_BAUnit is derived from both the S121_GF_ThematicAttributeType and the LA_BAUnit defined in ISO 19152.

S121_BAUnit
Version Phase Proposed
CHS created on 15/11/2016. Last modified 20/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_BAUnit to «featureType» LA_BAUnit
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from S121_BAUnit to «metaclass» S100_GF_InformationType
[Direction is 'Source -> Destination'.]

Generalization from S121_BAUnit to S121_VersionedObject
[Direction is 'Source -> Destination'.]

Realization from S121_BAUnit to «metaclass» S121_GF_ThematicAttributeType
[Name is Realize. Direction is 'Source -> Destination'.]

ATTRIBUTES

type : S121_BAUnitType Public

the use type of the basic administrative unit
[Is static False. Containment is Not Specified.]

uID : Oid Public

An ID used in relationships between elements of the RRR structure and the Basic Administrative Unit.
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination)

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Target: Public restriction (Class) S121_Restriction
Cardinality: [1..*]

Association (direction: Unspecified) relationBAUnit

Source: Public unit1 (Class) S121_BAUnit
Cardinality: [0..*]

Target: Public unit2 (Class) S121_BAUnit
Cardinality: [0..*]

Association (direction: Source -> Destination) baunitAsParty

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Target: Public party (Class) S121_Party
Cardinality: [0..*]

Association (direction: Source -> Destination)

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Target: Public right (Class) S121_Right
Cardinality: [1..*]

Association (direction: Source -> Destination)

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Target: Public responsibility (Class) S121_Responsibility
Cardinality: [1..*]

ASSOCIATIONS

Association (direction: Source -> Destination)

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Target: Public rrr (Abstract) S121_RRR «abstract»
Cardinality: [1..*]

Association (direction: Source -> Destination)

Source: Public (Abstract) S121_FeatureUnit «FeatureType»
Cardinality: [0..*]

Target: Public (Class) S121_BAUnit
Cardinality: [1..*]

Association (direction: Unspecified) relationBAUnit

Source: Public unit1 (Class) S121_BAUnit
Cardinality: [0..*]

Target: Public unit2 (Class) S121_BAUnit
Cardinality: [0..*]

Association (direction: Destination -> Source) unitSource

Source: Public source (Class) S121_Source
Cardinality: [0..*]

Target: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

1.4.55 S121_Right

Class in package 'ImplementationClass'

S121_Right is an action, activity or class of actions that a system participant may perform on or using an associated resource.

S121_Right is realized from LA_Right

For the S-121 code lists have been specialized to the marine environment. These code lists are currently generic or partial and the contents need to be defined as part of the S-121 project development. Code lists are used, rather than character strings in order to ensure consistency.

Note: ISO 19152 LADM stereotypes this the LA_Right object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed. In the S-100 environment the RRR objects are information objects that carry an object identifier "Oid". They can be referenced as objects from the attributes associated with an S-100 Feature Object.

S121_Right
Version Phase Proposed
CHS created on 15/11/2016. Last modified 19/11/2016
Extends S121_RRR

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_Right to «featureType» LA_Right
[Direction is 'Source -> Destination'.]

Generalization from S121_Right to «abstract» S121_RRR
[Direction is 'Source -> Destination'.]

ATTRIBUTES

type : S121_RightType Public

the type of the right

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination) party associated with right

Source: Public right (Class) S121_Right
Cardinality: [0..*]

Target: Public party (Class) S121_Party
Cardinality: [0..1]

Association (direction: Source -> Destination)

Source: Public right (Class) S121_Right
Cardinality: [0..*]

Target: Public group (Class) S121_GroupParty
Cardinality: [0..1]

Association (direction: Source -> Destination) rightSource

Source: Public right (Class) S121_Right
Cardinality: [0..*]

Target: Public source (Class) S121_Source
Cardinality: [1..*]

Association (direction: Source -> Destination)

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Target: Public right (Class) S121_Right
Cardinality: [1..*]

1.4.56 S121_Restriction

Class in package 'ImplementationClass'

S121_Restriction is a formal or informal entitlement to refrain from doing something.

S121_Restriction is realized from LA_Restriction

For the S-121 code lists have been specialized to the marine environment. These code lists are currently generic or partial and the contents need to be defined as part of the S-121 project development. Code lists are used, rather than character strings in order to ensure consistency.

Note: ISO 19152 LADM stereotypes this the LA_Restriction object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed. In the S-100 environment the RRR objects are information objects that carry an object identifier "Oid". They can be referenced as objects from the attributes associated with an S-100 Feature Object.

S121_Restriction
Version 1 Phase 1 Proposed
CHS created on 15/11/2016. Last modified 19/11/2016
Extends S121_RRR

OUTGOING STRUCTURAL RELATIONSHIPS

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_Restriction to «featureType» LA_Restriction
[Direction is 'Source -> Destination'.]

Generalization from S121_Restriction to «abstract» S121_RRR
[Direction is 'Source -> Destination'.]

ATTRIBUTES

partyRequired : Boolean Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

indicates whether a party is required for the registration of the restriction in the association to LA_Party
[Is static False. Containment is Not Specified.]

type : CharacterString Public

the type of the restriction
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination)

Source: Public restriction (Class) S121_Restriction
Cardinality: [0..*]
Target: Public group (Class) S121_GroupParty
Cardinality: [0..1]

Association (direction: Source -> Destination) party associated with restriction

Source: Public restriction (Class) S121_Restriction
Cardinality: [0..*]
Target: Public party (Class) S121_Party
Cardinality: [0..1]

Association (direction: Source -> Destination) restrictionSource

Source: Public restriction (Class) S121_Restriction
Cardinality: [0..*]
Target: Public source (Class) S121_Source
Cardinality: [1..*]

Association (direction: Source -> Destination)

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]
Target: Public restriction (Class) S121_Restriction
Cardinality: [1..*]

1.4.57 S121_BAUnitType

Class «codeList» in package 'S121_Administrative'

This code list describes the basic administrative unit domains in the realm of Maritime Limit and Boundaries which includes:
Sovereignty Unit,
Sovereign Rights Unit,
Joint Development Unit,

Other Jurisdiction and Regulatory Units.

S121_BAUnitType
Version 1.0 Phase 1.0 Proposed
created on 18/11/2016. Last modified 27/11/2016

ATTRIBUTES
JointDevelopmentUnit : Public [Is static False. Containment is Not Specified.]
OtherRegulatoryUnit : Public Other Jurisdiction and Regulatory Areas. [Is static False. Containment is Not Specified.]
SovereignRightsUnit : Public [Is static False. Containment is Not Specified.]
SovereigntyUnit : Public [Is static False. Containment is Not Specified.]

1.4.58 ImplementationClass

Package in package 'S121 Implementation Model'

ImplementationClass
Version 1.0 Phase 1.0 Proposed
CDOBrien created on 15/11/2016. Last modified 15/11/2016

1.4.58.1 S121_ArcGIS_ImplementationModel

Package «ArcGIS» in package 'ImplementationClass'

S121_ArcGIS_ImplementationModel
Version 1.0 Phase 1.0 Proposed
CDOBrien created on 17/11/2016. Last modified 27/11/2016

1.4.58.1.1 S121_ArcGIS_Min_Implementation diagram

ArcGIS diagram in package 'S121_ArcGIS_ImplementationModel'

S121_ArcGIS_Min_Implementation
Version 1.0
CDOBrien created on 17/11/2016. Last modified 17/11/2016

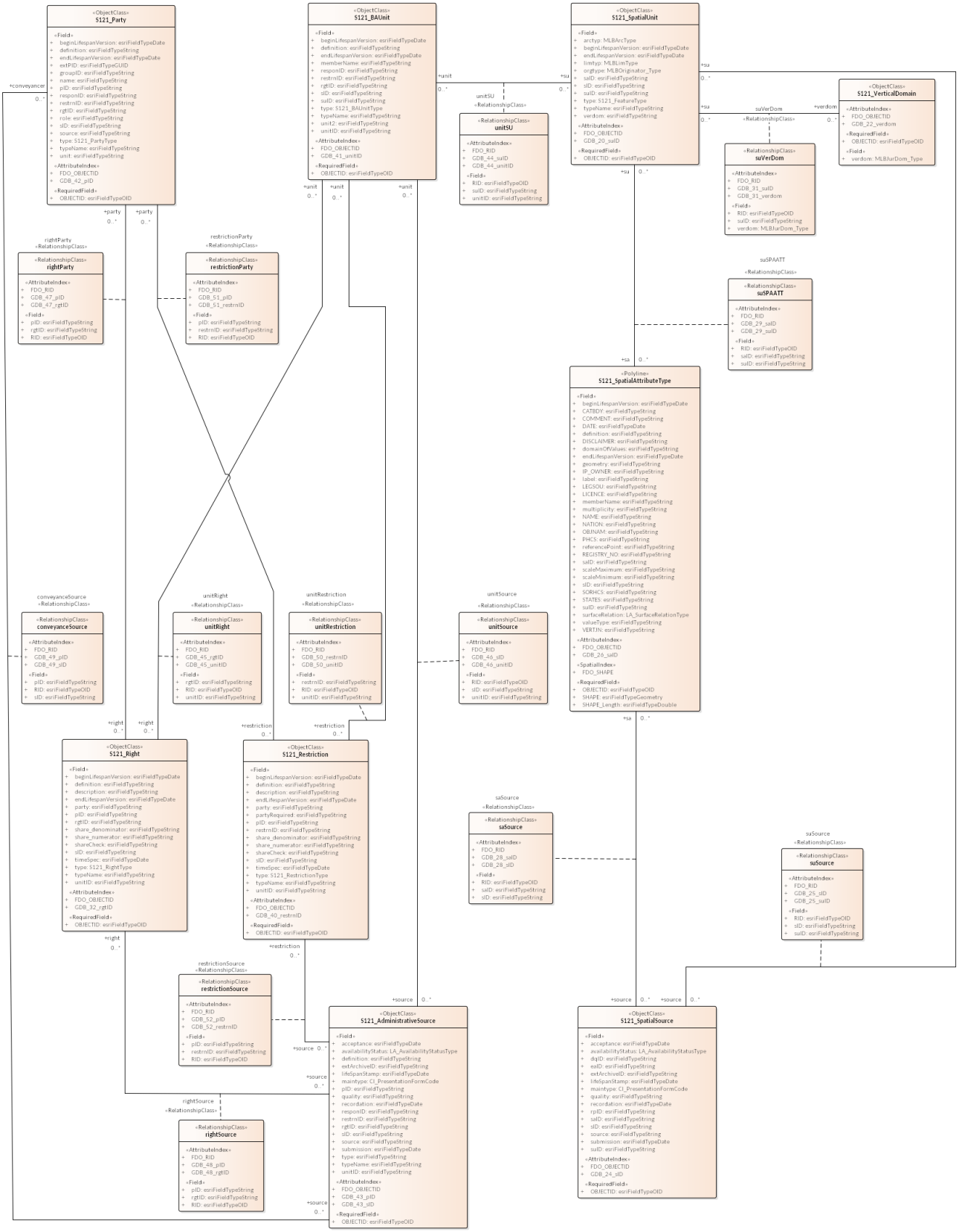

Figure 46: S121_ArcGIS_Min_Implementation

1.4.58.1.2 Domains

Package in package 'S121_ArcGIS_ImplementationModel'

Domains
Version 1.0 Phase 1.0 Proposed
CDOBrien created on 17/11/2016. Last modified 17/11/2016

1.4.58.1.2.1 Domains diagram

ArcGIS diagram in package 'Domains'

Domains
Version 1.0
CDOBrien created on 17/11/2016. Last modified 17/11/2016

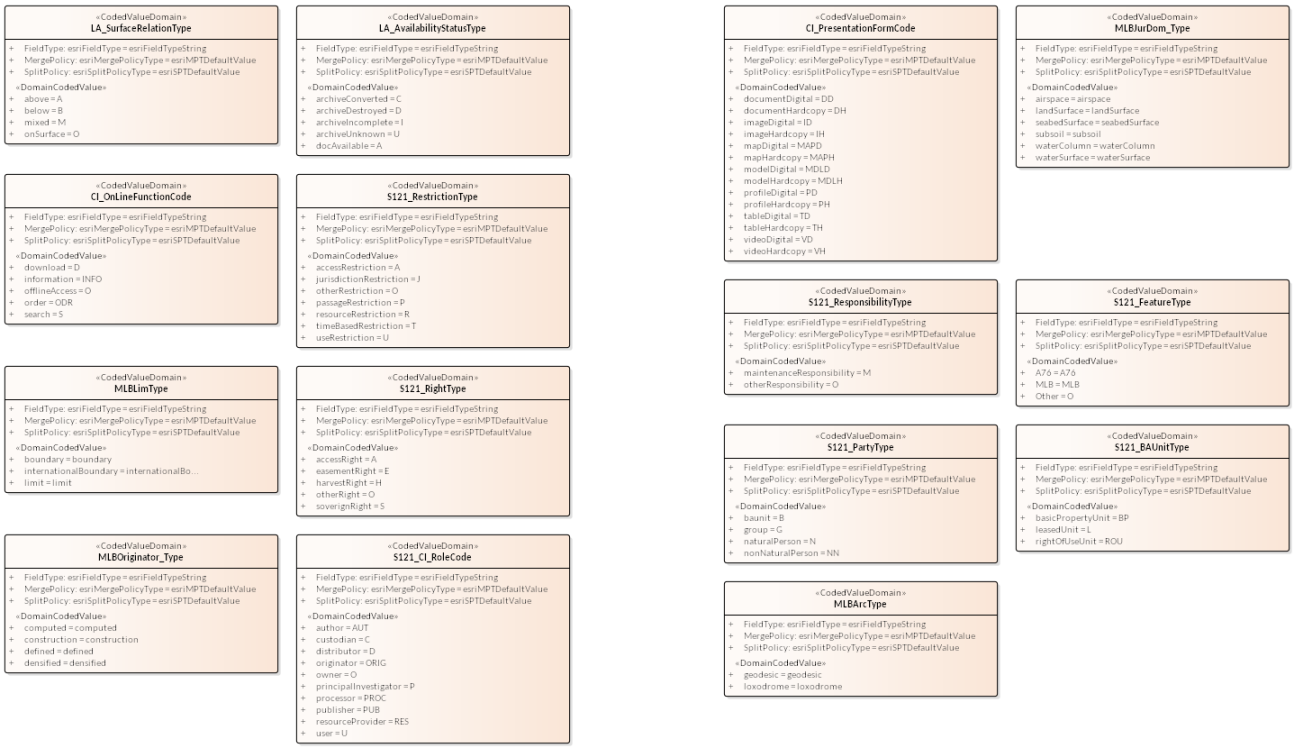

Figure 47: Domains

1.4.58.1.2.2 CI_OnLineFunctionCode

CodedValueDomain «CodedValueDomain» in package 'Domains'

CI OnLineFunction Code

CI_OnLineFunctionCode
Version 1.0 Phase
created on 17/11/2016. Last modified 17/11/2016

ATTRIBUTES
download : Public = D [Stereotype is «DomainCodedValue». Is static False. Containment is .]
FieldType : esriFieldType Public = esriFieldTypeString

ATTRIBUTES
[Is static False. Containment is .]
information : Public = INFO [Stereotype is «DomainCodedValue». Is static False. Containment is .]
MergePolicy : esriMergePolicyType Public = esriMPTDefaultValue [Is static False. Containment is .]
offlineAccess : Public = O [Stereotype is «DomainCodedValue». Is static False. Containment is .]
order : Public = ODR [Stereotype is «DomainCodedValue». Is static False. Containment is .]
search : Public = S [Stereotype is «DomainCodedValue». Is static False. Containment is .]
SplitPolicy : esriSplitPolicyType Public = esriSPTDefaultValue [Is static False. Containment is .]

1.4.58.1.2.3 CI_PresentationFormCode

CodedValueDomain «CodedValueDomain» in package 'Domains'

CI PresentationFormCode

CI_PresentationFormCode
Version 1.0 Phase
created on 17/11/2016. Last modified 17/11/2016

ATTRIBUTES
documentDigital : Public = DD [Stereotype is «DomainCodedValue». Is static False. Containment is .]
documentHardcopy : Public = DH [Stereotype is «DomainCodedValue». Is static False. Containment is .]
FieldType : esriFieldType Public = esriFieldTypeString [Is static False. Containment is .]
imageDigital : Public = ID [Stereotype is «DomainCodedValue». Is static False. Containment is .]
imageHardcopy : Public = IH [Stereotype is «DomainCodedValue». Is static False. Containment is .]
mapDigital : Public = MAPD

ATTRIBUTES
[Stereotype is «DomainCodedValue». Is static False. Containment is .]
mapHardcopy : Public = MAPH [Stereotype is «DomainCodedValue». Is static False. Containment is .]
MergePolicy : esriMergePolicyType Public = esriMPTDefaultValue [Is static False. Containment is .]
modelDigital : Public = MDLD [Stereotype is «DomainCodedValue». Is static False. Containment is .]
modelHardcopy : Public = MDLH [Stereotype is «DomainCodedValue». Is static False. Containment is .]
profileDigital : Public = PD [Stereotype is «DomainCodedValue». Is static False. Containment is .]
profileHardcopy : Public = PH [Stereotype is «DomainCodedValue». Is static False. Containment is .]
SplitPolicy : esriSplitPolicyType Public = esriSPTDefaultValue [Is static False. Containment is .]
tableDigital : Public = TD [Stereotype is «DomainCodedValue». Is static False. Containment is .]
tableHardcopy : Public = TH [Stereotype is «DomainCodedValue». Is static False. Containment is .]
videoDigital : Public = VD [Stereotype is «DomainCodedValue». Is static False. Containment is .]
videoHardcopy : Public = VH [Stereotype is «DomainCodedValue». Is static False. Containment is .]

1.4.58.1.2.4 LA_AvailabilityStatusType

CodedValueDomain «CodedValueDomain» in package 'Domains'

LA AvailabilityStatus Type

LA_AvailabilityStatusType
Version 1.0 Phase
created on 17/11/2016. Last modified 17/11/2016

ATTRIBUTES
archiveConverted : Public = C

ATTRIBUTES
[Stereotype is «DomainCodedValue». Is static False. Containment is .]
archiveDestroyed : Public = D [Stereotype is «DomainCodedValue». Is static False. Containment is .]
archiveIncomplete : Public = I [Stereotype is «DomainCodedValue». Is static False. Containment is .]
archiveUnknown : Public = U [Stereotype is «DomainCodedValue». Is static False. Containment is .]
docAvailable : Public = A [Stereotype is «DomainCodedValue». Is static False. Containment is .]
FieldType : esriFieldType Public = esriFieldTypeString [Is static False. Containment is .]
MergePolicy : esriMergePolicyType Public = esriMPTDefaultValue [Is static False. Containment is .]
SplitPolicy : esriSplitPolicyType Public = esriSPTDefaultValue [Is static False. Containment is .]

1.4.58.1.2.5 LA_SurfaceRelationType

CodedValueDomain «CodedValueDomain» in package 'Domains'

LA SurfaceRelation Type

LA_SurfaceRelationType
Version 1.0 Phase
created on 17/11/2016. Last modified 17/11/2016

ATTRIBUTES
above : Public = A [Stereotype is «DomainCodedValue». Is static False. Containment is .]
below : Public = B [Stereotype is «DomainCodedValue». Is static False. Containment is .]
FieldType : esriFieldType Public = esriFieldTypeString [Is static False. Containment is .]
MergePolicy : esriMergePolicyType Public = esriMPTDefaultValue [Is static False. Containment is .]
mixed : Public = M

ATTRIBUTES
[Stereotype is «DomainCodedValue». Is static False. Containment is .]
onSurface : Public = O [Stereotype is «DomainCodedValue». Is static False. Containment is .]
SplitPolicy : esriSplitPolicyType Public = esriSPTDefaultValue [Is static False. Containment is .]

1.4.58.1.2.6 MLBArcType

CodedValueDomain «CodedValueDomain» in package 'Domains'

MLBArc Type

MLBArcType
Version 1.0 Phase
created on 17/11/2016. Last modified 17/11/2016

ATTRIBUTES
FieldType : esriFieldType Public = esriFieldTypeString [Is static False. Containment is .]
geodesic : Public = geodesic [Stereotype is «DomainCodedValue». Is static False. Containment is .]
loxodrome : Public = loxodrome [Stereotype is «DomainCodedValue». Is static False. Containment is .]
MergePolicy : esriMergePolicyType Public = esriMPTDefaultValue [Is static False. Containment is .]
SplitPolicy : esriSplitPolicyType Public = esriSPTDefaultValue [Is static False. Containment is .]

1.4.58.1.2.7 MLBJurDom_Type

CodedValueDomain «CodedValueDomain» in package 'Domains'

MLB_JurDom Type

MLBJurDom_Type
Version 1.0 Phase
created on 17/11/2016. Last modified 17/11/2016

ATTRIBUTES
airspace : Public = airspace [Stereotype is «DomainCodedValue». Is static False. Containment is .]

ATTRIBUTES
FieldType : esriFieldType Public = esriFieldTypeString [Is static False. Containment is .]
landSurface : Public = landSurface [Stereotype is «DomainCodedValue». Is static False. Containment is .]
MergePolicy : esriMergePolicyType Public = esriMPTDefaultValue [Is static False. Containment is .]
seabedSurface : Public = seabedSurface [Stereotype is «DomainCodedValue». Is static False. Containment is .]
SplitPolicy : esriSplitPolicyType Public = esriSPTDefaultValue [Is static False. Containment is .]
subsoil : Public = subsoil [Stereotype is «DomainCodedValue». Is static False. Containment is .]
waterColumn : Public = waterColumn [Stereotype is «DomainCodedValue». Is static False. Containment is .]
waterSurface : Public = waterSurface [Stereotype is «DomainCodedValue». Is static False. Containment is .]

1.4.58.1.2.8 MLBLimType

CodedValueDomain «CodedValueDomain» in package 'Domains'

MLBLim Type

MLBLimType
Version 1.0 Phase
created on 17/11/2016. Last modified 17/11/2016

ATTRIBUTES
boundary : Public = boundary [Stereotype is «DomainCodedValue». Is static False. Containment is .]
FieldType : esriFieldType Public = esriFieldTypeString [Is static False. Containment is .]
internationalBoundary : Public = internationalBoundary [Stereotype is «DomainCodedValue». Is static False. Containment is .]
limit : Public = limit [Stereotype is «DomainCodedValue». Is static False. Containment is .]

ATTRIBUTES
MergePolicy : esriMergePolicyType Public = esriMPTDefaultValue [Is static False. Containment is .]
SplitPolicy : esriSplitPolicyType Public = esriSPTDefaultValue [Is static False. Containment is .]

1.4.58.1.2.9 MLBOriginator_Type

CodedValueDomain «CodedValueDomain» in package 'Domains'

MLBOriginator Type

MLBOriginator_Type
Version 1.0 Phase
created on 17/11/2016. Last modified 17/11/2016

ATTRIBUTES
computed : Public = computed [Stereotype is «DomainCodedValue». Is static False. Containment is .]
construction : Public = construction [Stereotype is «DomainCodedValue». Is static False. Containment is .]
defined : Public = defined [Stereotype is «DomainCodedValue». Is static False. Containment is .]
densified : Public = densified [Stereotype is «DomainCodedValue». Is static False. Containment is .]
FieldType : esriFieldType Public = esriFieldTypeString [Is static False. Containment is .]
MergePolicy : esriMergePolicyType Public = esriMPTDefaultValue [Is static False. Containment is .]
SplitPolicy : esriSplitPolicyType Public = esriSPTDefaultValue [Is static False. Containment is .]

1.4.58.1.2.10 S121_BAUnitType

CodedValueDomain «CodedValueDomain» in package 'Domains'

S121 BAUnit Type

S121_BAUnitType

Version 1.0 Phase
created on 17/11/2016. Last modified 17/11/2016

ATTRIBUTES
basicPropertyUnit : Public = BP [Stereotype is «DomainCodedValue». Is static False. Containment is .]
FieldType : esriFieldType Public = esriFieldTypeString [Is static False. Containment is .]
leasedUnit : Public = L [Stereotype is «DomainCodedValue». Is static False. Containment is .]
MergePolicy : esriMergePolicyType Public = esriMPTDefaultValue [Is static False. Containment is .]
rightOfUseUnit : Public = ROU [Stereotype is «DomainCodedValue». Is static False. Containment is .]
SplitPolicy : esriSplitPolicyType Public = esriSPTDefaultValue [Is static False. Containment is .]

1.4.58.1.2.11 S121_CI_RoleCode

CodedValueDomain «CodedValueDomain» in package 'Domains'

S121 CI_RoleCode

S121_CI_RoleCode
Version 1.0 Phase
created on 17/11/2016. Last modified 17/11/2016

ATTRIBUTES
author : Public = AUT [Stereotype is «DomainCodedValue». Is static False. Containment is .]
custodian : Public = C [Stereotype is «DomainCodedValue». Is static False. Containment is .]
distributor : Public = D [Stereotype is «DomainCodedValue». Is static False. Containment is .]
FieldType : esriFieldType Public = esriFieldTypeString [Is static False. Containment is .]
MergePolicy : esriMergePolicyType Public = esriMPTDefaultValue [Is static False. Containment is .]

ATTRIBUTES
originator : Public = ORIG [Stereotype is «DomainCodedValue». Is static False. Containment is .]
owner : Public = O [Stereotype is «DomainCodedValue». Is static False. Containment is .]
principalInvestigator : Public = P [Stereotype is «DomainCodedValue». Is static False. Containment is .]
processor : Public = PROC [Stereotype is «DomainCodedValue». Is static False. Containment is .]
publisher : Public = PUB [Stereotype is «DomainCodedValue». Is static False. Containment is .]
resourceProvider : Public = RES [Stereotype is «DomainCodedValue». Is static False. Containment is .]
SplitPolicy : esriSplitPolicyType Public = esriSPTDefaultValue [Is static False. Containment is .]
user : Public = U [Stereotype is «DomainCodedValue». Is static False. Containment is .]

1.4.58.1.2.12 S121_FeatureType

CodedValueDomain «CodedValueDomain» in package 'Domains'

S121 Feature Type

S121_FeatureType
Version 1.0 Phase
created on 17/11/2016. Last modified 17/11/2016

ATTRIBUTES
A76 : Public = A76 [Stereotype is «DomainCodedValue». Is static False. Containment is .]
FieldType : esriFieldType Public = esriFieldTypeString [Is static False. Containment is .]
MergePolicy : esriMergePolicyType Public = esriMPTDefaultValue [Is static False. Containment is .]
MLB : Public = MLB [Stereotype is «DomainCodedValue». Is static False. Containment is .]

ATTRIBUTES
Other : Public = O [Stereotype is «DomainCodedValue». Is static False. Containment is .]
SplitPolicy : esriSplitPolicyType Public = esriSPTDefaultValue [Is static False. Containment is .]

1.4.58.1.2.13 S121_PartyType

CodedValueDomain «CodedValueDomain» in package 'Domains'

S121 Party Type

S121_PartyType
Version 1.0 Phase
created on 17/11/2016. Last modified 17/11/2016

ATTRIBUTES
baunit : Public = B [Stereotype is «DomainCodedValue». Is static False. Containment is .]
FieldType : esriFieldType Public = esriFieldTypeString [Is static False. Containment is .]
group : Public = G [Stereotype is «DomainCodedValue». Is static False. Containment is .]
MergePolicy : esriMergePolicyType Public = esriMPTDefaultValue [Is static False. Containment is .]
naturalPerson : Public = N [Stereotype is «DomainCodedValue». Is static False. Containment is .]
nonNaturalPerson : Public = NN [Stereotype is «DomainCodedValue». Is static False. Containment is .]
SplitPolicy : esriSplitPolicyType Public = esriSPTDefaultValue [Is static False. Containment is .]

1.4.58.1.2.14 S121_ResponsibilityType

CodedValueDomain «CodedValueDomain» in package 'Domains'

S121 Responsibility Type

S121_ResponsibilityType
Version 1.0 Phase
created on 17/11/2016. Last modified 17/11/2016

ATTRIBUTES
FieldType : esriFieldType Public = esriFieldTypeString [Is static False. Containment is .]
maintenanceResponsibility : Public = M [Stereotype is «DomainCodedValue». Is static False. Containment is .]
MergePolicy : esriMergePolicyType Public = esriMPTDefaultValue [Is static False. Containment is .]
otherResponsibility : Public = O [Stereotype is «DomainCodedValue». Is static False. Containment is .]
SplitPolicy : esriSplitPolicyType Public = esriSPTDefaultValue [Is static False. Containment is .]

1.4.58.1.2.15 S121_RestrictionType

CodedValueDomain «CodedValueDomain» in package 'Domains'

S121 Restriction Type

S121_RestrictionType
Version 1.0 Phase
created on 17/11/2016. Last modified 17/11/2016

ATTRIBUTES
accessRestriction : Public = A [Stereotype is «DomainCodedValue». Is static False. Containment is .]
FieldType : esriFieldType Public = esriFieldTypeString [Is static False. Containment is .]
jurisdictionRestriction : Public = J [Stereotype is «DomainCodedValue». Is static False. Containment is .]
MergePolicy : esriMergePolicyType Public = esriMPTDefaultValue [Is static False. Containment is .]
otherRestriction : Public = O [Stereotype is «DomainCodedValue». Is static False. Containment is .]
passageRestriction : Public = P [Stereotype is «DomainCodedValue». Is static False. Containment is .]
resourceRestriction : Public = R [Stereotype is «DomainCodedValue». Is static False. Containment is .]

ATTRIBUTES
SplitPolicy : esriSplitPolicyType Public = esriSPTDefaultValue [Is static False. Containment is .]
timeBasedRestriction : Public = T [Stereotype is «DomainCodedValue». Is static False. Containment is .]
useRestriction : Public = U [Stereotype is «DomainCodedValue». Is static False. Containment is .]

1.4.58.1.2.16 S121_RightType

CodedValueDomain «CodedValueDomain» in package 'Domains'

S121 Right Type

S121_RightType
Version 1.0 Phase
created on 17/11/2016. Last modified 17/11/2016

ATTRIBUTES
accessRight : Public = A [Stereotype is «DomainCodedValue». Is static False. Containment is .]
easementRight : Public = E [Stereotype is «DomainCodedValue». Is static False. Containment is .]
FieldType : esriFieldType Public = esriFieldTypeString [Is static False. Containment is .]
harvestRight : Public = H [Stereotype is «DomainCodedValue». Is static False. Containment is .]
MergePolicy : esriMergePolicyType Public = esriMPTDefaultValue [Is static False. Containment is .]
otherRight : Public = O [Stereotype is «DomainCodedValue». Is static False. Containment is .]
soverignRight : Public = S [Stereotype is «DomainCodedValue». Is static False. Containment is .]
SplitPolicy : esriSplitPolicyType Public = esriSPTDefaultValue [Is static False. Containment is .]

1.4.58.1.3 SpatialReferences

Package in package 'S121_ArcGIS_ImplementationModel'

SpatialReferences
Version 1.0 Phase 1.0 Proposed
CDOBrien created on 17/11/2016. Last modified 17/11/2016

1.4.58.1.3.1 SpatialReferences diagram

ArcGIS diagram in package 'SpatialReferences'

SpatialReferences
Version 1.0
CDOBrien created on 17/11/2016. Last modified 17/11/2016

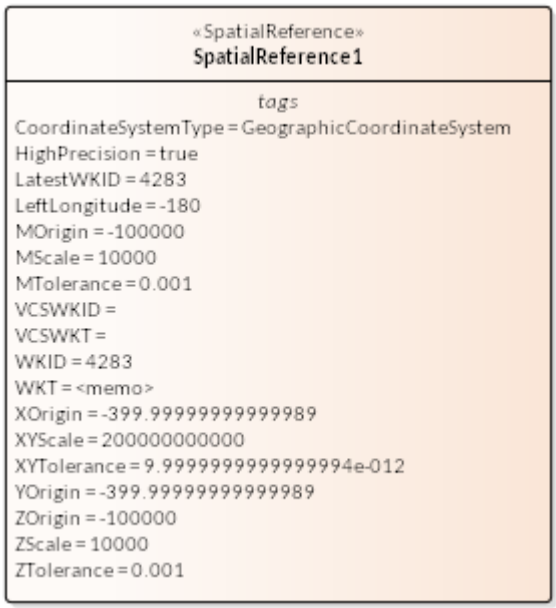

Figure 48: SpatialReferences

1.4.58.2 S121_FeatureUnit

Abstract «FeatureType» in package 'ImplementationClass'

The Feature Unit is a feature type which relates to the administrative structure through the S121_BA_Unit. The S121_FeatureUnit takes on spatial attributes through a relation to the S121_SpatialAttributeType. The S121_SpatialUnit is derived from both the S100_FeatureType .

S121_FeatureUnit
Version Phase Proposed
CHS created on 15/11/2016. Last modified 27/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS
⇐ Generalization from «FeatureType» S121_FeatureUnit to S121_VersionedObject [Direction is 'Source -> Destination'.]

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from «FeatureType» S121_FeatureUnit to «featureType» LA_SpatialUnit
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from «FeatureType» S121_FeatureUnit to «metaclass» S121_GF_FeatureType
[Name is Realize. Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Aggregation from «FeatureAttribute» S121_SpatialAttributeType to «FeatureType» S121_FeatureUnit
[Direction is 'Destination -> Source'.]

ATTRIBUTES

suID : Oid Public

the spatial unit identifier
[Is static False. Containment is Not Specified.]

type : S121_FeatureType Public
[Is static False. Containment is Not Specified.]

typeName : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

short textual description of the spatial unit
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination)

Source: Public (Abstract) S121_FeatureUnit «FeatureType»
Cardinality: [0..*]

Target: Public (Class) S121_BAUnit
Cardinality: [1..*]

Association (direction: Source -> Destination) suSource

Source: Public su (Abstract) S121_FeatureUnit «FeatureType»
Cardinality: [0..*]

Target: Public source (Class) S121_Source
Cardinality: [0..*]

1.4.58.3 S121_SpatialAttributeType

Abstract «FeatureAttribute» in package 'ImplementationClass'

The Spatial Attribute Type as defined for S121 is derived from the class LA_SpatialUnit defined in ISO 19152. It also inherits from S100_GF_SpatialAttributeType. This means that the geometry types inherited from S-100 apply. Only the geometry types GM_Point, GM_MultiPoint, GM_Curve, GM_Surface, CV_Coverage, GM_Curve (arcByCentrePoint and circleByCentrePoint may be used.

S121_SpatialAttributeType

Version Phase Proposed
S121 PT created on 15/11/2016. Last modified 27/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS

Aggregation from «FeatureAttribute» S121_SpatialAttributeType to «FeatureType» S121_FeatureUnit
[Direction is 'Destination -> Source'.]

Generalization from «FeatureAttribute» S121_SpatialAttributeType to S121_VersionedObject
[Direction is 'Source -> Destination'.]

Realization from «FeatureAttribute» S121_SpatialAttributeType to «metaclass» S121_GF_SpatialAttributeType
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from «FeatureAttribute» S121_SpatialAttributeType to «featureType» LA_SpatialUnit
[Name is Realize. Direction is 'Source -> Destination'.]

ATTRIBUTES

geometry : GM_Object Public
[Stereotype is «S100_GF_SpatialAttributeType». Is static False. Containment is Not Specified.]

label : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

short textual description of the spatial unit
[Is static False. Containment is Not Specified.]

referencePoint : GM_Point Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the coordinates of a point inside the spatial unit
[Is static False. Containment is Not Specified.]

referenceSystem : S100_IO_IdentifiedObject Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Spatial Referencing System

Constraints:
requirement : Pre-condition
[Is static False. Containment is Not Specified.]

salD : Oid Public

the spatial unit identifier
[Is static False. Containment is Not Specified.]

scaleMaximum : PositiveInteger Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Stereotype is «S100_GF_SpatialAttributeType». Is static False. Containment is Not Specified.]

ATTRIBUTES

scaleMinimum : PositiveInteger Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Stereotype is «S100_GF_SpatialAttributeType». Is static False. Containment is Not Specified.]

surfaceRelation : LA_SurfaceRelationType Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Destination -> Source) saSource

Source: Public source (Class) S121_Source
Cardinality: [0..*]

Target: Public sa (Abstract)
S121_SpatialAttributeType «FeatureAttribute»
Cardinality: [0..*]

1.4.58.4 S121_SpatialSource

Class in package 'ImplementationClass'

documentation of the source of the referenced information.

S121_SpatialSource
Version 1.0 Phase CD Proposed
S121 PT created on 15/11/2016. Last modified 23/11/2016
Extends S121_Source

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from S121_SpatialSource to S121_Source
[Direction is 'Source -> Destination'.]

ATTRIBUTES

type : S121_SpatialSourceType Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

1.4.58.5 S121_Source

Class in package 'ImplementationClass'

documentation of the source of the referenced information.

S121_Source
Version 1.0 Phase CD Proposed
S121 PT created on 23/11/2016. Last modified 23/11/2016

OUTGOING STRUCTURAL RELATIONSHIPS

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_Source to «metaclass» S100_GF_InformationType
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from S121_Source to «featureType» LA_Source
[Name is Realize. Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from S121_SpatialSource to S121_Source
[Direction is 'Source -> Destination'.]

Generalization from S121_AdministrativeSource to S121_Source
[Direction is 'Source -> Destination'.]

ATTRIBUTES

acceptance : DateTime Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the date of force of law of the source by an authority
[Is static False. Containment is Not Specified.]

availabilityStatus : LA_AvailabilityStatusType Public
[Is static False. Containment is Not Specified.]

extArchiveID : ExtArchive Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the identifier of a source in an external registration
[Is static False. Containment is Not Specified.]

lifeSpanStamp : DateTime Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the moment that the event represented by the instance of LA_Source is further processed in the LA system
[Is static False. Containment is Not Specified.]

maintype : CI_PresentationFormCode Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the type of document
[Is static False. Containment is Not Specified.]

name : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Document name - for example the document (legislation, treaty, title) that defines the object.
[Stereotype is «S121». Is static False. Containment is Not Specified.]

quality : DQ_Element Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

ATTRIBUTES

[Is static False. Containment is Not Specified.]

recordation : DateTime Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the date of registration (recordation) of the source by registering authority

[Is static False. Containment is Not Specified.]

registryNumber : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Unique official identifier of the record in a registry. For example, in states with registers of legislative instruments, versioning is controlled by the registry ID.

[Stereotype is «S121». Is static False. Containment is Not Specified.]

sID : Oid Public

the identifier of the source

[Is static False. Containment is Not Specified.]

source : S121_ResponsibleParty Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

[Is static False. Containment is Not Specified.]

submission : DateTime Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the date of submission of the source by a party

[Is static False. Containment is Not Specified.]

URL : S121_OnlineResource Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

URL - this is official the URL (or equivalent online resource) where the document is distributed.

[Stereotype is «S121». Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Destination -> Source) conveyancerSource

Source: Public source (Class) S121_Source
Cardinality: [0..*]

Target: Public conveyancer (Class) S121_Party
Cardinality: [1..*]

Association (direction: Destination -> Source) saSource

Source: Public source (Class) S121_Source
Cardinality: [0..*]

Target: Public sa (Abstract) S121_SpatialAttributeType «FeatureAttribute»
Cardinality: [0..*]

Association (direction: Destination -> Source) unitSource

Source: Public source (Class) S121_Source
Cardinality: [0..*]

Target: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

ASSOCIATIONS

Association (direction: Destination -> Source) rrrSource

Source: Public source (Class) S121_Source
Cardinality: [1..*]

Target: Public rrr (Abstract) S121_RRR «abstract»
Cardinality: [0..*]

Association (direction: Source -> Destination) restrictionSource

Source: Public restriction (Class) S121_Restriction
Cardinality: [0..*]

Target: Public source (Class) S121_Source
Cardinality: [1..*]

Association (direction: Source -> Destination) rightSource

Source: Public right (Class) S121_Right
Cardinality: [0..*]

Target: Public source (Class) S121_Source
Cardinality: [1..*]

Association (direction: Source -> Destination) suSource

Source: Public su (Abstract) S121_FeatureUnit «FeatureType»
Cardinality: [0..*]

Target: Public source (Class) S121_Source
Cardinality: [0..*]

1.4.58.6 S121_BAUnit

Class in package 'ImplementationClass'

The Basic Administrative Unit is an information object to “which (one or more) unique and homogeneous rights, responsibilities or restrictions are associated”. It is an information object since it does not directly take on spatial attributes. The S121_BAUnit is derived from both the S121_GF_ThematicAttributeType and the LA_BAUnit defined in ISO 19152.

S121_BAUnit
Version Phase Proposed
CHS created on 15/11/2016. Last modified 20/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_BAUnit to «featureType» LA_BAUnit
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from S121_BAUnit to «metaclass» S100_GF_InformationType
[Direction is 'Source -> Destination'.]

Generalization from S121_BAUnit to S121_VersionedObject
[Direction is 'Source -> Destination'.]

Realization from S121_BAUnit to «metaclass» S121_GF_ThematicAttributeType
[Name is Realize. Direction is 'Source -> Destination'.]

ATTRIBUTES

ATTRIBUTES

type : S121_BAUnitType Public

the use type of the basic administrative unit

[Is static False. Containment is Not Specified.]

uID : Oid Public

An ID used in relationships between elements of the RRR structure and the Basic Administrative Unit.

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination)

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Target: Public restriction (Class) S121_Restriction
Cardinality: [1..*]

Association (direction: Unspecified) relationBAUnit

Source: Public unit1 (Class) S121_BAUnit
Cardinality: [0..*]

Target: Public unit2 (Class) S121_BAUnit
Cardinality: [0..*]

Association (direction: Source -> Destination) baunitAsParty

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Target: Public party (Class) S121_Party
Cardinality: [0..*]

Association (direction: Source -> Destination)

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Target: Public right (Class) S121_Right
Cardinality: [1..*]

Association (direction: Source -> Destination)

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Target: Public responsibility (Class) S121_Responsibility
Cardinality: [1..*]

Association (direction: Source -> Destination)

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Target: Public rrr (Abstract) S121_RRR «abstract»
Cardinality: [1..*]

Association (direction: Source -> Destination)

Source: Public (Abstract) S121_FeatureUnit «FeatureType»
Cardinality: [0..*]

Target: Public (Class) S121_BAUnit
Cardinality: [1..*]

Association (direction: Unspecified) relationBAUnit

Source: Public unit1 (Class) S121_BAUnit
Cardinality: [0..*]

Target: Public unit2 (Class) S121_BAUnit
Cardinality: [0..*]

ASSOCIATIONS

Association (direction: Destination -> Source) unitSource

Source: Public source (Class) S121_Source
Cardinality: [0..*]

Target: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

1.4.58.7 S121_PartyMember

AssociationClass in package 'ImplementationClass'

S121_PartyMember derived from LA_PartyMember

Note: This class is a relationship class - i.e. it provides an attribute on a relationship. A party member is a fraction of a group party.

Note: ISO 19152 LADM stereotypes this the LA_PartyMember object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed.

S121_PartyMember
Version Phase Proposed
CHS created on 17/11/2016. Last modified 19/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from S121_PartyMember to S121_VersionedObject
[Direction is 'Source -> Destination'.]

ATTRIBUTES

share : Fraction Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the fraction of the whole

[Is static False. Containment is Not Specified.]

1.4.58.8 S121_Party

Class in package 'ImplementationClass'

S121_Party is a a person or organisation that plays a role in a **rights** transaction

S121_Party realized from LA_Party

Note: ISO 19152 LADM stereotypes this the LA_Party object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed.

S121_Party
Version Phase Mandatory
CHS created on 15/11/2016. Last modified 19/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_Party to «metaclass» S100_GF_InformationType
[Direction is 'Source -> Destination'.]

Realization from S121_Party to «featureType» LA_Party
[Name is Realize. Direction is 'Source -> Destination'.]

Generalization from S121_Party to S121_VersionedObject
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from S121_GroupParty to S121_Party
[Direction is 'Source -> Destination'.]

ATTRIBUTES

extPID : Oid Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the identifier of the party in an external registration
[Is static False. Containment is Not Specified.]

name : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the name of the party
[Is static False. Containment is Not Specified.]

pID : Oid Public

the identifier of the party
[Is static False. Containment is Not Specified.]

role : CharacterString Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

type : S121_PartyType Public

the type of the party
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

AssociationClass (direction: Unspecified) members

Source: Public parties (Class) S121_Party
Cardinality: [2..*]

Target: Public group (Class) S121_GroupParty
Cardinality: [0..1]

Association (direction: Source -> Destination) party associated with right

ASSOCIATIONS

Source: Public right (Class) S121_Right
Cardinality: [0..*]

Target: Public party (Class) S121_Party
Cardinality: [0..1]

Association (direction: Destination -> Source) conveyancerSource

Source: Public source (Class) S121_Source
Cardinality: [0..*]

Target: Public conveyancer (Class) S121_Party
Cardinality: [1..*]

Association (direction: Source -> Destination) baunitAsParty

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Target: Public party (Class) S121_Party
Cardinality: [0..*]

Association (direction: Source -> Destination) party associated with restriction

Source: Public restriction (Class) S121_Restriction
Cardinality: [0..*]

Target: Public party (Class) S121_Party
Cardinality: [0..1]

Association (direction: Source -> Destination) party associated with responsibility

Source: Public responsibility (Class) S121_Responsibility
Cardinality: [0..*]

Target: Public party (Class) S121_Party
Cardinality: [0..1]

Association (direction: Source -> Destination) rrrParty

Source: Public rrr (Abstract) S121_RRR «abstract»
Cardinality: [0..*]

Target: Public party (Class) S121_Party
Cardinality: [0..1]

1.4.58.9 S121_GroupParty

Class in package 'ImplementationClass'

S121_GroupParty is any number of **parties**, forming together a distinct entity, with each **party** registered.

S121_GroupParty realized from LA_GroupParty

Note: ISO 19152 LADM stereotypes this the LA_GroupParty object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed.

S121_GroupParty
Version Phase Proposed
CHS created on 15/11/2016. Last modified 19/11/2016
Extends S121_Party, S121_VersionedObject

CONSTRAINTS

Invariant. sum(LA_PartyMember.share)=1 per group

[Approved, Weight is 0.]

OUTGOING STRUCTURAL RELATIONSHIPS

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from S121_GroupParty to S121_VersionedObject

[Direction is 'Source -> Destination'.]

Generalization from S121_GroupParty to S121_Party

[Direction is 'Source -> Destination'.]

Realization from S121_GroupParty to «featureType» LA_GroupParty

[Direction is 'Source -> Destination'.]

ATTRIBUTES

groupID : Oid Public

the identifier of a group party

[Is static False. Containment is Not Specified.]

type : S121_GroupPartyType Public

the type of the group party

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination)

Source: Public restriction (Class) S121_Restriction
Cardinality: [0..*]

Target: Public group (Class) S121_GroupParty
Cardinality: [0..1]

Association (direction: Source -> Destination)

Source: Public right (Class) S121_Right
Cardinality: [0..*]

Target: Public group (Class) S121_GroupParty
Cardinality: [0..1]

AssociationClass (direction: Unspecified) members

Source: Public parties (Class) S121_Party
Cardinality: [2..*]

Target: Public group (Class) S121_GroupParty
Cardinality: [0..1]

Association (direction: Source -> Destination)

Source: Public responsibility (Class) S121_Responsibility
Cardinality: [0..*]

Target: Public group (Class) S121_GroupParty
Cardinality: [0..1]

1.4.58.10 S121_RRR

Abstract «abstract» in package 'ImplementationClass'

S121_RRR realized from LA_RRR

An instance of a subclass of LA_RRR is a **right** (or social tenure relationship), a **restriction**, or a **responsibility**

Note: ISO 19152 LADM stereotypes this the LA_RRR object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed. In the S-100 environment the RRR objects are information objects that carry an object identifier "Oid". They can be referenced as objects from the attributes associated with an S-100 Feature Object. This allows Rights, Responsibilities and Restrictions to be re-used by several objects. Thagt is, several objects may reference the same RRR objects.

S121_RRR
Version Phase Proposed
CHS created on 15/11/2016. Last modified 20/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from «abstract» S121_RRR to «featureType» LA_RRR
[Name is Realize. Direction is 'Source -> Destination'.]

Generalization from «abstract» S121_RRR to S121_VersionedObject
[Direction is 'Source -> Destination'.]

Realization from «abstract» S121_RRR to «metaclass» S100_GF_InformationType
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from S121_Responsibility to «abstract» S121_RRR
[Direction is 'Source -> Destination'.]

Generalization from S121_Right to «abstract» S121_RRR
[Direction is 'Source -> Destination'.]

Generalization from S121_Restriction to «abstract» S121_RRR
[Direction is 'Source -> Destination'.]

ATTRIBUTES

description : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

description regarding the right, restriction or responsibility
[Is static False. Containment is Not Specified.]

rID : Oid Public

The RRR identifier
[Is static False. Containment is Not Specified.]

share : Fraction Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

a share in an instance of a subclass of LA_RRR
[Is static False. Containment is Not Specified.]

ATTRIBUTES

shareCheck : Boolean Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

boolean indicating whether the constraint is applicable

[Is static False. Containment is Not Specified.]

timeSpec : S100_GF_DateTimeAttributeClass Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

operational use of a right in time sharing

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination) rrrParty

Source: Public rrr (Abstract) S121_RRR «abstract»
Cardinality: [0..*]

Target: Public party (Class) S121_Party
Cardinality: [0..1]

Association (direction: Destination -> Source) rrrSource

Source: Public source (Class) S121_Source
Cardinality: [1..*]

Target: Public rrr (Abstract) S121_RRR «abstract»
Cardinality: [0..*]

Association (direction: Source -> Destination)

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Target: Public rrr (Abstract) S121_RRR «abstract»
Cardinality: [1..*]

1.4.58.11 S121_Right

Class in package 'ImplementationClass'

S121_Right is an action, activity or class of actions that a system participant may perform on or using an associated resource.

S121_Right is realized from LA_Right

For the S-121 code lists have been specialized to the marine environment. These code lists are currently generic or partial and the contents need to be defined as part of the S-121 project development. Code lists are used, rather than character strings in order to ensure consistency.

Note: ISO 19152 LADM stereotypes this the LA_Right object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed. In the S-100 environment the RRR objects are information objects that carry an object identifier "Oid". They can be referenced as objects from the attributes associated with an S-100 Feature Object.

S121_Right
Version Phase Proposed
CHS created on 15/11/2016. Last modified 19/11/2016
Extends S121_RRR

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_Right to «featureType» LA_Right

[Direction is 'Source -> Destination'.]

Generalization from S121_Right to «abstract» S121_RRR

[Direction is 'Source -> Destination'.]

ATTRIBUTES

type : S121_RightType Public

the type of the right

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination) party associated with right

Source: Public right (Class) S121_Right
Cardinality: [0..*]

Target: Public party (Class) S121_Party
Cardinality: [0..1]

Association (direction: Source -> Destination)

Source: Public right (Class) S121_Right
Cardinality: [0..*]

Target: Public group (Class) S121_GroupParty
Cardinality: [0..1]

Association (direction: Source -> Destination) rightSource

Source: Public right (Class) S121_Right
Cardinality: [0..*]

Target: Public source (Class) S121_Source
Cardinality: [1..*]

Association (direction: Source -> Destination)

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Target: Public right (Class) S121_Right
Cardinality: [1..*]

1.4.58.12 S121_Restriction

Class in package 'ImplementationClass'

S121_Restriction is a formal or informal entitlement to refrain from doing something.

S121_Restriction is realized from LA_Restriction

For the S-121 code lists have been specialized to the marine environment. These code lists are currently generic or partial and the contents need to be defined as part of the S-121 project development. Code lists are used, rather than character strings in order to ensure consistency.

Note: ISO 19152 LADM stereotypes this the LA_Restriction object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed. In the S-100 environment the RRR objects are information objects that carry an object identifier "Oid". They can be referenced as objects from the attributes associated with an S-100 Feature Object.

S121_Restriction
Version 1 Phase 1 Proposed
CHS created on 15/11/2016. Last modified 19/11/2016
Extends S121_RRR

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_Restriction to «featureType» LA_Restriction
[Direction is 'Source -> Destination'.]

Generalization from S121_Restriction to «abstract» S121_RRR
[Direction is 'Source -> Destination'.]

ATTRIBUTES

partyRequired : Boolean Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

indicates whether a party is required for the registration of the restriction in the association to LA_Party
[Is static False. Containment is Not Specified.]

type : CharacterString Public

the type of the restriction
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination)

Source: Public restriction (Class) S121_Restriction
Cardinality: [0..*]
Target: Public group (Class) S121_GroupParty
Cardinality: [0..1]

Association (direction: Source -> Destination) party associated with restriction

Source: Public restriction (Class) S121_Restriction
Cardinality: [0..*]
Target: Public party (Class) S121_Party
Cardinality: [0..1]

Association (direction: Source -> Destination) restrictionSource

Source: Public restriction (Class) S121_Restriction
Cardinality: [0..*]
Target: Public source (Class) S121_Source
Cardinality: [1..*]

Association (direction: Source -> Destination)

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]
Target: Public restriction (Class) S121_Restriction
Cardinality: [1..*]

1.4.58.13 S121_Responsibility

Class in package 'ImplementationClass'

S121_Responsibility is a formal or informal obligation to do something

S121_Responsibility realized from LA_Responsibility

For the S-121 code lists have been specialized to the marine environment. These code lists are currently generic or partial and the contents need to be defined as part of the S-121 project development. Code lists are used, rather than character strings in order to ensure consistency.

Note: ISO 19152 LADM stereotypes this the LA_Responsibility object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed. In the S-100 environment the RRR objects are information objects that carry an object identifier "Oid". They can be referenced as objects from the attributes associated with an S-100 Feature Object. This allows Rights, Responsibilities and Restrictions to be re-used by several objects. Thagt is, several objects may reference the same RRR objects.

S121_Responsibility
Version 1 Phase 1 Proposed
CHS created on 15/11/2016. Last modified 19/11/2016
Extends S121_RRR

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from S121_Responsibility to «abstract» S121_RRR
[Direction is 'Source -> Destination'.]

Realization from S121_Responsibility to «featureType» LA_Responsibility
[Direction is 'Source -> Destination'.]

ATTRIBUTES

type : S121_ResponsibilityType Public
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination) party associated with responsibility

Source: Public responsibility (Class) S121_Responsibility
Cardinality: [0..*]

Target: Public party (Class) S121_Party
Cardinality: [0..1]

Association (direction: Source -> Destination) responsibilitySource

Source: Public responsibility (Class) S121_Responsibility
Cardinality: [0..*]

Target: Public spurce (Class) S121_AdministrativeSource
Cardinality: [1..*]

Association (direction: Source -> Destination)

Source: Public responsibility (Class) S121_Responsibility
Cardinality: [0..*]

Target: Public group (Class) S121_GroupParty
Cardinality: [0..1]

Association (direction: Source -> Destination)

Source: Public unit (Class) S121_BAUnit
Cardinality: [0..*]

Target: Public responsibility (Class) S121_Responsibility

ASSOCIATIONS

Cardinality: [1..*]

1.4.58.14 S121_AdministrativeSource

Class in package 'ImplementationClass'

S121_AdministrativeSource is a **source** with the administrative description (where applicable) of the **parties** involved, the **rights**, **restrictions** and **responsibilities** created and the **basic administrative units** affected

S121_AdministrativeSource derived from LA_AdministrativeSource

Note: ISO 19152 LADM stereotypes this the LA_AdministrativeSource object as a "featureType". Since it is not a feature in the same sense as the term feature is used in IHO S-100, the stereotype has been removed.

S121_AdministrativeSource
Version Phase Proposed
CHS created on 15/11/2016. Last modified 23/11/2016
Extends S121_Source

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from S121_AdministrativeSource to «featureType» LA_AdministrativeSource
[Direction is 'Source -> Destination'.]

Realization from S121_AdministrativeSource to «metaclass» S100_GF_InformationType
[Name is Realize. Direction is 'Source -> Destination'.]

Generalization from S121_AdministrativeSource to S121_Source
[Direction is 'Source -> Destination'.]

ATTRIBUTES

type : S121_AdministrativeSourceType Public

the type of document

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination) responsibilitySource

Source: Public responsibility (Class) S121_Responsibility
Cardinality: [0..*]

Target: Public spurce (Class) S121_AdministrativeSource
Cardinality: [1..*]

1.5 S121 Feature Model

Package in package 'S-121 Maritime Limits and Boundaries'

This is the model of the feature objects that will be put in the Feature Concept Dictionary supporting the Marine Administrative Domain Model and subsequent product specifications such as the S-121 MLB Product Specification.

S121 Feature Model
Version 1 Phase 1 Proposed
CHS created on 18/08/2015. Last modified 23/02/2016

1.5.1S121 Generic Feature Types diagram

Class diagram in package 'S121 Feature Model'

S121 Generic Feature Types
Version
CHS created on 09/07/2015. Last modified 27/11/2016

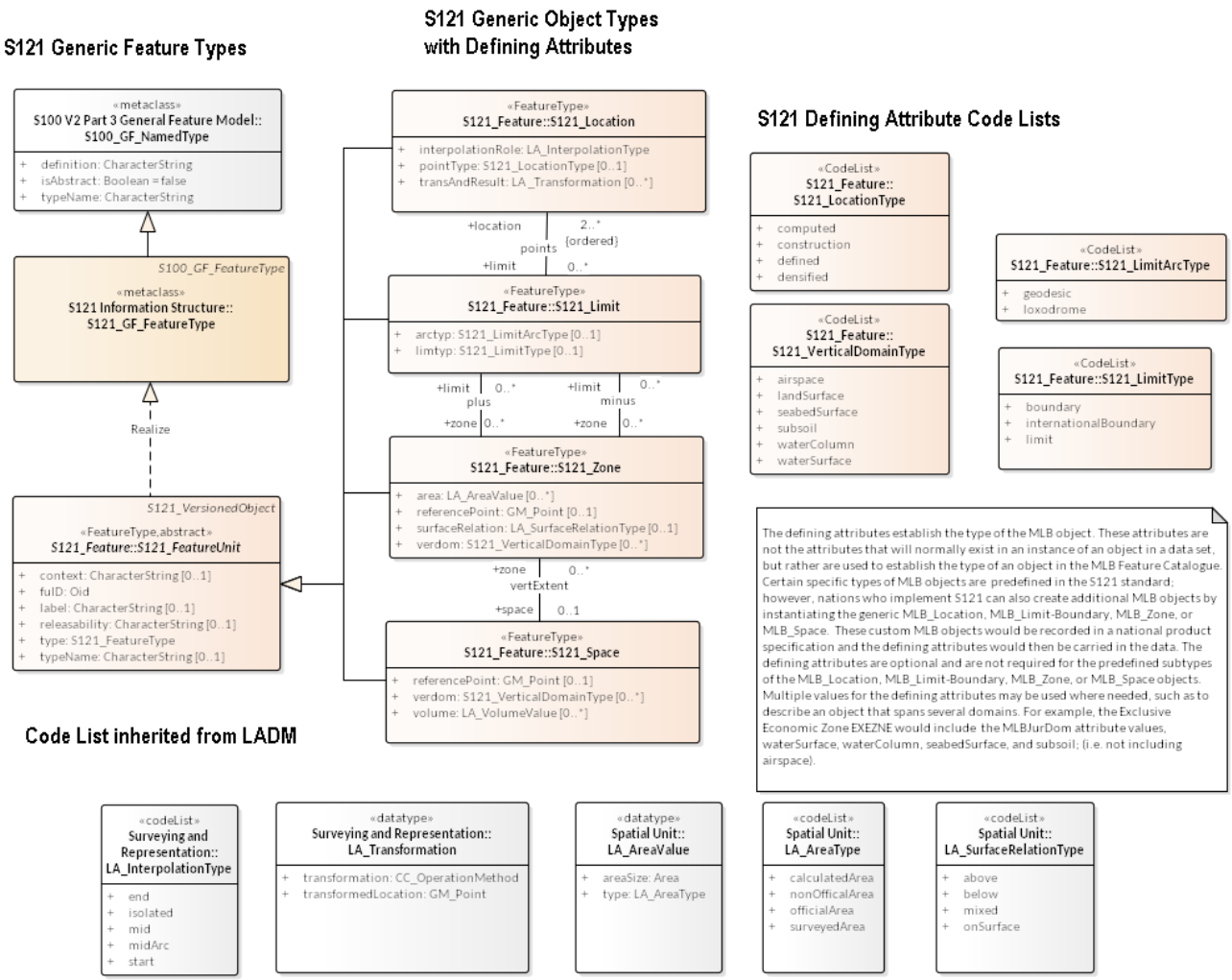

Figure 49: S121 Generic Feature Types

1.5.2S100_GF_NamedType

Metaclass «metaclass» in package 'S100 V2 Part 3 General Feature Model'

The class S100_GF_NamedType is not realised from ISO 19109 but is introduced specifically for the S-100 GFM. It is an abstract super-class of the classes S100_GF_FeatureType and S100_GF_InformationType. The intention in introducing this class is to show the commonality between the concept of the feature type and the information type within S-100. Both types are core identifiable objects of S-100 data schemas.

S100_GF_NamedType
Version 2.0 Phase 2.0 Proposed
IHO TSMAD created on 22/12/2014. Last modified 27/11/2016

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from «metaclass» S121_GF_FeatureType to «metaclass» S100_GF_NamedType
[Direction is 'Source -> Destination'.]

Generalization from «metaclass» S100_GF_AssociationType to «metaclass» S100_GF_NamedType
[Direction is 'Source -> Destination'.]

Generalization from «metaclass» S100_GF_FeatureType to «metaclass» S100_GF_NamedType
[Direction is 'Source -> Destination'.]

Generalization from «metaclass» S100_GF_InformationType to «metaclass» S100_GF_NamedType
[Direction is 'Source -> Destination'.]

Generalization from «metaclass» S100_GF_ObjectType to «metaclass» S100_GF_NamedType
[Direction is 'Source -> Destination'.]

Generalization from «metaclass» S121_GF_FeatureType to «metaclass» S100_GF_NamedType
[Direction is 'Source -> Destination'.]

CONNECTORS

Dependency «trace» Source -> Destination
From: S100_GF_NamedType : Metaclass, Public
To: S100_GF_NamedType : Metaclass, Public

ATTRIBUTES

definition : CharacterString Public

Definition that describes the named type.
[Is static False. Containment is Not Specified.]

isAbstract : Boolean Public = false

Boolean attribute. If true, the named type acts as an abstract supertype. It is not possible to create an instance of an abstract type.
[Is static False. Containment is Not Specified.]

typeName : CharacterString Public

Name of the named type. The name shall be unique within a namespace.
[Is static False. Containment is Not Specified.]

ATTRIBUTES

ASSOCIATIONS

Association (direction: Source -> Destination)

The role "constrainedBy" specifies that a constraint is made on the named type.

Source: Public (Metaclass) S100_GF_NamedType «metaclass»

Target: Public constrainedBy (Metaclass) S100_GF_Constraint «metaclass»
Cardinality: [0..*]

Association (direction: Unspecified)

Source: Public informationClient (Metaclass) S100_GF_NamedType «metaclass»
Cardinality: [1..*]

Target: Public informationLink (Metaclass) S100_GF_InformationAssociationType «metaclass»
Cardinality: [0..*]

The object types that act as client in the information association

Association (direction: Source -> Destination)

Source: Public informationClient (Class) GM_Object «type»
Cardinality: [1..*]

Target: Public additionalInformation (Metaclass) S100_GF_NamedType «metaclass»
Cardinality: [0..*]

1.5.3S121_GF_FeatureType

Metaclass «metaclass» in package 'S121 Information Structure'

The class S121_GF_FeatureType is a specialization of S100_GF_FeatureType.

The class S100_GF_FeatureType is a realisation of the ISO 19109 class GF_FeatureType. It differs from the ISO class in the following ways:
1. It is a sub-type of the class S100_GF_NamedType;
2. It does not realise the Generalization and Specialization associations with the class GF_InheritanceRelation. Instead, the class has an association with itself with the roles subType and superType. GF_InheritanceRelation is not realised in the S-100 GFM;
3. The multiplicity of the superType is 0..1 to represent the concept that a feature may have a maximum of one superType. This is in order to prevent multiple-inheritance in S-100;
4. The multiplicity of the role carrierOfCharacteristics with S100_GF_PropertyType (the S-100 realisation of GF_PropertyType) is changed from 0..* to 1..*. An S-100 feature must have properties.

S121_GF_FeatureType
Version Phase Proposed
CHS created on 30/06/2015. Last modified 01/12/2016
Extends S100_GF_FeatureType, S100_GF_NamedType

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «metaclass» S121_GF_FeatureType to «metaclass» S100_GF_NamedType
[Direction is 'Source -> Destination'.]

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «metaclass» S121_GF_FeatureType to «metaclass» S100_GF_FeatureType
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from «FeatureType» S121_FeatureUnit to «metaclass» S121_GF_FeatureType
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from FeatureType Instance to «metaclass» S121_GF_FeatureType
[Name is Instance. Direction is 'Source -> Destination'.]

Aggregation from «metaclass» S121_GF_ThematicAttributeType to «metaclass» S121_GF_FeatureType
[Direction is 'Source -> Destination'.]

Aggregation from «metaclass» S121_GF_SpatialAttributeType to «metaclass» S121_GF_FeatureType
[Direction is 'Unspecified'.]

Realization from «FeatureType» S121_FeatureUnit to «metaclass» S121_GF_FeatureType
[Name is Realize. Direction is 'Source -> Destination'.]

ASSOCIATIONS

Association (direction: Unspecified) inheritance

Role: superType - The more generic feature type from which this feature type is derived.
Role: subType - The more specific feature types which are derived from this feature type.

Source: Public subType (Metaclass) S121_GF_FeatureType «metaclass»
Cardinality: [0..*]

Target: Public superType (Metaclass) S121_GF_FeatureType «metaclass»
Cardinality: [0..1]

Association (direction: Source -> Destination) Usage of registered definityon etc

Source: Public (Metaclass) S121_GF_FeatureType «metaclass»
Cardinality: [1]

Target: Public (Class) S121_FC_FeatureType
Cardinality: [0..*]

Association (direction: Unspecified) inheritance

Role: superType - The more generic feature type from which this feature type is derived.
Role: subType - The more specific feature types which are derived from this feature type.

Source: Public subType (Metaclass) S121_GF_FeatureType «metaclass»
Cardinality: [0..*]

Target: Public superType (Metaclass) S121_GF_FeatureType «metaclass»
Cardinality: [0..1]

1.5.4S121_Limit

Class «FeatureType» in package 'S121_Feature'

Name: Limit
AlphaCode: MLBLIM
camelCaseCode: Limit
NumericCode:
Use Type: theme
Definition: The MLB_Limit object is an object that defines any limits or boundaries either relating to terrestrial, marine or both environments.
Permitted Primitives: P, L
References:
Remarks:

S121_Limit
Version Phase Proposed
S-121 PT created on 26/03/2015. Last modified 01/12/2016
Extends S121_FeatureUnit

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «FeatureType» S121_Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from «MLB» Exclusive Economic Zone Limit to «FeatureType» S121_Limit
[Direction is 'Source -> Destination'.]

Realization from «MLB» Baseline to «FeatureType» S121_Limit
[Direction is 'Source -> Destination'.]

Realization from «MLB» Contiguous Zone Limit to «FeatureType» S121_Limit
[Direction is 'Source -> Destination'.]

Realization from «MLB» Inland Limit to «FeatureType» S121_Limit
[Direction is 'Source -> Destination'.]

Realization from «MLB» International Boundary to «FeatureType» S121_Limit
[Direction is 'Source -> Destination'.]

Aggregation from «Geometry» S121_Curve to «FeatureType» S121_Limit
[Name is SpatialAttribute. Direction is 'Source -> Destination'.]

Realization from «HYDRO» Straight Baseline to «FeatureType» S121_Limit
[Direction is 'Source -> Destination'.]

Realization from «MLB» Territorial Sea Limit to «FeatureType» S121_Limit
[Direction is 'Source -> Destination'.]

Realization from «MLB» Continental Shelf Limit to «FeatureType» S121_Limit
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from «MLB» Normal Baseline to «FeatureType» S121_Limit
[Direction is 'Source -> Destination'.]

ATTRIBUTES

arctyp : S121_LimitArcType Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Definition: Type of computation used to define an arc (line). (Geodesic or loxodrome).
[Is static False. Containment is Not Specified.]

limtyp : S121_LimitType Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Definition: Type of delineation (Boundary, Limit or Construction).
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified) plus

Source: Public zone (Class) S121_Zone «FeatureType»
Cardinality: [0..*]

Target: Public limit (Class) S121_Limit «FeatureType»
Cardinality: [0..*]

Association (direction: Unspecified) minus

Source: Public zone (Class) S121_Zone «FeatureType»
Cardinality: [0..*]

Target: Public limit (Class) S121_Limit «FeatureType»
Cardinality: [0..*]

Association (direction: Unspecified) points

Source: Public location (Class) S121_Location «FeatureType»
Cardinality: [2..*]

Target: Public limit (Class) S121_Limit «FeatureType»
Cardinality: [0..*]

1.5.5S121_Location

Class «FeatureType» in package 'S121_Feature'

Name: Location
AlphaCode: MLOCTN
camelCaseCode: Limit
NumericCode:
Use Type: theme
Definition: The Location object is an object that defines the underlying structure of location.
Permitted Primitives: P
Remarks: To portray a geodesic or loxodrome curve correctly, additional vertices may be included in the dataset. These are densified locations. These vertices would not have formed part of the original source information. The loctyp attribute can be used to differentiate between a defined vertex (e.g. declared in a treaty) with a vertex densified to ensure correct GIS depiction. A computed location is also not part of the original source information, but is calculated

as the result of the original source guidance, such as the intersection between arcs, geodesics, or loxodromes. A construction vertex is any arbitrary position established to support computation.
References:

S121_Location
Version Phase Proposed
S-121 PT created on 26/03/2015. Last modified 01/12/2016
Extends S121_FeatureUnit

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «FeatureType» S121_Location to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Realization from «FeatureType» S121_Location to «featureType» LA_Point
[Name is Realize. Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from «MLB» Boundary Point to «FeatureType» S121_Location
[Direction is 'Source -> Destination'.]

Realization from «MLB» Baseline Point to «FeatureType» S121_Location
[Direction is 'Source -> Destination'.]

Aggregation from «Geometry» S121_Point to «FeatureType» S121_Location
[Name is SpatialAttribute. Direction is 'Source -> Destination'.]

Realization from «MLB» Limit Point to «FeatureType» S121_Location
[Direction is 'Source -> Destination'.]

ATTRIBUTES

interpolationRole : LA_InterpolationType Public

the role of point in the structure of a straight line or curve
[Is static False. Containment is Not Specified.]

pointType : S121_LocationType Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Definition: Computational origin of the element (defined, densified, computed or construction)
[Is static False. Containment is Not Specified.]

transAndResult : LA _Transformation Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

transformation and transformed location
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

ASSOCIATIONS

Association (direction: Unspecified) points

Source: Public location (Class) S121_Location «FeatureType»
Cardinality: [2..*]

Target: Public limit (Class) S121_Limit «FeatureType»
Cardinality: [0..*]

1.5.6S121_Zone

Class «FeatureType» in package 'S121_Feature'

Name: Zone
AlphaCode: MZONE
camelCaseCode: Zone
NumericCode:
Use Type: theme
Definition: The Zone object is an object that defines an area which is logically delimited by instances of delineation (limit_boundary) objects.
Permitted Primitives: P,L,A
Remarks: Maritime, terrestrial or inter-tidal zone objects are the three real objects that inherit from this object.
References:

S121_Zone
Version Phase Proposed
S-121 PT created on 26/03/2015. Last modified 01/12/2016
Extends S121_FeatureUnit

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from «FeatureType» S121_Zone to «featureType» LA_SpatialUnit
[Name is Realize. Direction is 'Source -> Destination'.]

Generalization from «FeatureType» S121_Zone to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from «HYDRO» Territorial Sea Area to «FeatureType» S121_Zone
[Direction is 'Source -> Destination'.]

Realization from «HYDRO» Exclusive Economic Zone to «FeatureType» S121_Zone
[Direction is 'Source -> Destination'.]

Aggregation from «Geometry» S121_Surface to «FeatureType» S121_Zone
[Name is SpatialAttribute. Direction is 'Source -> Destination'.]

Realization from «MLB» High sea to «FeatureType» S121_Zone
[Direction is 'Source -> Destination'.]

Realization from «HYDRO» Continental Shelf Area to «FeatureType» S121_Zone
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from «MLB» Internal Waters to «FeatureType» S121_Zone
[Direction is 'Source -> Destination'.]

Realization from «HYDRO» Contiguous Zone to «FeatureType» S121_Zone
[Direction is 'Source -> Destination'.]

Realization from «MLB» The Area to «FeatureType» S121_Zone
[Direction is 'Source -> Destination'.]

Realization from «MLB» Disputed Area to «FeatureType» S121_Zone
[Direction is 'Source -> Destination'.]

Realization from «MLB» Inland Waters to «FeatureType» S121_Zone
[Direction is 'Source -> Destination'.]

ATTRIBUTES

area : LA_AreaValue Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

the area value
[Is static False. Containment is Not Specified.]

referencePoint : GM_Point Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the coordinates of a point inside the spatial unit
[Is static False. Containment is Not Specified.]

surfaceRelation : LA_SurfaceRelationType Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

verdom : S121_VerticalDomainType Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

Definition: verdom - Category of vertical domain of the object delimited. (e.g. airspace, land_surface, water_surface, water_column, seabed_surface, subsoil). Any particular object may span more than one vertical domain.
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified) plus

Source: Public zone (Class) S121_Zone «FeatureType»
Cardinality: [0..*]

Target: Public limit (Class) S121_Limit «FeatureType»
Cardinality: [0..*]

Association (direction: Unspecified) minus

Source: Public zone (Class) S121_Zone «FeatureType»

Target: Public limit (Class) S121_Limit

ASSOCIATIONS	
Cardinality: [0..*]	«FeatureType» Cardinality: [0..*]
Association (direction: Unspecified)	
Source: Public (Class) S121_BAUnit	Target: Public (Class) S121_Zone «FeatureType»
Association (direction: Unspecified) vertExtent	
Source: Public space (Class) S121_Space «FeatureType» Cardinality: [0..1]	Target: Public zone (Class) S121_Zone «FeatureType» Cardinality: [0..*]

OPERATIONS
areaClosed () : Boolean Public [Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]
computeArea () : Area Public [Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]
createArea () : GM_MultiSurface Public [Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

1.5.7S121_Space

Class «FeatureType» in package 'S121_Feature'

Name: Space
AlphaCode: MSPACE
camelCaseCode: Space
NumericCode:
Use Type: theme
Definition: The Space object is an object that defines an volume which is logically delimited by instances of zone objects.
Permitted Primitives: P,L,A
Remarks: A Space is an objects of 2 dimensions with a height description located in 2 or 3 dimensional space. This is sometimes called 2 1/2 dimensions. A Space has the same geometry as a Zone with the attributes of vertical position. The vertical position may be explicit numerical attributes of height above a reference or a textual description.
References:

S121_Space
Version Phase Proposed
S-121 PT created on 26/03/2015. Last modified 01/12/2016
Extends S121_FeatureUnit

OUTGOING STRUCTURAL RELATIONSHIPS
Generalization from «FeatureType» S121_Space to «FeatureType» S121_FeatureUnit [Direction is 'Source -> Destination'.]

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from «FeatureType» S121_Space to «featureType» LA_SpatialUnit
[Name is Realize. Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Aggregation from «Geometry» S121_Volume to «FeatureType» S121_Space
[Name is SpatialAttribute. Direction is 'Source -> Destination'.]

ATTRIBUTES

referencePoint : GM_Point Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the coordinates of a point inside the spatial unit
[Is static False. Containment is Not Specified.]

verdom : S121_VerticalDomainType Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

Definition: verdom - Category of vertical domain of the object delimited. (e.g. airspace, land_surface, water_surface, water_column, seabed_surface, subsoil). Any particular object may span more than one vertical domain.
[Is static False. Containment is Not Specified.]

volume : LA_VolumeValue Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

the volume value (in case of bounded 3D description)
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified) vertExtent

Source: Public space (Class) S121_Space «FeatureType»
Cardinality: [0..1]

Target: Public zone (Class) S121_Zone «FeatureType»
Cardinality: [0..*]

Association (direction: Unspecified)

Source: Public (Class) S121_BAUnit

Target: Public (Class) S121_Space «FeatureType»

OPERATIONS

computeVolume () : Volume Public
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

createVolume () : GM_MultiSolid Public
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

volumeClosed () : Boolean Public
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

OPERATIONS

1.5.8S121_FeatureUnit

Abstract «FeatureType» in package 'S121_Feature'

The Feature Unit is a feature type which derives from the S100 General Feture Model. The S121_FeatureUnit takes on spatial attributes through a relation to the S121_SpatialAttributeType. This is an abstract class. It is implemented through its subtypes S121_Location, S121_Limit, S121_Zone, S121_Space.

S121_FeatureUnit
Version Phase Proposed
CHS created on 03/11/2016. Last modified 27/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS
Realization from «FeatureType» S121_FeatureUnit to «metaclass» S121_GF_FeatureType [Name is Realize. Direction is 'Source -> Destination'.]
Generalization from «FeatureType» S121_FeatureUnit to S121_VersionedObject [Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS
Generalization from «MLB» Limit Point to «FeatureType» S121_FeatureUnit [Direction is 'Source -> Destination'.]
Generalization from «MLB» Inland Waters to «FeatureType» S121_FeatureUnit [Direction is 'Source -> Destination'.]
Generalization from «FeatureType» S121_Space to «FeatureType» S121_FeatureUnit [Direction is 'Source -> Destination'.]
Generalization from «MLB» International Boundary to «FeatureType» S121_FeatureUnit [Direction is 'Source -> Destination'.]
Generalization from «MLB» Baseline Point to «FeatureType» S121_FeatureUnit [Direction is 'Source -> Destination'.]
Generalization from «MLB» Inland Limit to «FeatureType» S121_FeatureUnit [Direction is 'Source -> Destination'.]
Generalization from «MLB» The Area to «FeatureType» S121_FeatureUnit [Direction is 'Source -> Destination'.]
Generalization from «MLB» Baseline to «FeatureType» S121_FeatureUnit [Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from «MLB» Boundary Point to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «HYDRO» Exclusive Economic Zone to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Territorial Sea Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Disputed Area to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «HYDRO» Straight Baseline to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» High sea to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Exclusive Economic Zone Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Aggregation from «FeatureAttribute» S121_SpatialAttributeType to «FeatureType» S121_FeatureUnit
[Direction is 'Unspecified'.]

Generalization from «MLB» Normal Baseline to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «FeatureType» S121_Zone to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Contiguous Zone Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «HYDRO» Contiguous Zone to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «HYDRO» Continental Shelf Area to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Continental Shelf Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «FeatureType» S121_Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from «MLB» Internal Waters to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «FeatureType» S121_Location to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «HYDRO» Territorial Sea Area to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

ATTRIBUTES

context : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

fuID : Oid Public

the spatial unit identifier
[Is static False. Containment is Not Specified.]

label : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

releasability : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

This attribute may be used to differentiate between "official", "development", "internal use" or "in construction" status for particular features. This may be a code list in the future.
[Is static False. Containment is Not Specified.]

type : S121_FeatureType Public
[Is static False. Containment is Not Specified.]

typeName : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

short textual description of the spatial unit
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified)

Source: Public (Abstract) S121_FeatureUnit «FeatureType»
Cardinality: [0..*]

Target: Public (Class) S121_BAUnit
Cardinality: [1..*]

Association (direction: Unspecified) fuSource

Source: Public fu (Abstract) S121_FeatureUnit «FeatureType»
Cardinality: [0..*]

Target: Public source (Class) S121_Source
Cardinality: [0..*]

ASSOCIATIONS

1.5.9S121_LimitArcType

Class «CodeList» in package 'S121_Feature'

Definition: Category of computation used to define an arc (line). (Geodesic or Loxodrome).

S121_LimitArcType
Version 1 Phase Proposed
CHS created on 10/07/2015. Last modified 27/11/2016

ATTRIBUTES
geodesic : Public A path of shortest distance along the surface of an ellipsoid, namely a segment of a great circle. [Is static False. Containment is Not Specified.]
loxodrome : Public An arc crossing all meridians of longitude at the same angle; a path with constant bearing. [Is static False. Containment is Not Specified.]

1.5.10 S121_LocationType

Class «CodeList» in package 'S121_Feature'

Definition: Category of location types (defined, densified, computed or construction)

S121_LocationType
Version Phase Proposed
CHS created on 08/07/2015. Last modified 27/11/2016
Alias pointType

ATTRIBUTES
computed : Public a point is computed in accordance with the definition described in the source through proper geodetic calculations; for example, the intersection of two arcs over an ellipsoidal surface. A point may be established to support construction computations. [Is static False. Containment is Not Specified.]
construction : Public point established to support construction computations. [Is static False. Containment is Not Specified.]
defined : Public

ATTRIBUTES

a point is derived from a legislative document or other definitive source.
[Is static False. Containment is Not Specified.]

densified : Public

a point is part of a densification of the vertices in a line to ensure the geometry of a feature is correctly represented.
[Is static False. Containment is Not Specified.]

1.5.11 S121_VerticalDomainType

Class «CodeList» in package 'S121_Feature'

Definition: Category of vertical domain of the object delimited. (e.g. airspace, land_surface, water_surface, water_column, seabed_surface, subsoil). The code list may be extended. Any particular object may span more than one jurisdiction domain, for example, an **inter-tidal space** may span the airspace and water column. The **Territorial Sea** spans all of the vertical domains; however, the **EEZ** is the water surface, water column, seabed surface and subsoil.

S121_VerticalDomainType
Version Phase Proposed
IHO S121 PT created on 17/03/2014. Last modified 27/11/2016

ATTRIBUTES

airspace : Public

The airspace is a space composed of air .
[Is static False. Containment is Not Specified.]

landSurface : Public

landSurface is the interface between earth and air.
[Is static False. Containment is Not Specified.]

seabedSurface : Public

seabedSurface is the interface between the submerged land and the ocean.
IHO S-32 defines the Sea Floor as " The BOTTOM of the OCEAN where there is a smooth and gentle GRADIENT... " The sea bed is inclusive of the sea floor and all submerged lands.
[Is static False. Containment is Not Specified.]

subsoil : Public

The subsoil is an area composed of earth (soil).
[Is static False. Containment is Not Specified.]

waterColumn : Public

The waterColumn is a space (volume) from the seabedSurface up to the waterSurface.
[Is static False. Containment is Not Specified.]

waterSurface : Public

The waterSurface is the interface between the airspace and waterColumn.

ATTRIBUTES
[Is static False. Containment is Not Specified.]

1.5.12 S121_LimitType

Class «CodeList» in package 'S121_Feature'

Definition: Category of limit types (boundary, limit or construction)

S121_LimitType
Version Phase Proposed
CHS created on 17/03/2014. Last modified 27/11/2016

ATTRIBUTES
boundary : Public element delimiting an object administered by a more than one owner; typically two sovereign states (countries). If there are two political entities involved, the delineated is a boundary, and if there is only one the delineation is a limit. [Is static False. Containment is Not Specified.]
internationalBoundary : Public A type of boundary administered by two sovereign states (countries). This is a special case of boundary whose purpose is to allow the clear definition of critical sovereignty related elements. [Is static False. Containment is Not Specified.]
limit : Public element delimiting an object administered by a single owner; e.g. boundary of a management zone, that pertains to only one political entity, such as oil lease areas within a management zone for oil exploration. If there are two political entities involved, the delineation is a boundary, and if there is only one the delineation is a limit. [Is static False. Containment is Not Specified.]

1.5.13 S121 Feature Unit Attributes diagram

Class diagram in package 'S121 Feature Model'

S121 Feature Unit Attributes
Version
CHS created on 24/02/2016. Last modified 27/11/2016

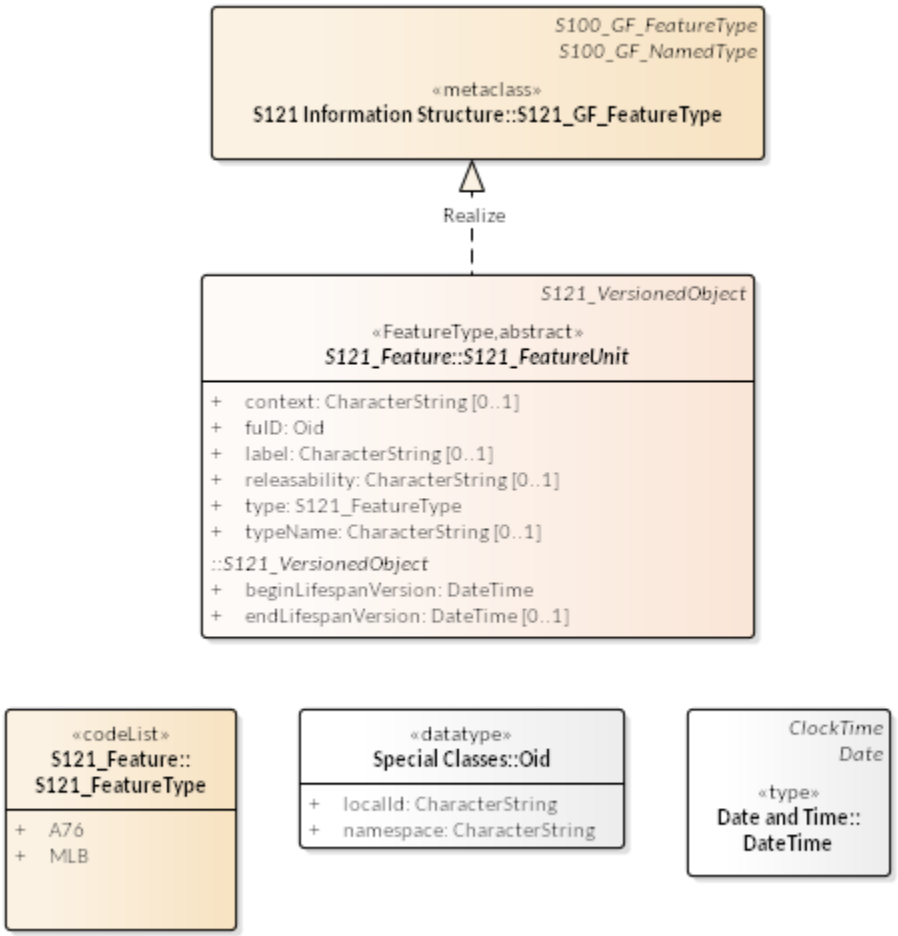

Figure 50: S121 Feature Unit Attributes

1.5.14 S121_GF_FeatureType

Metaclass «metaclass» in package 'S121 Information Structure'

The class S121_GF_FeatureType is a specialization of S100_GF_FeatureType.

The class S100_GF_FeatureType is a realisation of the ISO 19109 class GF_FeatureType. It differs from the ISO class in the following ways:
1. It is a sub-type of the class S100_GF_NamedType;
2. It does not realise the Generalization and Specialization associations with the class GF_InheritanceRelation. Instead, the class has an association with itself with the roles subType and superType. GF_InheritanceRelation is not realised in the S-100 GFM;
3. The multiplicity of the superType is 0..1 to represent the concept that a feature may have a maximum of one superType. This is in order to prevent multiple-inheritance in S-100;
4. The multiplicity of the role carrierOfCharacteristics with S100_GF_PropertyType (the S-100 realisation of GF_PropertyType) is changed from 0..* to 1..*. An S-100 feature must have properties.

S121_GF_FeatureType
Version Phase Proposed
CHS created on 30/06/2015. Last modified 01/12/2016
Extends S100_GF_FeatureType, S100_GF_NamedType

OUTGOING STRUCTURAL RELATIONSHIPS

⇐ Generalization from «metaclass» S121_GF_FeatureType to «metaclass» S100_GF_NamedType
[Direction is 'Source -> Destination'.]

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «metaclass» S121_GF_FeatureType to «metaclass» S100_GF_FeatureType
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from «FeatureType» S121_FeatureUnit to «metaclass» S121_GF_FeatureType
[Name is Realize. Direction is 'Source -> Destination'.]

Realization from FeatureType Instance to «metaclass» S121_GF_FeatureType
[Name is Instance. Direction is 'Source -> Destination'.]

Aggregation from «metaclass» S121_GF_ThematicAttributeType to «metaclass» S121_GF_FeatureType
[Direction is 'Source -> Destination'.]

Aggregation from «metaclass» S121_GF_SpatialAttributeType to «metaclass» S121_GF_FeatureType
[Direction is 'Unspecified'.]

Realization from «FeatureType» S121_FeatureUnit to «metaclass» S121_GF_FeatureType
[Name is Realize. Direction is 'Source -> Destination'.]

ASSOCIATIONS

Association (direction: Unspecified) inheritance

Role: superType - The more generic feature type from which this feature type is derived.
Role: subType - The more specific feature types which are derived from this feature type.

Source: Public subType (Metaclass) S121_GF_FeatureType «metaclass»
Cardinality: [0..*]

Target: Public superType (Metaclass) S121_GF_FeatureType «metaclass»
Cardinality: [0..1]

Association (direction: Source -> Destination) Usage of registered definityon etc

Source: Public (Metaclass) S121_GF_FeatureType «metaclass»
Cardinality: [1]

Target: Public (Class) S121_FC_FeatureType
Cardinality: [0..*]

Association (direction: Unspecified) inheritance

Role: superType - The more generic feature type from which this feature type is derived.
Role: subType - The more specific feature types which are derived from this feature type.

Source: Public subType (Metaclass) S121_GF_FeatureType «metaclass»
Cardinality: [0..*]

Target: Public superType (Metaclass) S121_GF_FeatureType «metaclass»
Cardinality: [0..1]

1.5.15 S121_FeatureUnit

Abstract «FeatureType» in package 'S121_Feature'

The Feature Unit is a feature type which derives from the S100 General Feture Model. The S121_FeatureUnit takes on spatial attributes through a relation to the S121_SpatialAttributeType. This is an abstract class. It is implemented through its subtypes S121_Location, S121_Limit, S121_Zone, S121_Space.

S121_FeatureUnit
Version Phase Proposed
CHS created on 03/11/2016. Last modified 27/11/2016
Extends S121_VersionedObject

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from «FeatureType» S121_FeatureUnit to «metaclass» S121_GF_FeatureType
[Name is Realize. Direction is 'Source -> Destination'.]

Generalization from «FeatureType» S121_FeatureUnit to S121_VersionedObject
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from «MLB» Limit Point to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Inland Waters to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «FeatureType» S121_Space to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» International Boundary to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Baseline Point to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Inland Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» The Area to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Baseline to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Boundary Point to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «HYDRO» Exclusive Economic Zone to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from «MLB» Territorial Sea Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Disputed Area to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «HYDRO» Straight Baseline to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» High sea to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Exclusive Economic Zone Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Aggregation from «FeatureAttribute» S121_SpatialAttributeType to «FeatureType» S121_FeatureUnit
[Direction is 'Unspecified'.]

Generalization from «MLB» Normal Baseline to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «FeatureType» S121_Zone to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Contiguous Zone Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «HYDRO» Contiguous Zone to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «HYDRO» Continental Shelf Area to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Continental Shelf Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «FeatureType» S121_Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Internal Waters to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Generalization from «FeatureType» S121_Location to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Generalization from «HYDRO» Territorial Sea Area to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

ATTRIBUTES

context : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

fuID : Oid Public

the spatial unit identifier
[Is static False. Containment is Not Specified.]

label : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Is static False. Containment is Not Specified.]

releasability : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

This attribute may be used to differentiate between "official", "development", "internal use" or "in construction" status for particular features. This may be a code list in the future.
[Is static False. Containment is Not Specified.]

type : S121_FeatureType Public
[Is static False. Containment is Not Specified.]

typeName : CharacterString Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

short textual description of the spatial unit
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified)

Source: Public (Abstract) S121_FeatureUnit «FeatureType»
Cardinality: [0..*]

Target: Public (Class) S121_BAUnit
Cardinality: [1..*]

Association (direction: Unspecified) fuSource

Source: Public fu (Abstract) S121_FeatureUnit «FeatureType»
Cardinality: [0..*]

Target: Public source (Class) S121_Source
Cardinality: [0..*]

1.5.16 S121_FeatureType

Class «codeList» in package 'S121_Feature'

This code list includes types that have a common characteristic related to the marine environment. The code list is registered in the Feature Concept Dictionary as listed values and as such can be expanded to include all aspects of the legal context. The initial contents are: **MLB** (Marine Limits and Boundaries), and **A76** (UNCLOS article 76). This code list can be extended.

S121_FeatureType
Version 1.0 Phase 1.0 Proposed
created on 21/02/2016. Last modified 27/11/2016

ATTRIBUTES
A76 : Public UNCLOS article 76 [Is static False. Containment is Not Specified.]
MLB : Public Marine Limits and Boundaries [Is static False. Containment is Not Specified.]

1.5.17 MLB_Objects

Package in package 'S121 Feature Model'

MLB_Objects
Version 1 Phase Proposed
CHS created on 11/03/2014. Last modified 19/08/2015

1.5.17.1 S121 MLB Features diagram

Class diagram in package 'MLB_Objects'

A set of predefined objects have been established that include the normal objects required for Marine Limits and Boundaries. The stereotype <FeatureType> is used to identify the defining objects. The stereotype <MLB> (Maritime Limits and Boundaries) is used to identify the MLB Feature Types.
Figure F2 illustrates the relationship of the feature types to the defining objects. The realize relation is used because the feature types do not directly carry the defining attributes. The information contained in the defining attributes is included in the Feature Catalogue for each feature as applicable.

S121 MLB Features
Version
S121 PT created on 10/07/2015. Last modified 27/11/2016

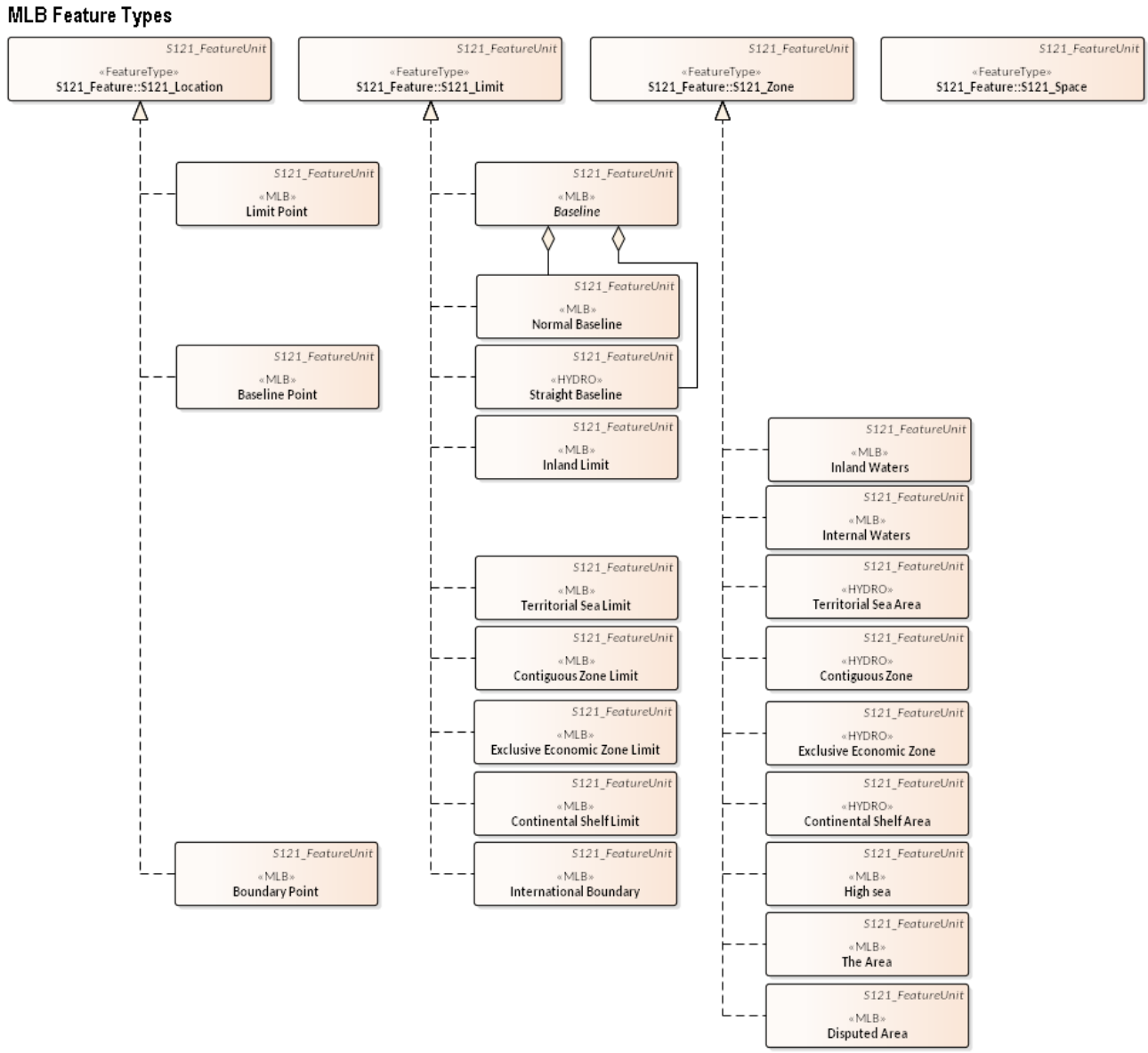

Figure 51: S121 MLB Features

1.5.17.2 S121_Limit

Class «FeatureType» in package 'S121_Feature'

Name: Limit
AlphaCode: MLBLIM
camelCaseCode: Limit
NumericCode:
Use Type: theme
Definition: The MLB_Limit object is an object that defines any limits or boundaries either relating to terrestrial, marine or both environments.
Permitted Primitives: P, L
References:
Remarks:

S121_Limit
Version Phase Proposed
S-121 PT created on 26/03/2015. Last modified 01/12/2016
Extends S121_FeatureUnit

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «FeatureType» S121_Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from «MLB» Exclusive Economic Zone Limit to «FeatureType» S121_Limit
[Direction is 'Source -> Destination'.]

Realization from «MLB» Baseline to «FeatureType» S121_Limit
[Direction is 'Source -> Destination'.]

Realization from «MLB» Contiguous Zone Limit to «FeatureType» S121_Limit
[Direction is 'Source -> Destination'.]

Realization from «MLB» Inland Limit to «FeatureType» S121_Limit
[Direction is 'Source -> Destination'.]

Realization from «MLB» International Boundary to «FeatureType» S121_Limit
[Direction is 'Source -> Destination'.]

Aggregation from «Geometry» S121_Curve to «FeatureType» S121_Limit
[Name is SpatialAttribute. Direction is 'Source -> Destination'.]

Realization from «HYDRO» Straight Baseline to «FeatureType» S121_Limit
[Direction is 'Source -> Destination'.]

Realization from «MLB» Territorial Sea Limit to «FeatureType» S121_Limit
[Direction is 'Source -> Destination'.]

Realization from «MLB» Continental Shelf Limit to «FeatureType» S121_Limit
[Direction is 'Source -> Destination'.]

Realization from «MLB» Normal Baseline to «FeatureType» S121_Limit
[Direction is 'Source -> Destination'.]

ATTRIBUTES

arctyp : S121_LimitArcType Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Definition: Type of computation used to define an arc (line). (Geodesic or loxodrome).
[Is static False. Containment is Not Specified.]

limtyp : S121_LimitType Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Definition: Type of delineation (Boundary, Limit or Construction).
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified) plus

Source: Public zone (Class) S121_Zone «FeatureType»
Cardinality: [0..*]

Target: Public limit (Class) S121_Limit «FeatureType»
Cardinality: [0..*]

Association (direction: Unspecified) minus

Source: Public zone (Class) S121_Zone «FeatureType»
Cardinality: [0..*]

Target: Public limit (Class) S121_Limit «FeatureType»
Cardinality: [0..*]

Association (direction: Unspecified) points

Source: Public location (Class) S121_Location «FeatureType»
Cardinality: [2..*]

Target: Public limit (Class) S121_Limit «FeatureType»
Cardinality: [0..*]

1.5.17.3 S121_Location

Class «FeatureType» in package 'S121_Feature'

Name: Location
AlphaCode: MLOCTN
camelCaseCode: Limit
NumericCode:
Use Type: theme
Definition: The Location object is an object that defines the underlying structure of location.
Permitted Primitives: P
Remarks: To portray a geodesic or loxodrome curve correctly, additional vertices may be included in the dataset. These are densified locations. These vertices would not have formed part of the original source information. The loctyp attribute can be used to differentiate between a defined vertex (e.g. declared in a treaty) with a vertex densified to ensure correct GIS depiction. A computed location is also not part of the original source information, but is calculated as the result of the original source guidance, such as the intersection between arcs, geodesics, or loxodromes. A construction vertex is any arbitrary position established to support computation.
References:

S121_Location
Version Phase Proposed
S-121 PT created on 26/03/2015. Last modified 01/12/2016
Extends S121_FeatureUnit

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «FeatureType» S121_Location to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Realization from «FeatureType» S121_Location to «featureType» LA_Point
[Name is Realize. Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

INCOMING STRUCTURAL RELATIONSHIPS

Realization from «MLB» Boundary Point to «FeatureType» S121_Location
[Direction is 'Source -> Destination'.]

Realization from «MLB» Baseline Point to «FeatureType» S121_Location
[Direction is 'Source -> Destination'.]

Aggregation from «Geometry» S121_Point to «FeatureType» S121_Location
[Name is SpatialAttribute. Direction is 'Source -> Destination'.]

Realization from «MLB» Limit Point to «FeatureType» S121_Location
[Direction is 'Source -> Destination'.]

ATTRIBUTES

interpolationRole : LA_InterpolationType Public

the role of point in the structure of a straight line or curve
[Is static False. Containment is Not Specified.]

pointType : S121_LocationType Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Definition: Computational origin of the element (defined, densified, computed or construction)
[Is static False. Containment is Not Specified.]

transAndResult : LA _Transformation Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

transformation and transformed location
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified) points

Source: Public location (Class) S121_Location «FeatureType»
Cardinality: [2..*]

Target: Public limit (Class) S121_Limit «FeatureType»
Cardinality: [0..*]

1.5.17.4 S121_Zone

Class «FeatureType» in package 'S121_Feature'

Name: Zone
AlphaCode: MZONE
camelCaseCode: Zone
NumericCode:
Use Type: theme
Definition: The Zone object is an object that defines an area which is logically delimited by instances of delineation (limit_boundary) objects.

Permitted Primitives: P,L,A
Remarks: Maritime, terrestrial or inter-tidal zone objects are the three real objects that inherit from this object.
References:

S121_Zone
Version Phase Proposed
S-121 PT created on 26/03/2015. Last modified 01/12/2016
Extends S121_FeatureUnit

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from «FeatureType» S121_Zone to «featureType» LA_SpatialUnit
[Name is Realize. Direction is 'Source -> Destination'.]

Generalization from «FeatureType» S121_Zone to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Realization from «HYDRO» Territorial Sea Area to «FeatureType» S121_Zone
[Direction is 'Source -> Destination'.]

Realization from «HYDRO» Exclusive Economic Zone to «FeatureType» S121_Zone
[Direction is 'Source -> Destination'.]

Aggregation from «Geometry» S121_Surface to «FeatureType» S121_Zone
[Name is SpatialAttribute. Direction is 'Source -> Destination'.]

Realization from «MLB» High sea to «FeatureType» S121_Zone
[Direction is 'Source -> Destination'.]

Realization from «HYDRO» Continental Shelf Area to «FeatureType» S121_Zone
[Direction is 'Source -> Destination'.]

Realization from «MLB» Internal Waters to «FeatureType» S121_Zone
[Direction is 'Source -> Destination'.]

Realization from «HYDRO» Contiguous Zone to «FeatureType» S121_Zone
[Direction is 'Source -> Destination'.]

Realization from «MLB» The Area to «FeatureType» S121_Zone
[Direction is 'Source -> Destination'.]

Realization from «MLB» Disputed Area to «FeatureType» S121_Zone
[Direction is 'Source -> Destination'.]

Realization from «MLB» Inland Waters to «FeatureType» S121_Zone
[Direction is 'Source -> Destination'.]

ATTRIBUTES

ATTRIBUTES

area : LA_AreaValue Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

the area value

[Is static False. Containment is Not Specified.]

referencePoint : GM_Point Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the coordinates of a point inside the spatial unit

[Is static False. Containment is Not Specified.]

surfaceRelation : LA_SurfaceRelationType Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

[Is static False. Containment is Not Specified.]

verdom : S121_VerticalDomainType Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

Definition: verdom - Category of vertical domain of the object delimited. (e.g. airspace, land_surface, water_surface, water_column, seabed_surface, subsoil). Any particular object may span more than one vertical domain.

[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified) plus

Source: Public zone (Class) S121_Zone «FeatureType»
Cardinality: [0..*]

Target: Public limit (Class) S121_Limit «FeatureType»
Cardinality: [0..*]

Association (direction: Unspecified) minus

Source: Public zone (Class) S121_Zone «FeatureType»
Cardinality: [0..*]

Target: Public limit (Class) S121_Limit «FeatureType»
Cardinality: [0..*]

Association (direction: Unspecified)

Source: Public (Class) S121_BAUnit

Target: Public (Class) S121_Zone «FeatureType»

Association (direction: Unspecified) vertExtent

Source: Public space (Class) S121_Space «FeatureType»
Cardinality: [0..1]

Target: Public zone (Class) S121_Zone «FeatureType»
Cardinality: [0..*]

OPERATIONS

areaClosed () : Boolean Public

[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

OPERATIONS

computeArea () : Area Public
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

createArea () : GM_MultiSurface Public
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

1.5.17.5 S121_Space

Class «FeatureType» in package 'S121_Feature'

Name: Space
AlphaCode: MSPACE
camelCaseCode: Space
NumericCode:
Use Type: theme
Definition: The Space object is an object that defines an volume which is logically delimited by instances of zone objects.
Permitted Primitives: P,L,A
Remarks: A Space is an objects of 2 dimensions with a height description located in 2 or 3 dimensional space. This is sometimes called 2 1/2 dimensions. A Space has the same geometry as a Zone with the attributes of vertical position. The vertical position may be explicit numerical attributes of height above a reference or a textual description.
References:

S121_Space
Version Phase Proposed
S-121 PT created on 26/03/2015. Last modified 01/12/2016
Extends S121_FeatureUnit

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «FeatureType» S121_Space to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Realization from «FeatureType» S121_Space to «featureType» LA_SpatialUnit
[Name is Realize. Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Aggregation from «Geometry» S121_Volume to «FeatureType» S121_Space
[Name is SpatialAttribute. Direction is 'Source -> Destination'.]

ATTRIBUTES

referencePoint : GM_Point Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

the coordinates of a point inside the spatial unit
[Is static False. Containment is Not Specified.]

verdom : S121_VerticalDomainType Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

ATTRIBUTES

Definition: verdom - Category of vertical domain of the object delimited. (e.g. airspace, land_surface, water_surface, water_column, seabed_surface, subsoil). Any particular object may span more than one vertical domain.
[Is static False. Containment is Not Specified.]

volume : LA_VolumeValue Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

the volume value (in case of bounded 3D description)
[Is static False. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified) vertExtent

Source: Public space (Class) S121_Space «FeatureType»
Cardinality: [0..1]

Target: Public zone (Class) S121_Zone «FeatureType»
Cardinality: [0..*]

Association (direction: Unspecified)

Source: Public (Class) S121_BAUnit

Target: Public (Class) S121_Space «FeatureType»

OPERATIONS

computeVolume () : Volume Public
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

createVolume () : GM_MultiSolid Public
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

volumeClosed () : Boolean Public
[Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False.]

1.5.17.6 S121 MLB Location Objects and Attributes diagram

Class diagram in package 'MLB_Objects'

S121 MLB Location Objects and Attributes
Version
CHS created on 27/07/2015. Last modified 27/11/2016

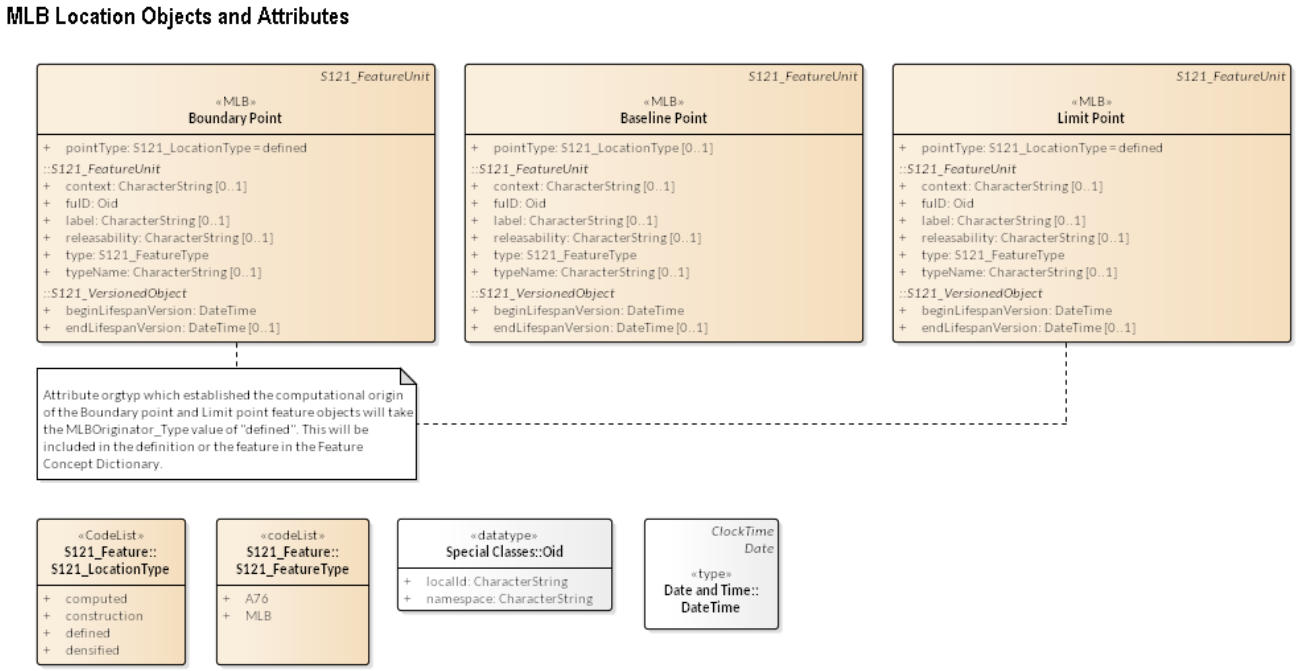

Figure 52: S121 MLB Location Objects and Attributes

1.5.17.7 S121_FeatureType

Class «codeList» in package 'S121_Feature'

This code list includes types that have a common characteristic related to the marine environment. The code list is registered in the Feature Concept Dictionary as listed values and as such can be expanded to include all aspects of the legal context. The initial contents are: **MLB** (Marine Limits and Boundaries), and **A76** (UNCLOS article 76). This code list can be extended.

S121_FeatureType
Version 1.0 Phase 1.0 Proposed
created on 21/02/2016. Last modified 27/11/2016

ATTRIBUTES

A76 : Public

UNCLOS article 76

[Is static False. Containment is Not Specified.]

MLB : Public

Marine Limits and Boundaries

[Is static False. Containment is Not Specified.]

1.5.17.8 S121_LocationType

Class «CodeList» in package 'S121_Feature'

Definition: Category of location types (defined, densified, computed or construction)

S121_LocationType

Version Phase Proposed
CHS created on 08/07/2015. Last modified 27/11/2016
Alias pointType

ATTRIBUTES
computed : Public a point is computed in accordance with the definition described in the source through proper geodetic calculations; for example, the intersection of two arcs over an ellipsoidal surface. A point may be established to support construction computations. [Is static False. Containment is Not Specified.]
construction : Public point established to support construction computations. [Is static False. Containment is Not Specified.]
defined : Public a point is derived from a legislative document or other definitive source. [Is static False. Containment is Not Specified.]
densified : Public a point is part of a densification of the vertices in a line to ensure the geometry of a feature is correctly represented. [Is static False. Containment is Not Specified.]

1.5.17.9 S121 MLB Limit Objects and Attributes diagram

Class diagram in package 'MLB_Objects'

S121 MLB Limit Objects and Attributes
Version
CHS created on 27/07/2015. Last modified 27/11/2016

MLB Limit Objects and Attributes

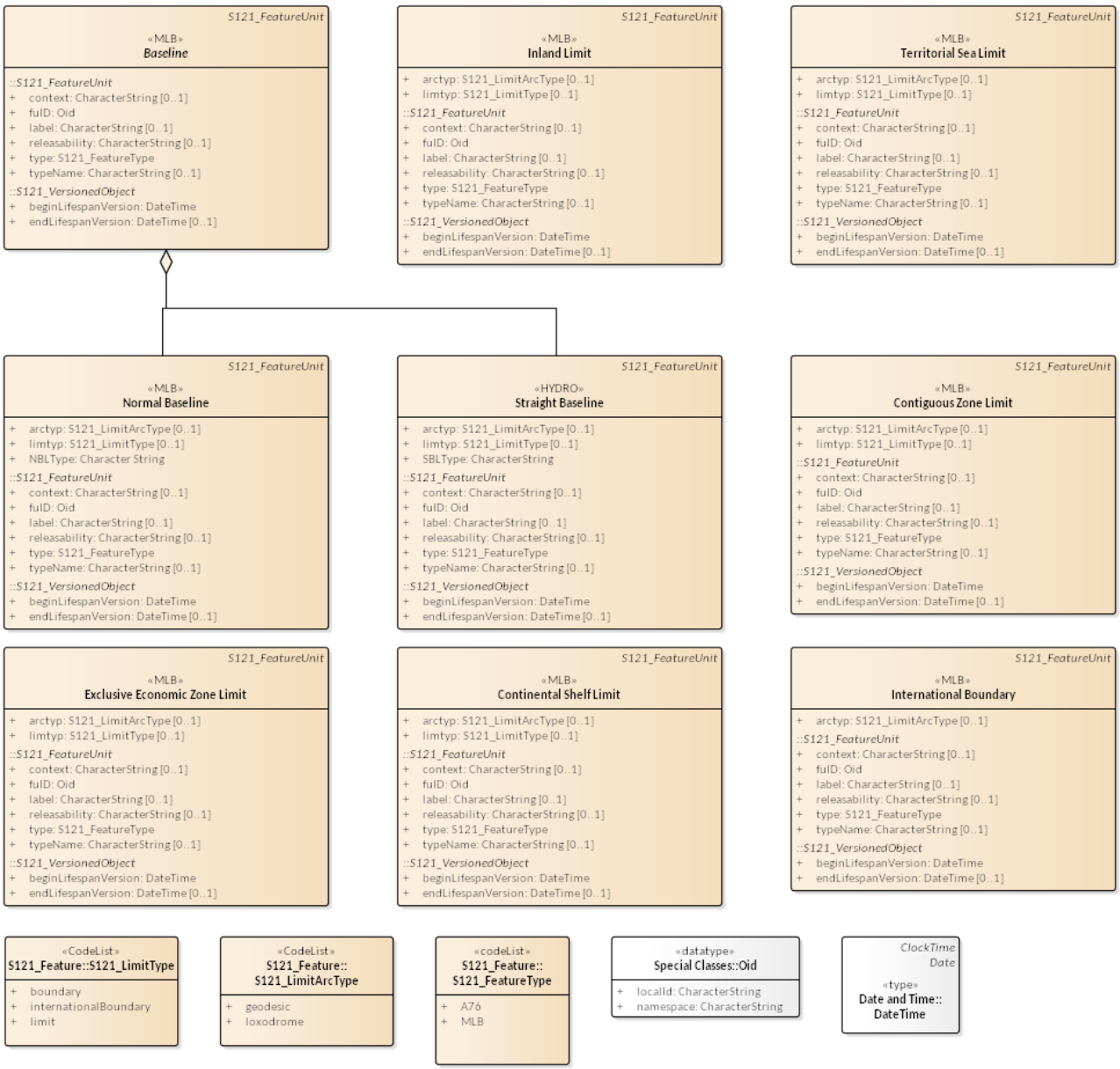

Figure 53: S121 MLB Limit Objects and Attributes

1.5.17.10 S121_FeatureType

Class «codeList» in package 'S121_Feature'

This code list includes types that have a common characteristic related to the marine environment. The code list is registered in the Feature Concept Dictionary as listed values and as such can be expanded to include all aspects of the legal context. The initial contents are: **MLB** (Marine Limits and Boundaries), and **A76** (UNCLOS article 76). This code list can be extended.

S121_FeatureType
Version 1.0 Phase 1.0 Proposed
created on 21/02/2016. Last modified 27/11/2016

ATTRIBUTES
A76 : Public

ATTRIBUTES

UNCLOS article 76

[Is static False. Containment is Not Specified.]

MLB : Public

Marine Limits and Boundaries

[Is static False. Containment is Not Specified.]

1.5.17.11 S121_LimitArcType

Class «CodeList» in package 'S121_Feature'

Definition: Category of computation used to define an arc (line). (Geodesic or Loxodrome).

S121_LimitArcType
Version 1 Phase Proposed
CHS created on 10/07/2015. Last modified 27/11/2016

ATTRIBUTES

geodesic : Public

A path of shortest distance along the surface of an ellipsoid, namely a segment of a great circle.

[Is static False. Containment is Not Specified.]

loxodrome : Public

An arc crossing all meridians of longitude at the same angle; a path with constant bearing.

[Is static False. Containment is Not Specified.]

1.5.17.12 S121_LimitType

Class «CodeList» in package 'S121_Feature'

Definition: Category of limit types (boundary, limit or construction)

S121_LimitType
Version Phase Proposed
CHS created on 17/03/2014. Last modified 27/11/2016

ATTRIBUTES

boundary : Public

element delimiting an object administered by a more than one owner; typically two sovereign states (countries). If there are two political entities involved, the delineated is a boundary, and if there is only one the delineation is a limit.

[Is static False. Containment is Not Specified.]

internationalBoundary : Public

A type of boundary administered by two sovereign states (countries). This is a special case of boundary whose purpose is to

ATTRIBUTES

allow the clear definition of critical sovereignty related elements.

[Is static False. Containment is Not Specified.]

limit : Public

element delimiting an object administered by a single owner; e.g. boundary of a management zone, that pertains to only one political entity, such as oil lease areas within a management zone for oil exploration. If there are two political entities involved, the delineation is a boundary, and if there is only one the delineation is a limit.

[Is static False. Containment is Not Specified.]

1.5.17.13 S121 MLB Zone Objects and Attributes diagram

Class diagram in package 'MLB_Objects'

S121 MLB Zone Objects and Attributes
Version
CHS created on 27/07/2015. Last modified 27/11/2016

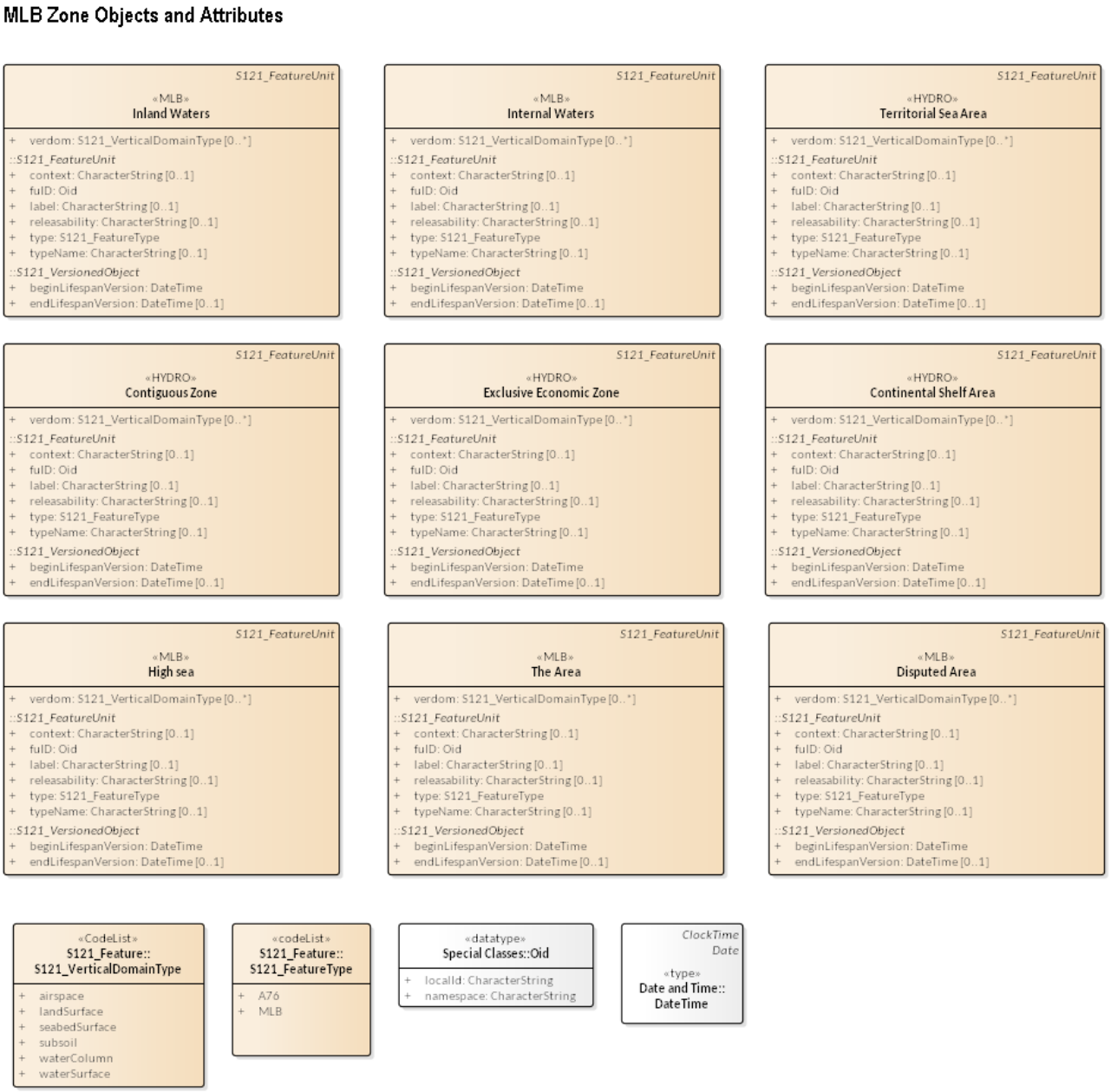

Figure 54: S121 MLB Zone Objects and Attributes

1.5.17.14 S121_FeatureType

Class «codeList» in package 'S121_Feature'

This code list includes types that have a common characteristic related to the marine environment. The code list is registered in the Feature Concept Dictionary as listed values and as such can be expanded to include all aspects of the legal context. The initial contents are: **MLB** (Marine Limits and Boundaries), and **A76** (UNCLOS article 76). This code list can be extended.

S121_FeatureType
Version 1.0 Phase 1.0 Proposed
created on 21/02/2016. Last modified 27/11/2016

ATTRIBUTES
A76 : Public

ATTRIBUTES

UNCLOS article 76

[Is static False. Containment is Not Specified.]

MLB : Public

Marine Limits and Boundaries

[Is static False. Containment is Not Specified.]

1.5.17.15 S121_VerticalDomainType

Class «CodeList» in package 'S121_Feature'

Definition: Category of vertical domain of the object delimited. (e.g. airspace, land_surface, water_surface, water_column, seabed_surface, subsoil). The code list may be extended. Any particular object may span more than one jurisdiction domain, for example, an **inter-tidal space** may span the airspace and water column. The **Territorial Sea** spans all of the vertical domains; however, the **EEZ** is the water surface, water column, seabed surface and subsoil.

S121_VerticalDomainType
Version Phase Proposed
IHO S121 PT created on 17/03/2014. Last modified 27/11/2016

ATTRIBUTES

airspace : Public

The airspace is a space composed of air .

[Is static False. Containment is Not Specified.]

landSurface : Public

landSurface is the interface between earth and air.

[Is static False. Containment is Not Specified.]

seabedSurface : Public

seabedSurface is the interface between the submerged land and the ocean.
IHO S-32 defines the Sea Floor as " The BOTTOM of the OCEAN where there is a smooth and gentle GRADIENT... " The sea bed is inclusive of the sea floor and all submerged lands.

[Is static False. Containment is Not Specified.]

subsoil : Public

The subsoil is an area composed of earth (soil).

[Is static False. Containment is Not Specified.]

waterColumn : Public

The waterColumn is a space (volume) from the seabedSurface up to the waterSurface.

[Is static False. Containment is Not Specified.]

waterSurface : Public

The waterSurface is the interface between the airspace and waterColumn.

ATTRIBUTES
[Is static False. Containment is Not Specified.]

1.5.17.16 Disputed Area

Class «MLB» in package 'MLB_Objects'

Name: Disputed Area
AlphaCode: DISARE
camelCaseCode: DisputedArea
Numeric Code:
Use Type: theme
Definition: An area of disputed jurisdiction.
Permitted Primitives: A
Remarks: A disputed area can be any type of zone. The limit of the zone would correspond to the type of limit that would apply if the zone was not disputed.
Distinction:
References:

Disputed Area
Version Phase Proposed
S-121 PT created on 10/07/2015. Last modified 01/12/2016
Alias DISARE
Extends S121_FeatureUnit

OUTGOING STRUCTURAL RELATIONSHIPS
Generalization from «MLB» Disputed Area to «FeatureType» S121_FeatureUnit [Direction is 'Source -> Destination'.]
Realization from «MLB» Disputed Area to «FeatureType» S121_Zone [Direction is 'Source -> Destination'.]

ATTRIBUTES
verdom : S121_VerticalDomainType Public Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False) **Definition**: verdom - Category of vertical domain of the object delimited. (e.g. airspace, land_surface, water_surface, water_column, seabed_surface, subsoil). Any particular object may span more than one vertical domain. [Is static False. Containment is Not Specified.]

1.5.17.17 Baseline Point

Class «MLB» in package 'MLB_Objects'

Name: Baseline Point
AlphaCode: BASEPT
camelCaseCode: BaselinePoint

Numeric Code:
Use Type: theme
Definition: A Baseline Point is part of the territorial sea baseline model or of an archipelagic baseline. It can be used in a normal baseline, straight baseline, archipelagic, bay closing, river mouth closing, historic bay closing or delta or dynamic coastal environment baseline.
Permitted Primitives: P
Remarks: This can be any point that makes up a baseline.
References:

Baseline Point
Version Phase Proposed
S-121 PT created on 10/07/2015. Last modified 01/12/2016
Alias BASEPT
Extends S121_FeatureUnit

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from «MLB» Baseline Point to «FeatureType» S121_Location
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Baseline Point to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

ATTRIBUTES

pointType : S121_LocationType Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Definition: Computational origin of the element (defined, densified, computed or construction)
[Is static False. Containment is Not Specified.]

1.5.17.18 Contiguous Zone

Class «HYDRO» in package 'MLB_Objects'

Name: Contiguous Zone
AlphaCode: CONZNE
camelCaseCode: ContiguousZone
NumericCode: 31
Use Type: geo, theme
Definition: A zone contiguous to a coastal State's territorial sea, which may not extend beyond 24 nautical miles from the baselines from which the breadth of the territorial sea is measured. (IHO Dictionary, S-32, 5th Edition, 993)
Permitted Primitives: A
Remarks: The coastal state may exercise certain control in this zone subject to the provisions of International Law. A contiguous zone is a zone that is bounded by the TESLIM (Territorial Sea limit), the CONLIM and or other limit objects such as an international boundary.
Distinction: ADMARE, COSARE, EXEZNE, FSHZNE, TESARE
References:
INT 1: IN 44;
M-4: 440.6;

Contiguous Zone
Version Phase Proposed
TSMAD created on 09/07/2015. Last modified 01/12/2016

Alias CONZNE
Extends S121_FeatureUnit

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from «HYDRO» Contiguous Zone to «FeatureType» S121_Zone
[Direction is 'Source -> Destination'.]

Generalization from «HYDRO» Contiguous Zone to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

ATTRIBUTES

verdom : S121_VerticalDomainType Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

Definition: verdom - Category of vertical domain of the object delimited. (e.g. airspace, land_surface, water_surface, water_column, seabed_surface, subsoil). Any particular object may span more than one vertical domain.
[Is static False. Containment is Not Specified.]

1.5.17.19 Contiguous Zone Limit

Class «MLB» in package 'MLB_Objects'

Name: Contiguous Zone Limit
AlphaCode: CONLIM
camelCaseCode: ContiguousZoneLimit
NumericCode:
Use Type: theme
Definition: This object is used to express the outer limit of the State's Contiguous Zone.
Permitted Primitives: L
Remarks:
Distinction:
References:

Contiguous Zone Limit
Version Phase Proposed
S-121 PT created on 09/07/2015. Last modified 01/12/2016
Alias CONLIM
Extends S121_FeatureUnit

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from «MLB» Contiguous Zone Limit to «FeatureType» S121_Limit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Contiguous Zone Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

ATTRIBUTES

arctyp : S121_LimitArcType Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

ATTRIBUTES

Definition: Type of computation used to define an arc (line). (Geodesic or loxodrome).
[Is static False. Containment is Not Specified.]

limtyp : S121_LimitType Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Definition: Type of delineation (Boundary, Limit or Construction).
[Is static False. Containment is Not Specified.]

1.5.17.20 Continental Shelf Limit

Class «MLB» in package 'MLB_Objects'

Name: Continental Shelf Limit
Alias: Extended Continental Shelf Limit
AlphaCode: COSLIM
camelCaseCode: ContinentalShelfLimit
NumericCode:
Use Type: theme
Definition: The outer limit of the State's Continental Shelf.
Permitted Primitives: L
Remarks:
Distinction:
References:

Continental Shelf Limit
Version Phase Proposed
S-121 PT created on 09/07/2015. Last modified 01/12/2016
Alias Extended Continental Shelf Limit
Extends S121_FeatureUnit

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from «MLB» Continental Shelf Limit to «FeatureType» S121_Limit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Continental Shelf Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

ATTRIBUTES

arctyp : S121_LimitArcType Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Definition: Type of computation used to define an arc (line). (Geodesic or loxodrome).
[Is static False. Containment is Not Specified.]

limtyp : S121_LimitType Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Definition: Type of delineation (Boundary, Limit or Construction).
[Is static False. Containment is Not Specified.]

ATTRIBUTES

1.5.17.21 Continental Shelf Area

Class «HYDRO» in package 'MLB_Objects'

Name: Continental Shelf Area
AlphaCode: COSARE
camelCaseCode: ContinentalShelfArea
NumericCode: 32
Use Type: geo, theme
Definition:The continental shelf of a coastal State comprises the sea bed and subsoil of the submarine areas that extend beyond its territorial sea throughout the natural prolongation of its land territory to the outer edge of the continental margin, or to a distance of 200 nautical miles from the baselines from which the breadth of the territorial sea is measured where the outer edge of the continental margin does not extend out to that distance.
Permitted Primitives: A
Remarks: The Continental Shelf Area is a zone that is bounded by the EEZ and the COSLIM and / or other limit objects such as an international boundary.
Distinction: ADMARE, CONZNE, EXEZNE, FSHZNE, TESARE
References:
INT 1: N 46;
S-4: 440.8;

Continental Shelf Area
Version Phase Proposed
TSMAD created on 02/12/2015. Last modified 01/12/2016
Alias COSARE
Extends S121_FeatureUnit

OUTGOING STRUCTURAL RELATIONSHIPS
Realization from «HYDRO» Continental Shelf Area to «FeatureType» S121_Zone [Direction is 'Source -> Destination'.]
Generalization from «HYDRO» Continental Shelf Area to «FeatureType» S121_FeatureUnit [Direction is 'Source -> Destination'.]

ATTRIBUTES
verdom : S121_VerticalDomainType Public Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False) **Definition**: verdom - Category of vertical domain of the object delimited. (e.g. airspace, land_surface, water_surface, water_column, seabed_surface, subsoil). Any particular object may span more than one vertical domain. [Is static False. Containment is Not Specified.]

1.5.17.22 Exclusive Economic Zone

Class «HYDRO» in package 'MLB_Objects'

Name: Exclusive Economic Zone
AlphaCode: EXEZNE

camelCaseCode: ExclusiveEconomicZone
NumericCode: 50
Use Type: geo, theme
Definition:An area, not exceeding 200 nautical miles from the baselines from which the breadth of the territorial sea is measured, subject to a specific legal regime established in the United Nations Convention on the Law of the Sea under which the coastal state has certain rights and jurisdiction. (IHO Dictionary, S-32, 5th Edition, 1723)
Permitted Primitives: A
Remarks: The Exclusive Economic Zone is a zone that is bounded by the TESLIM (Territorial Sea limit), EEZLIM or other limit objects such as an international boundary.
Distinction: ADMARE, CONZNE, COSARE, FSHZNE, TESARE
References:
INT 1: IN 47;
M-4: 440.9;

Exclusive Economic Zone
Version Phase Proposed
TSMAD created on 09/07/2015. Last modified 01/12/2016
Alias EXEZNE
Extends S121_FeatureUnit

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from «HYDRO» Exclusive Economic Zone to «FeatureType» S121_Zone
[Direction is 'Source -> Destination'.]

Generalization from «HYDRO» Exclusive Economic Zone to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

ATTRIBUTES

verdom : S121_VerticalDomainType Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

Definition: verdom - Category of vertical domain of the object delimited. (e.g. airspace, land_surface, water_surface, water_column, seabed_surface, subsoil). Any particular object may span more than one vertical domain.
[Is static False. Containment is Not Specified.]

1.5.17.23 Exclusive Economic Zone Limit

Class «MLB» in package 'MLB_Objects'

Name: Exclusive Economic Zone Limit
AlphaCode: EEZLIM
camelCaseCode: ExclusiveEconomicZoneLimit
NumericCode:
Use Type: theme
Definition: The outer limit of the State's exclusive economic zone.
Permitted Primitives: L
Remarks:
Distinction:
References:

Exclusive Economic Zone Limit
Version Phase Proposed
S-121 PT created on 09/07/2015. Last modified 01/12/2016

Alias EEZLIM
Extends S121_FeatureUnit

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from «MLB» Exclusive Economic Zone Limit to «FeatureType» S121_Limit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Exclusive Economic Zone Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

ATTRIBUTES

arctyp : S121_LimitArcType Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Definition: Type of computation used to define an arc (line). (Geodesic or loxodrome).
[Is static False. Containment is Not Specified.]

limtyp : S121_LimitType Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Definition: Type of delineation (Boundary, Limit or Construction).
[Is static False. Containment is Not Specified.]

1.5.17.24 High sea

Class «MLB» in package 'MLB_Objects'

Name: High Sea
AlphaCode: HIGHSE
camelCaseCode: HighSea
NumericCode:
Use Type: theme
Definition: A zone that consists of the open ocean, not part of the exclusive economic zone, territorial sea or internal waters of any state. A term of international and maritime law per UNCLOS article 86.
Permitted Primitives: A
Remarks:
Distinction: ADMARE, CONZNE, COSARE, FSHZNE, TESARE, EXEZNE, SBAREA, ECSZNE
References: UNCLOS Part 7

High sea
Version Phase Proposed
S-121 PT created on 09/07/2015. Last modified 01/12/2016
Alias HIGHSE
Extends S121_FeatureUnit

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from «MLB» High sea to «FeatureType» S121_Zone
[Direction is 'Source -> Destination'.]

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «MLB» High sea to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

ATTRIBUTES

verdom : S121_VerticalDomainType Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

Definition: verdom - Category of vertical domain of the object delimited. (e.g. airspace, land_surface, water_surface, water_column, seabed_surface, subsoil). Any particular object may span more than one vertical domain.
[Is static False. Containment is Not Specified.]

1.5.17.25 Inland Limit

Class «MLB» in package 'MLB_Objects'

Name: Inland Limit
Geometry: L
AlphaCode: INLLIM
camelCaseCode: InlandLimit
NumericCode:
Use Type: theme
Definition: Inland limit is a segment of line used to delineate the outer limit of inland waters. It is a boundary between internal waters and inland waters.
Permitted Primitives: L
Remarks: .
Distinction:
References:

Inland Limit
Version Phase Proposed
S-121 PT created on 09/07/2015. Last modified 01/12/2016
Alias INLLIM
Extends S121_FeatureUnit

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «MLB» Inland Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Realization from «MLB» Inland Limit to «FeatureType» S121_Limit
[Direction is 'Source -> Destination'.]

ATTRIBUTES

arctyp : S121_LimitArcType Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Definition: Type of computation used to define an arc (line). (Geodesic or loxodrome).
[Is static False. Containment is Not Specified.]

ATTRIBUTES

limtyp : S121_LimitType Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Definition: Type of delineation (Boundary, Limit or Construction).

[Is static False. Containment is Not Specified.]

1.5.17.26 Inland Waters

Class «MLB» in package 'MLB_Objects'

Name: Inland Waters
AlphaCode: INLWTR
camelCaseCode: InlandlWaters
NumericCode:
Use Type: theme
Definition: An area describing waters found on the landward side of the Inland Waters limits
Permitted Primitives: A
Remarks: Synonymous with the EU Inspire Administrative Hierarchy Level
Distinction: INTWTR
References:

Inland Waters
Version Phase Proposed
S121 PT created on 09/07/2015. Last modified 01/12/2016
Alias INLWTR
Extends S121_FeatureUnit

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «MLB» Inland Waters to «FeatureType» S121_FeatureUnit

[Direction is 'Source -> Destination'.]

Realization from «MLB» Inland Waters to «FeatureType» S121_Zone

[Direction is 'Source -> Destination'.]

ATTRIBUTES

verdom : S121_VerticalDomainType Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

Definition: verdom - Category of vertical domain of the object delimited. (e.g. airspace, land_surface, water_surface, water_column, seabed_surface, subsoil). Any particular object may span more than one vertical domain.

[Is static False. Containment is Not Specified.]

1.5.17.27 Internal Waters

Class «MLB» in package 'MLB_Objects'

Name: Internal Waters
AlphaCode: INTWTR
camelCaseCode: InternalWaters
NumericCode:

Use Type: theme
Definition:Waters on the landward side of the baseline of the territorial sea and landlocked waters within the State (IHO Dictionary, S-32, 5th Edition, 2484) (For legal definition see UNCLOS Article 8)
Permitted Primitives: L, A
Remarks: A zone that is bounded by the inland water, the land area and the territorial sea. (For legal definition see UNCLOS Article 8).
Distinction: INLWTR
References:

Internal Waters
Version Phase Proposed
S121 PT created on 09/07/2015. Last modified 01/12/2016
Alias INTWTR
Extends S121_FeatureUnit

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from «MLB» Internal Waters to «FeatureType» S121_Zone
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Internal Waters to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

ATTRIBUTES

verdom : S121_VerticalDomainType Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

Definition: verdom - Category of vertical domain of the object delimited. (e.g. airspace, land_surface, water_surface, water_column, seabed_surface, subsoil). Any particular object may span more than one vertical domain.
[Is static False. Containment is Not Specified.]

1.5.17.28 International Boundary

Class «MLB» in package 'MLB_Objects'

Name: International Boundary
Geometry: L
AlphaCode: INTBND
camelCaseCode: InternationalBoundary
NumericCode:
Use Type: theme
Definition: International Boundary is a boundary object between sovereign states. This object can be either unilaterally defined or be the result of an international treaty or other agreement. Specific attributes can be assigned to this object to describe its role.
Permitted Primitives: L
Remarks: Specific vertical domains can be assigned to this object to describe its role.
References:

International Boundary
Version Phase Proposed
S-121 PT created on 10/07/2015. Last modified 01/12/2016
Alias INTBDY

Extends S121_FeatureUnit

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «MLB» International Boundary to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Realization from «MLB» International Boundary to «FeatureType» S121_Limit
[Direction is 'Source -> Destination'.]

ATTRIBUTES

arctyp : S121_LimitArcType Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Definition: Type of computation used to define an arc (line). (Geodesic or loxodrome).
[Is static False. Containment is Not Specified.]

1.5.17.29 Normal Baseline

Class «MLB» in package 'MLB_Objects'

Name: Normal Baseline
AlphaCode: NORBLN
camelCaseCode: NormalBaseline
NumericCode:
Use Type: theme
Definition: A normal baseline is part of the territorial sea baseline model.
Permitted Primitives: L
Remarks: It is formed of the normal baseline points collected on low water elevations, drying rocks or on the coastline.
Distinction:
References:

Normal Baseline
Version Phase Proposed
S121 PT created on 09/07/2015. Last modified 01/12/2016
Alias NORBLN
Extends S121_FeatureUnit

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «MLB» Normal Baseline to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Realization from «MLB» Normal Baseline to «FeatureType» S121_Limit
[Direction is 'Source -> Destination'.]

Aggregation from «MLB» Normal Baseline to «MLB» Baseline
[Direction is 'Source -> Destination'.]

ATTRIBUTES

ATTRIBUTES

arctyp : S121_LimitArcType Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Definition: Type of computation used to define an arc (line). (Geodesic or loxodrome).
[Is static False. Containment is Not Specified.]

limtyp : S121_LimitType Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Definition: Type of delineation (Boundary, Limit or Construction).
[Is static False. Containment is Not Specified.]

NBLType : Character String Public

NBLType code list:
-Normal
-Low Tide Elevation
[Is static False. Containment is Not Specified.]

1.5.17.30 Straight Baseline

Class «HYDRO» in package 'MLB_Objects'

Name: Straight Baseline
AlphaCode: STSLNE
camelCaseCode: StraightBaseline
Use Type: geo, theme
NumericCode: 132
Definition:A baseline is the line from which the outer limits of the territorial sea and certain other outer limits are measured. (IHO Dictionary, S-32, 5th Edition, 390)
Straight baselines are a system of straight lines joining specified or discrete points on the low-water line, usually known as straight baseline turning points. (IHO Dictionary, S-32, 5th Edition, 393)
Permitted Primitives: L
Remarks: A straight line used in place of the normal baseline. Types of straight baseline are: straight, archipelagic, bay closing, river mouth closing, historic bay closing.
Distinction:
References:
INT 1: IN 42;
M-4: 440.4;

Straight Baseline
Version Phase Proposed
TSMAD created on 09/07/2015. Last modified 01/12/2016
Alias STSLNE
Extends S121_FeatureUnit

OUTGOING STRUCTURAL RELATIONSHIPS

Aggregation from «HYDRO» Straight Baseline to «MLB» Baseline
[Direction is 'Source -> Destination'.]

Realization from «HYDRO» Straight Baseline to «FeatureType» S121_Limit
[Direction is 'Source -> Destination'.]

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «HYDRO» Straight Baseline to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

ATTRIBUTES

arctyp : S121_LimitArcType Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Definition: Type of computation used to define an arc (line). (Geodesic or loxodrome).
[Is static False. Containment is Not Specified.]

limtyp : S121_LimitType Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Definition: Type of delineation (Boundary, Limit or Construction).
[Is static False. Containment is Not Specified.]

SBLType : CharacterString Public

Straight Baseline Type from the code list:
-Straight Baseline
-Archipelagic Baseline
-Delta Baseline
-Unstable coast Baseline
-Historic Bay Closing
-River Closing
-Historic Waters (CA)

[Is static False. Containment is Not Specified.]

1.5.17.31 Territorial Sea Area

Class «HYDRO» in package 'MLB_Objects'

Name: Territorial Sea Area
AlphaCode: TESARE
camelCaseCode: TerritorialSeaArea
NumericCode: 135
Use Type: geo, theme
Definition:The territorial sea is a belt of water of a defined breadth but not exceeding 12 nautical miles measured seaward from the territorial sea baseline. (IHO Dictionary, S-32, 5th Edition, 5360)
Permitted Primitives: A
Remarks: TESARE is a zone that is bounded by the TESLIM (Territorial Sea outer limit), the baseline BASELN and or other limit objects such as an international boundary.
Distinction: ADMARE, CONZNE, COSARE, EXEZNE, FSHZNE, RESARE
References:
INT 1: IN 43;
M-4: 440.5;

Territorial Sea Area
Version Phase Proposed
TSMAD created on 09/07/2015. Last modified 01/12/2016
Alias TESARE
Extends S121_FeatureUnit

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from «HYDRO» Territorial Sea Area to «FeatureType» S121_Zone
[Direction is 'Source -> Destination'.]

Generalization from «HYDRO» Territorial Sea Area to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

ATTRIBUTES

verdom : S121_VerticalDomainType Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

Definition: verdom - Category of vertical domain of the object delimited. (e.g. airspace, land_surface, water_surface, water_column, seabed_surface, subsoil). Any particular object may span more than one vertical domain.
[Is static False. Containment is Not Specified.]

1.5.17.32 Territorial Sea Limit

Class «MLB» in package 'MLB_Objects'

Name: Territorial Sea Limit
AlphaCode: TESLIM
camelCaseCode: TerritorialSeaLimit
NumericCode:
Use Type: theme
Definition: This object is used to express the outer limit of the State's territorial sea.
Permitted Primitives: L
Remarks: TESLIM is used to express the outer extent of TESARE. TESARE is a zone that is bounded by the TESLIM (Territorial Sea limit), the baseline BASELN and or other limit objects such as an international boundary.
Distinction:
References:

Territorial Sea Limit
Version Phase Proposed
S-121 PT created on 09/07/2015. Last modified 01/12/2016
Alias TESLIM
Extends S121_FeatureUnit

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «MLB» Territorial Sea Limit to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Realization from «MLB» Territorial Sea Limit to «FeatureType» S121_Limit
[Direction is 'Source -> Destination'.]

ATTRIBUTES

arctyp : S121_LimitArcType Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

ATTRIBUTES

Definition: Type of computation used to define an arc (line). (Geodesic or loxodrome).
[Is static False. Containment is Not Specified.]

limtyp : S121_LimitType Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Definition: Type of delineation (Boundary, Limit or Construction).
[Is static False. Containment is Not Specified.]

1.5.17.33 The Area

Class «MLB» in package 'MLB_Objects'

Name: The Area
AlphaCode: ISAREA
camelCaseCode: TheArea
NumericCode:
Use Type: theme
Definition: The area of the seabed not under the jurisdiction of any state. This area lies beyond the extension of the continental shelf awarded to coastal States under Article 76 of UNCLOS.
Permitted Primitives: A
Remarks: In the United Nations Law of the Sea terminology, the sea-bed and ocean floor and subsoil thereof, beyond the limits of national jurisdiction. (IHO Hydrographic Dictionary, S-32, 5th Edition, 227) (For legal definition see UNCLOS Part XI). The Area is a zone that is bounded by the states sovereign extent which may be the extended continental shelf or the Exclusive Economic Zone.
Distinction: ADMARE, CONZNE, COSARE, FSHZNE, TESARE, EXEZNE, HIGHSE
References:

The Area
Version Phase Proposed
S-121 PT created on 09/07/2015. Last modified 01/12/2016
Alias SBAREA
Extends S121_FeatureUnit

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «MLB» The Area to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Realization from «MLB» The Area to «FeatureType» S121_Zone
[Direction is 'Source -> Destination'.]

ATTRIBUTES

verdom : S121_VerticalDomainType Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

Definition: verdom - Category of vertical domain of the object delimited. (e.g. airspace, land_surface, water_surface, water_column, seabed_surface, subsoil). Any particular object may span more than one vertical domain.
[Is static False. Containment is Not Specified.]

1.5.17.34 Limit Point

Class «MLB» in package 'MLB_Objects'

Name: LimitPoint
AlphaCode: LIMPNT
camelCaseCode: LimitPoint
NumericCode:
Use Type: theme
Definition: A Limit Point is a point on a limit.
Permitted Primitives: P
Remarks: A point associated with one party.
Distinction: BDNPNT
References:

Limit Point
Version Phase Proposed
S-121 PT created on 03/12/2015. Last modified 01/12/2016
Alias LIMPNT
Extends S121_FeatureUnit

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «MLB» Limit Point to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

Realization from «MLB» Limit Point to «FeatureType» S121_Location
[Direction is 'Source -> Destination'.]

ATTRIBUTES

pointType : S121_LocationType Public = defined

Definition: Computational origin of the element (defined, densified, computed or construction)
[Is static False. Containment is Not Specified.]

1.5.17.35 Boundary Point

Class «MLB» in package 'MLB_Objects'

Name: Boundary Point
AlphaCode: BDNPNT
camelCaseCode: BoundaryPoint
NumericCode:
Use Type: theme
Definition: A Boundary Point is a point on a boundary.
Permitted Primitives: P
Remarks: A point associated with more than one party.
Distinction: LIMPNT
References:

Boundary Point
Version Phase Proposed
S-121 PT created on 10/07/2015. Last modified 01/12/2016
Alias BDNPNT
Extends S121_FeatureUnit

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from «MLB» Boundary Point to «FeatureType» S121_Location
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Boundary Point to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

ATTRIBUTES

pointType : S121_LocationType Public = defined

Definition: Computational origin of the element (defined, densified, computed or construction)
[Is static False. Containment is Not Specified.]

1.5.17.36 Baseline

Class «MLB» in package 'MLB_Objects'

Name: Baseline
AlphaCode: BASELN
camelCaseCode: Baseline
NumericCode:
Use Type: theme
Definition: A baseline is the line from which the outer limits of the territorial sea and certain other outer limits are measured. (IHO Dictionary, S-32, 5th Edition, 390).
Permitted Primitives: L
Remarks: A baseline is generally composed of two components, a normal baseline and a straight baseline.
References:

Baseline
Version Phase Proposed
S-121 PT created on 09/07/2015. Last modified 01/12/2016
Alias BASELN
Extends S121_FeatureUnit

OUTGOING STRUCTURAL RELATIONSHIPS

Realization from «MLB» Baseline to «FeatureType» S121_Limit
[Direction is 'Source -> Destination'.]

Generalization from «MLB» Baseline to «FeatureType» S121_FeatureUnit
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

INCOMING STRUCTURAL RELATIONSHIPS

Aggregation from «HYDRO» Straight Baseline to «MLB» Baseline
[Direction is 'Source -> Destination'.]

Aggregation from «MLB» Normal Baseline to «MLB» Baseline
[Direction is 'Source -> Destination'.]

1.6 S121_GF_FeatureType

Metaclass «metaclass» in package 'S-121 Maritime Limits and Boundaries'

The class S121_GF_FeatureType is a specialization of S100_GF_FeatureType.

The class S100_GF_FeatureType is a realisation of the ISO 19109 class GF_FeatureType. It differs from the ISO class in the following ways:
1. It is a sub-type of the class S100_GF_NamedType;
2. It does not realise the Generalization and Specialization associations with the class GF_InheritanceRelation. Instead, the class has an association with itself with the roles subType and superType. GF_InheritanceRelation is not realised in the S-100 GFM;
3. The multiplicity of the superType is 0..1 to represent the concept that a feature may have a maximum of one superType. This is in order to prevent multiple-inheritance in S-100;
4. The multiplicity of the role carrierOfCharacteristics with S100_GF_PropertyType (the S-100 realisation of GF_PropertyType) is changed from 0..* to 1..*. An S-100 feature must have properties.

S121_GF_FeatureType
Version Phase Proposed
CHS created on 11/08/2015. Last modified 01/12/2016
Extends S100_GF_FeatureType, S100_GF_NamedType

OUTGOING STRUCTURAL RELATIONSHIPS

Generalization from «metaclass» S121_GF_FeatureType to «metaclass» S100_GF_FeatureType
[Direction is 'Source -> Destination'.]

Generalization from «metaclass» S121_GF_FeatureType to «metaclass» S100_GF_NamedType
[Direction is 'Source -> Destination'.]

INCOMING STRUCTURAL RELATIONSHIPS

Aggregation from «metaclass» S121_GF_ThematicAttributeType to «metaclass» S121_GF_FeatureType
[Direction is 'Source -> Destination'.]

ASSOCIATIONS

Association (direction: Unspecified) inheritance

Role: superType - The more generic feature type from which this feature type is derived.
Role: subType - The more specific feature types which are derived from this feature type.

Source: Public subType (Metaclass) S121_GF_FeatureType «metaclass»
Cardinality: [0..*]

Target: Public superType (Metaclass) S121_GF_FeatureType «metaclass»
Cardinality: [0..1]

ASSOCIATIONS

Association (direction: Unspecified) inheritance

Role: superType - The more generic feature type from which this feature type is derived.
Role: subType - The more specific feature types which are derived from this feature type.

Source: Public subType (Metaclass) S121_GF_FeatureType «metaclass»
Cardinality: [0..*]

Target: Public superType (Metaclass) S121_GF_FeatureType «metaclass»
Cardinality: [0..1]

1.7 S121_GF_ThematicAttributeType

Metaclass «metaclass» in package 'S-121 Maritime Limits and Boundaries'

The class S121_GF_ThematicAttributeType is a subtype of S100_GF_ThematicAttributeType. It adds a relationship to S121_GF_FeatureType

The class S100_GF_ThematicAttributeType is a realisation of the ISO 19109 class GF_ThematicAttributeType. Thematic attribute types carry descriptive characteristics of objects other than those specified in ISO 19109 clauses 7.4.3 – 7.4.7. This class differs from the ISO 19109 class in the following ways:
1) GF_ThematicAttributeType is defined in ISO 19109 as a concrete class. The S-100 GFM realisation is an abstract class with two concrete subclasses – S100_GF_SimpleAttributeType and S100_GF_ComplexAttributeType.
2) Temporal information shall have their value type defined by the types Date, Time, DateTime or complex structures using combinations of the primitive temporal types.

S121_GF_ThematicAttributeType
Version Phase Proposed
CHS created on 11/08/2015. Last modified 20/02/2016
Extends S100_GF_ThematicAttributeType

OUTGOING STRUCTURAL RELATIONSHIPS

Aggregation from «metaclass» S121_GF_ThematicAttributeType to «metaclass» S100_GF_InformationType
[Direction is 'Source -> Destination'.]

Aggregation from «metaclass» S121_GF_ThematicAttributeType to «metaclass» S121_GF_FeatureType
[Direction is 'Source -> Destination'.]

Generalization from «metaclass» S121_GF_ThematicAttributeType to «metaclass» S100_GF_ThematicAttributeType
[Direction is 'Source -> Destination'.]