Table of Contents

1 S-131 V0.2 5

1.1 Domain Model diagram 5

1.2 S-131 Realizations of S-100 GFM diagram 5

1.3 S-131 Realizations of S-100 GFM and Spatial Types diagram 6

1.4 S-131 Domain Model 7

1.4.1 S-131 Base Classes diagram 8

1.4.2 S-131 Layout diagram 8

1.4.3 S-131 Physical Infrastructure diagram 9

1.4.4 S-131 Feature Associations diagram 10

1.4.5 S-131 Services diagram 11

1.4.6 S-131 InfoTypesAbbreviated diagram 12

1.4.7 S-131 Services Enumerations diagram 12

1.4.8 S-131 Wrapper Attributes diagram 13

1.4.9 S-131 InfoTypesShowingAttributes diagram 14

1.4.10 S-131 InfoAssociations diagram 15

1.4.11 S-131 ContactDetails diagram 15

1.4.12 S-131 ApplicabilityAssociations diagram 16

1.4.13 S-131 SupplementaryInformation diagram 17

1.4.14 S-131 AuthoritiesAndContacts diagram 18

1.4.15 S-131 RXNTypes diagram 19

1.4.16 S-131 RulesForFeatures diagram 20

1.4.17 S-131 ShipCharacteristicSubsets diagram 21

1.4.18 S-131 WorkingTimes diagram 22

1.4.19 Complex Attributes 23

1.4.19.1 New/Updated/S131Specific 23

1.4.19.1.1 availablePortServices 24

1.4.19.1.2 cargoHandling 25

1.4.19.1.3 constructionInformation 25

1.4.19.1.4 depthsDescription 26

1.4.19.1.5 descriptionOfFacilitiesLayout 26

1.4.19.1.6 generalHarbourInformation 26

1.4.19.1.7 generalPortDescription 28

1.4.19.1.8 historicalAspectsOfTheHarbour 28

1.4.19.1.9 landmarks 28

1.4.19.1.10 limitDescription 29

1.4.19.1.11 majorLights 29

1.4.19.1.12 markedBy 29

1.4.19.1.13 locationByMetreMark 30

1.4.19.1.14 offshoreMarks 30

1.4.19.1.15 usefulMarks 30

1.4.19.1.16 weatherResource 31

1.4.19.2 bearingInformation 31

1.4.19.3 contactAddress 32

1.4.19.4 featureName 33

1.4.19.5 fixedDateRange 33

1.4.19.6 frequencyPair 34

1.4.19.7 graphic 35

1.4.19.8 information 35

1.4.19.9 onlineResource 36

1.4.19.10 orientation 38

1.4.19.11 periodicDateRange 38

1.4.19.12 radiocommunications 38

1.4.19.13 rxnCode 39

1.4.19.14 scheduleByDayOfWeek 40

1.4.19.15 sourceIndication 40

1.4.19.16 telecommunications 41

1.4.19.17 textContent 42

1.4.19.18 timeIntervalsByDayOfWeek 43

1.4.19.19 vesselsMeasurements 44

1.4.21 Enumerations 45

1.4.21.1 S-131 CategoryEnumsAndCodelists diagram 45

1.4.21.2 S-131 OtherEnumsAndCodelists diagram 46

1.4.21.3 New/Updated/S131Specific 47

1.4.21.3.1 berthingAssistance 47

1.4.21.3.2 categoryOfAnchorage 49

1.4.21.3.3 categoryOfBerthLocation 50

1.4.21.3.4 categoryOfDepthsDescription 51

1.4.21.3.5 categoryOfMooringWarpingFacility 51

1.4.21.3.6 categoryOfPortSection 52

1.4.21.3.7 categoryOfWaterwayArea 53

1.4.21.3.8 firefightingService 54

1.4.21.3.9 medicalService 55

1.4.21.3.10 methodOfSecuring 56

1.4.21.3.11 repairService 57

1.4.21.3.12 securitySafetyEmergencyService 58

1.4.21.3.13 shipSanitationControl 59

1.4.21.3.14 technicalPortService 60

1.4.21.3.15 transportationService 61

1.4.21.3.16 wasteDisposalService 62

1.4.21.3.17 dynamicResource 64

1.4.21.3.18 status 65

1.4.21.4 actionOrActivity 67

1.4.21.5 categoryOfRadioMethods 68

1.4.21.6 condition 70

1.4.21.7 categoryOfRxN 71

1.4.21.8 categoryOfSchedule 72

1.4.21.9 categoryOfVessel 73

1.4.21.10 onlineFunction 75

1.4.21.11 telecommunicationService 76

1.4.21.12 cardinalDirection 77

1.4.21.13 categoryOfAuthority 78

1.4.21.14 categoryOfCargo 80

1.4.21.15 categoryOfCommPref 81

1.4.21.16 categoryOfDangerousOrHazardousCargo 82

1.4.21.17 categoryOfHarbourFacility 84

1.4.21.18 categoryOfPreference 86

1.4.21.19 categoryOfRelationship 86

1.4.21.20 categoryOfText 87

1.4.21.21 categoryOfVesselRegistry 87

1.4.21.22 comparisonOperator 88

1.4.21.23 dayOfWeek 89

1.4.21.24 iSPSLevel 89

1.4.21.25 logicalConnectives 90

1.4.21.26 membership 91

1.4.21.27 operation 91

1.4.21.28 sourceType 92

1.4.21.29 vesselsCharacteristics 93

1.4.21.30 vesselsCharacteristicsUnit 95

1.4.22 FeatureType 97

1.4.23 Layout 99

1.4.24 OrganisationContactArea 100

1.4.25 PhysicalInfrastructure 101

1.4.26 SupervisedArea 102

1.4.27 AnchorBerth 103

1.4.28 Berth 104

1.4.29 BerthPosition 106

1.4.30 DryDock 108

1.4.31 FloatingDock 108

1.4.32 GridIron 109

1.4.33 HarbourAreaAdministrative 109

1.4.34 HarbourAreaSection 111

1.4.35 MooringWarpingFacility 113

1.4.36 OuterLimit 114

1.4.37 StraddleCarrier 115

1.4.38 Syncrolift 116

1.4.39 Terminal 116

1.4.40 WaterwayArea 118

1.4.41 InformationType 119

1.4.42 AbstractRXN 120

1.4.43 Applicability 122

1.4.44 Authority 124

1.4.45 ContactDetails 125

1.4.46 Entrance 127

1.4.47 NauticalInformation 129

1.4.48 NonStandardWorkingDay 130

1.4.49 Recommendations 131

1.4.50 Regulations 131

1.4.51 Restrictions 131

1.4.52 ServiceHours 132

1.4.53 InclusionType 133

1.4.54 PermissionType 133

1.5 S-131 Meta Features 135

1.5.1 S-131 Q of NonBathy data diagram 135

1.5.2 S-131 Meta Features diagram 135

1.5.3 S-131 Meta FeatureEnums diagram 136

1.5.4 DataQuality 137

1.5.5 QualityOfTemporalVariation 137

1.5.6 DataCoverage 138

1.5.7 QualityOfNonBathymetricData 139

1.5.8 horizontalPositionUncertainty 139

1.5.9 surveyDateRange 140

1.5.10 categoryOfTemporalVariation 140

1.6 S-131 Cartographic Features 142

1.6.1 S-131 Cartographic Features diagram 142

1.6.2 textJustification 142

1.6.3 TextPlacement 143

1.6.4 textType 144

# S-131 V0.2

Package in package 'S-131 Marine Harbour Infrastructure'

S-131 V0.2

Version 1.0 Phase 1.0 Proposed

raphaelm created on 15-Nov-2021. Last modified 15-Nov-2021

## Domain Model diagram

Package diagram in package 'S-131 V0.2'

Domain Model

Version 1.0

eivind.mong created on 01-Jan-2018. Last modified 14-Jan-2022



1. Domain Model

## S-131 Realizations of S-100 GFM diagram

Class diagram in package 'S-131 V0.2'

S-131 Realizations of S-100 GFM

Version 1.0

raphaelm created on 01-Jan-2018. Last modified 12-Dec-2021



1. S-131 Realizations of S-100 GFM

## S-131 Realizations of S-100 GFM and Spatial Types diagram

Class diagram in package 'S-131 V0.2'

S-131 Realizations of S-100 GFM and Spatial Types

Version 1.0

raphaelm created on 01-Jan-2018. Last modified 23-Nov-2021



1. S-131 Realizations of S-100 GFM and Spatial Types

## S-131 Domain Model

Package in package 'S-131 V0.2'

This package contains domain objects for S-131. Meta- and cartographic features are defined in other packages.

Reviewers, please note:

1. The definitions in red font were developed for S-131 and only these need be reviewed.
2. Definitions in black are for items which are already in the GI registry, and the chances of a revision to them are low.
3. Sources naming particular people would be replaced by "NIPWG" or a particular source like the "Port Information Manual" when the entry is proposed to the GI registry.
4. If a complex, codelist, or enumeration attribute is not defined in its binding to a feature or information type class, it may be defined in the corresponding type class or enumeration. E.g., the definition of *fixedDateRange* can be found in the class *fixedDateRange* but not in *constructionInformation.fixedDateRange*.

S-131 Domain Model

Version 1.0 Phase 1.0 Proposed

raphaelm created on 15-Nov-2021. Last modified 07-Jan-2022

### S-131 Base Classes diagram

Class diagram in package 'S-131 Domain Model'

S-131 Base Classes

Version 1.0

raphaelm created on 21-Aug-2018. Last modified 02-Jan-2022



1. S-131 Base Classes

### S-131 Layout diagram

Class diagram in package 'S-131 Domain Model'

S-131 Layout

Version 1.0

raphaelm created on 29-Nov-2021. Last modified 14-Jan-2022



1. S-131 Layout

### S-131 Physical Infrastructure diagram

Class diagram in package 'S-131 Domain Model'

S-131 Physical Infrastructure

Version 1.0

raphaelm created on 29-Nov-2021. Last modified 13-Jan-2022



1. S-131 Physical Infrastructure

### S-131 Feature Associations diagram

Class diagram in package 'S-131 Domain Model'

S-131 Feature Associations

Version 1.0

raphaelm created on 30-Dec-2021. Last modified 14-Jan-2022



1. S-131 Feature Associations

### S-131 Services diagram

Class diagram in package 'S-131 Domain Model'

S-131 Services

Version 1.0

raphaelm created on 29-Nov-2021. Last modified 07-Jan-2022



1. S-131 Services

### S-131 InfoTypesAbbreviated diagram

Class diagram in package 'S-131 Domain Model'

S-131 InfoTypesAbbreviated

Version 0.1

raphaelm created on 01-Jan-2018. Last modified 02-Jan-2022



1. S-131 InfoTypesAbbreviated

### S-131 Services Enumerations diagram

Class diagram in package 'S-131 Domain Model'

Dirty ballast is created when seawater is pumped into empty fuel tanks for the purpose of increasing ship stability. The seawater mixes with residual fuel producing “dirty” ballast. Pollutants in dirty ballast may include residual fuel, fuel additives (e.g., biocides), oil and grease, petroleum hydrocarbons, and metals (e.g., copper, nickel, silver, and zinc). (http://www.globalsecurity.org/military/systems/ship/shipbreaking-green.htm 14.Dec. 2007)

S-131 Services Enumerations

Version 1.0

raphaelm created on 29-Dec-2021. Last modified 14-Jan-2022



1. S-131 Services Enumerations

### S-131 Wrapper Attributes diagram

Class diagram in package 'S-131 Domain Model'

S-131 Wrapper Attributes

Version 1.0

raphaelm created on 28-Dec-2021. Last modified 14-Jan-2022



1. S-131 Wrapper Attributes

### S-131 InfoTypesShowingAttributes diagram

Class diagram in package 'S-131 Domain Model'

S-131 InfoTypesShowingAttributes

Version 0.1

raphaelm created on 01-Jan-2018. Last modified 02-Jan-2022



1. S-131 InfoTypesShowingAttributes

### S-131 InfoAssociations diagram

Class diagram in package 'S-131 Domain Model'

S-131 InfoAssociations

Version 1.0

raphaelm created on 10-Jan-2018. Last modified 14-Jan-2022



1. S-131 InfoAssociations

### S-131 ContactDetails diagram

Class diagram in package 'S-131 Domain Model'

S-131 ContactDetails

Version 1.0

raphaelm created on 01-Jan-2018. Last modified 14-Jan-2022



1. S-131 ContactDetails

### S-131 ApplicabilityAssociations diagram

Class diagram in package 'S-131 Domain Model'

S-131 ApplicabilityAssociations

Version 1.0

raphaelm created on 01-Jan-2018. Last modified 02-Jan-2022



1. S-131 ApplicabilityAssociations

### S-131 SupplementaryInformation diagram

Class diagram in package 'S-131 Domain Model'

S-131 SupplementaryInformation

Version 1.0

raphaelm created on 01-Jan-2018. Last modified 02-Jan-2022



1. S-131 SupplementaryInformation

### S-131 AuthoritiesAndContacts diagram

Class diagram in package 'S-131 Domain Model'

S-131 AuthoritiesAndContacts

Version 1.0

raphaelm created on 01-Jan-2018. Last modified 02-Jan-2022



1. S-131 AuthoritiesAndContacts

### S-131 RXNTypes diagram

Class diagram in package 'S-131 Domain Model'

S-131 RXNTypes

Version 1.0

raphaelm created on 01-Jan-2018. Last modified 02-Jan-2022



1. S-131 RXNTypes

### S-131 RulesForFeatures diagram

Class diagram in package 'S-131 Domain Model'

S-131 RulesForFeatures

Version 1.0

raphaelm created on 01-Jan-2018. Last modified 02-Jan-2022



1. S-131 RulesForFeatures

### S-131 ShipCharacteristicSubsets diagram

Class diagram in package 'S-131 Domain Model'

S-131 ShipCharacteristicSubsets

Version 1.0

raphaelm created on 01-Jan-2018. Last modified 02-Jan-2022



1. S-131 ShipCharacteristicSubsets

### S-131 WorkingTimes diagram

Class diagram in package 'S-131 Domain Model'

S-131 WorkingTimes

Version 1.0

raphaelm created on 01-Jan-2018. Last modified 02-Jan-2022



1. S-131 WorkingTimes

### Complex Attributes

Package in package 'S-131 Domain Model'

Complex Attributes

Version 1.0 Phase 1.0 Proposed

raphaelm created on 02-Jan-2022. Last modified 02-Jan-2022

#### New/Updated/S131Specific

Package in package 'Complex Attributes'

New/Updated/S131Specific

Version 1.0 Phase 1.0 Proposed

raphaelm created on 02-Jan-2022. Last modified 02-Jan-2022

##### availablePortServices

Class «ComplexAttributeType» in package 'New/Updated/S131Specific'

Services that are available for a given port.

availablePortServices

Version 1.0 Phase 1.0 Proposed

raphaelm created on 29-Dec-2021. Last modified 07-Jan-2022

| ATTRIBUTES |
| --- |
| firefightingService : firefightingService Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  Classification of firefighting services by method of provision.  [ Is static True. Containment is Not Specified. ] |
| medicalService : medicalService Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  Classification of medical services.  [ Is static True. Containment is Not Specified. ] |
| repairService : repairService Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  Classification of services for the repair of the vessel or onboard equipment.  (source: Raphael)  [ Is static True. Containment is Not Specified. ] |
| technicalPortService : technicalPortService Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  Classification of services for the adjustment of vessel equipment or for assessments pertaining to cargo, compliance with regulations, safety, or security. Does not include repairs to the vessel or onboard equipment.  [ Is static True. Containment is Not Specified. ] |
| shipSanitationControl : shipSanitationControl Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  Classification of sanitation control services by ability to perform sanitation control measures or issue completion or exemption certificates.  [ Is static True. Containment is Not Specified. ] |
| transportationService : transportationService Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  Classification of transportation service by method of transport.  [ Is static True. Containment is Not Specified. ] |
| berthingAssistance : berthingAssistance Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  Classification of assistance available for any kind of manoeuvring and berthing operations.  (Raphael, restyled NIPWG feature BERAST to make it suitable for an attribute.)  [ Is static True. Containment is Not Specified. ] |
| securitySafetyEmergencyService : securitySafetyEmergencyService Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  The type of security, safety, or emergency service.  [ Is static True. Containment is Not Specified. ] |
| wasteDisposalService : wasteDisposalService Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  Classification of waste disposal services by the nature of waste processed by the service.  [ Is static True. Containment is Not Specified. ] |

##### cargoHandling

Class «ComplexAttributeType» in package 'New/Updated/S131Specific'

cargo handling operations within the given area. Includes Import cargoes and Export cargoes.

**Source:** briana

cargoHandling

Version 1.0 Phase 1.0 Proposed

raphaelm created on 28-Dec-2021. Last modified 14-Jan-2022

| ATTRIBUTES |
| --- |
| textContent : textContent Public  Multiplicity: ( [1..\*], Allow duplicates: 0, Is ordered: False )  [ Is static True. Containment is Not Specified. ] |

##### constructionInformation

Class «ComplexAttributeType» in package 'New/Updated/S131Specific'

A listing of developments in the area where construction will affect navigation, maneuvering or docking/berthing.

**Source:** briana

constructionInformation

Version 1.0 Phase 1.0 Proposed

raphaelm created on 28-Dec-2021. Last modified 07-Jan-2022

| ATTRIBUTES |
| --- |
| fixedDateRange : fixedDateRange Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  Encoding remark for DCEG: In constructionInformation, at least one of the start or end dates must be provided.  [ Is static True. Containment is Not Specified. ] |
| condition : condition Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  The various conditions of buildings and other constructions. (Source: Registry)  [ Is static True. Containment is Not Specified. ] |
| typeOfDevelopment : text Public  Type of development or construction.  [ Is static True. Containment is Not Specified. ] |
| locationByText : text Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  A textual rendering of a geographic location.  [ Is static True. Containment is Not Specified. ] |
| textContent : textContent Public  Encoding remark for DCEG: In constructionInformation, the textContent sub-atttribute is used for encoding a textual and/or graphical description of the development.  [ Is static True. Containment is Not Specified. ] |

##### depthsDescription

Class «ComplexAttribute» in package 'New/Updated/S131Specific'

Textual description explaining the depth of the area.

depthsDescription

Version 1.0 Phase 1.0 Proposed

raphaelm created on 28-Dec-2021. Last modified 07-Jan-2022

| ATTRIBUTES |
| --- |
| categoryOfDepthsDescription : categoryOfDepthsDescription Public  [ Is static True. Containment is Not Specified. ] |
| textContent : textContent Public  Multiplicity: ( [1..\*], Allow duplicates: 0, Is ordered: False )  [ Is static True. Containment is Not Specified. ] |

##### descriptionOfFacilitiesLayout

Class «ComplexAttributeType» in package 'New/Updated/S131Specific'

A description of the layout of port facilities.

descriptionOfFacilitiesLayout

Version 1.0 Phase 1.0 Proposed

raphaelm created on 28-Dec-2021. Last modified 14-Jan-2022

| ATTRIBUTES |
| --- |
| textContent : textContent Public  Multiplicity: ( [1..\*], Allow duplicates: 0, Is ordered: False )  [ Is static True. Containment is Not Specified. ] |

##### generalHarbourInformation

Class «ComplexAttributeType» in package 'New/Updated/S131Specific'

A collection of information designed to give a general overview of Harbour related Information.

**Source:** briana

generalHarbourInformation

Version 1.0 Phase 1.0 Proposed

raphaelm created on 28-Dec-2021. Last modified 14-Jan-2022

| ATTRIBUTES |
| --- |
| generalPortDescription : generalPortDescription Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  General statement about the Port including social/political aspects, which could have an impact on the mariner’s/company’s safety or professional reputation  **Source:** adapted from UKHO request -> NIPWG, unless there is an identifiable NP100 cite.  [ Stereotype is «complexAttribute». Is static True. Containment is Not Specified. ] |
| descriptionOfFacilitiesLayout : descriptionOfFacilitiesLayout Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  A description of the layout of port facilities.  [ Stereotype is «complexAttribute». Is static True. Containment is Not Specified. ] |
| limitDescription : limitDescription Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  Description of the area covered by the information specified  **Source:**Port Information Manual  http://wp12183585.server-he.de/npubwiki/wiki/images/7/73/Port\_Information\_Manual.pdf  [ Stereotype is «complexAttribute». Is static True. Containment is Not Specified. ] |
| constructionInformation : constructionInformation Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  A listing of developments in the area where construction will affect navigation, maneuvering or docking/berthing.  **Source:** briana  [ Stereotype is «complexAttribute». Is static True. Containment is Not Specified. ] |
| cargoHandling : cargoHandling Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  Cargo handling operations within the given area. Includes Import cargoes and Export cargoes.  **Source:** briana  ---  **ENCODING NOTE for DCEG:** Import cargoes and export cargoes should be in described separately, in different instances of this complex attribute.  [ Stereotype is «complexAttribute». Is static True. Containment is Not Specified. ] |
| historicalAspectsOfTheHarbour : historicalAspectsOfTheHarbour Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  Description of historical aspects of the harbour.  [Need a more precise definition - Raphael. What historical aspects, and why is this information needed in this dataset?]  [ Stereotype is «complexAttribute». Is static True. Containment is Not Specified. ] |
| weatherResource : weatherResource Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  Links for relevant weather related information.  **Remark**: Weather details will be captured in S-126 and the S-412  **Source:** NIPWG  [ Stereotype is «complexAttribute». Is static True. Containment is Not Specified. ] |

##### generalPortDescription

Class «ComplexAttributeType» in package 'New/Updated/S131Specific'

General statement about the Port including social/political aspects, which could have an impact on the mariner’s/company’s safety or professional reputation

**Source:** adapted from UKHO request -> NIPWG, unless there is an identifiable NP100 cite.

generalPortDescription

Version 1.0 Phase 1.0 Proposed

raphaelm created on 28-Dec-2021. Last modified 07-Jan-2022

| ATTRIBUTES |
| --- |
| textContent : textContent Public  Multiplicity: ( [1..\*], Allow duplicates: 0, Is ordered: False )  [ Is static True. Containment is Not Specified. ] |

##### historicalAspectsOfTheHarbour

Class «ComplexAttributeType» in package 'New/Updated/S131Specific'

Description of historical aspects of the harbour.

[Need a more precise definition. What historical aspects, and why is this information needed in this dataset?]

historicalAspectsOfTheHarbour

Version 1.0 Phase 1.0 Proposed

raphaelm created on 28-Dec-2021. Last modified 13-Jan-2022

| ATTRIBUTES |
| --- |
| textContent : textContent Public  Multiplicity: ( [1..\*], Allow duplicates: 0, Is ordered: False )  [ Is static True. Containment is Not Specified. ] |

##### landmarks

Class «ComplexAttributeType» in package 'New/Updated/S131Specific'

Description of selected landmarks that have significance in the area.

[Source: Raphael]

**Encoding note for DCEG**: no aids to navigations here, they belong in majorLights, usefulMarks, offshoreMarks and markedBy

landmarks

Version 1.0 Phase 1.0 Proposed

raphaelm created on 28-Dec-2021. Last modified 13-Jan-2022

| ATTRIBUTES |
| --- |
| textContent : textContent Public  Multiplicity: ( [1..\*], Allow duplicates: 0, Is ordered: False )  [ Is static True. Containment is Not Specified. ] |

##### limitDescription

Class «ComplexAttributeType» in package 'New/Updated/S131Specific'

Description of the area covered by the information specified

**Source:**Port Information Manual

http://wp12183585.server-he.de/npubwiki/wiki/images/7/73/Port\_Information\_Manual.pdf

limitDescription

Version 1.0 Phase 1.0 Proposed

raphaelm created on 28-Dec-2021. Last modified 06-Jan-2022

| ATTRIBUTES |
| --- |
| textContent : textContent Public  Multiplicity: ( [1..\*], Allow duplicates: 0, Is ordered: False )  [ Is static True. Containment is Not Specified. ] |

##### majorLights

Class «ComplexAttributeType» in package 'New/Updated/S131Specific'

Lighted Aids to Navigation that have great significance in an area.

**Source:** briana

majorLights

Version 1.0 Phase 1.0 Proposed

raphaelm created on 28-Dec-2021. Last modified 06-Jan-2022

| ATTRIBUTES |
| --- |
| textContent : textContent Public  Multiplicity: ( [1..\*], Allow duplicates: 0, Is ordered: False )  [ Is static True. Containment is Not Specified. ] |

##### markedBy

Class «ComplexAttributeType» in package 'New/Updated/S131Specific'

The navigational aids used to mark an area or object

**Source:** briana

markedBy

Version 1.0 Phase 1.0 Proposed

raphaelm created on 28-Dec-2021. Last modified 06-Jan-2022

| ATTRIBUTES |
| --- |
| textContent : textContent Public  Multiplicity: ( [1..\*], Allow duplicates: 0, Is ordered: False )  [ Is static True. Containment is Not Specified. ] |

##### locationByMetreMark

Class «ComplexAttributeType» in package 'New/Updated/S131Specific'

One or more metre mark numbers, defining a point on or a linear extent of a wharf or quay.

(Source: Raphael)

locationByMetreMark

Version 1.0 Phase 1.0 Proposed

raphaelm created on 05-Jan-2022. Last modified 07-Jan-2022

| ATTRIBUTES |
| --- |
| fromMetreMark : text Public  The metre mark number denoting a single position on a wharf, or the starting metre mark number for a linear extent of a wharf.  (source: Raphael)  [ Is static True. Containment is Not Specified. ] |
| toMetreMark : text Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  The metre mark number denoting the end of a linear extent of a wharf.  (source: Raphael)  [ Is static True. Containment is Not Specified. ] |

##### offshoreMarks

Class «ComplexAttributeType» in package 'New/Updated/S131Specific'

Navigational aids that are useful in situational awareness when offshore

**Source:** briana

offshoreMarks

Version 1.0 Phase 1.0 Proposed

raphaelm created on 28-Dec-2021. Last modified 06-Jan-2022

| ATTRIBUTES |
| --- |
| textContent : textContent Public  Multiplicity: ( [1..\*], Allow duplicates: 0, Is ordered: False )  [ Is static True. Containment is Not Specified. ] |

##### usefulMarks

Class «ComplexAttributeType» in package 'New/Updated/S131Specific'

Navigational aids that are useful in situational awareness

**Source:**briana

usefulMarks

Version 1.0 Phase 1.0 Proposed

raphaelm created on 28-Dec-2021. Last modified 06-Jan-2022

| ATTRIBUTES |
| --- |
| textContent : textContent Public  Multiplicity: ( [1..\*], Allow duplicates: 0, Is ordered: False )  [ Is static True. Containment is Not Specified. ] |

##### weatherResource

Class «ComplexAttributeType» in package 'New/Updated/S131Specific'

Links for relevant weather related information.

Encoding notes for DCEG:

* At least one of onlineResource or textContent must be populated.
* If onlineResource is populated dynamicResource must be populated.

weatherResource

Version 1.0 Phase 1.0 Proposed

raphaelm created on 28-Dec-2021. Last modified 07-Jan-2022

| ATTRIBUTES |
| --- |
| onlineResource : onlineResource Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  [ Is static True. Containment is Not Specified. ] |
| dynamicResource : dynamicResource Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  [ Is static True. Containment is Not Specified. ] |
| textContent : textContent Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  [ Is static True. Containment is Not Specified. ] |

#### bearingInformation

Class «ComplexAttributeType» in package 'Complex Attributes'

A bearing is the direction one object is from another object.

At least one of the sub-attributes must be present.

bearingInformation

Version 1.0 Phase 1.0 Proposed

raphaelm created on 01-Jan-2018. Last modified 02-Jan-2022

Alias BRGINF

| CONSTRAINTS |
| --- |
| Invariant. count(sectorBearing) = 0 or 2  [ Proposed, Weight is 0. ] |

| ATTRIBUTES |
| --- |
| cardinalDirection : cardinalDirection Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| distance : Real Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| information : information Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Complex». Is static True. Containment is Not Specified. ] |
| orientation : orientation Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Complex». Is static True. Containment is Not Specified. ] |
| sectorBearing : Real Public  Multiplicity: ( [0..2], Allow duplicates: 0, Is ordered: True )  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |

#### contactAddress

Class «ComplexAttributeType» in package 'Complex Attributes'

Direction or superscription of a letter, package, etc., specifying the name of the place to which it is directed, and optionally a contact person or organisation who should receive it. (Oxford English Dictionary, 2nd Ed., adapted).

contactAddress

Version 1.0 Phase 1.0 Proposed

raphaelm created on 01-Jan-2018. Last modified 02-Jan-2022

| ATTRIBUTES |
| --- |
| deliveryPoint : text Public  Alias: DELPNT  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  Details of where post can be delivered such as the apartment, name and/or number of a street, building or PO Box.  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| cityName : text Public  Alias: CITYNM  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  The name of a town or city.  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| administrativeDivision : text Public  Alias: ADMDIV  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  Administrative division is a generic term for an administrative region within a country at a level below that of the sovereign state.  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| countryName : text Public  Alias: CONTRY  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  The name of a nation.  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| postalCode : text Public  Alias: POSCOD  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  Known in various countries as a postcode, or ZIP code, the postal code is a series of letters and/or digits that identifies each postal delivery area.  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |

#### featureName

Class «ComplexAttributeType» in package 'Complex Attributes'

The complex attribute provides the name of an entity, defines the national language of the name, and provides the option to display the name at various system display settings.

featureName

Version 1.0 Phase 1.0 Proposed

raphaelm created on 01-Jan-2018. Last modified 02-Jan-2022

| ATTRIBUTES |
| --- |
| displayName : Boolean Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  A statement expressing if a feature name is to be displayed in certain display settings or not.  Indication: Boolean. A True value is an indication that the name is intended to be displayed.  Remarks:  Where it is allowable to encode multiple instances of feature name for a single feature instance, only one feature name instance can indicate that the name is to be displayed (**display name** set to *True*).  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| language : ISO639-3 Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  The language is encoded by a character code following ISO 639-3  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| name : text Public  The individual name of a feature.  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |

#### fixedDateRange

Class «ComplexAttributeType» in package 'Complex Attributes'

Describes a single fixed period, as the date range between its sub-attributes.

Remarks: Sub-attributes date end and date start must have the calendar year encoded using 4 digits for the calendar year (CCYY). Month (MM) and day (DD) are optional.

fixedDateRange

Version 1.0 Phase 1.0 Proposed

raphaelm created on 01-Jan-2018. Last modified 06-Jan-2022

| ATTRIBUTES |
| --- |
| dateStart : S100\_TruncatedDate Public  Alias: DATSTA  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  The earliest date on which an object (for example a buoy) will be present.  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| dateEnd : S100\_TruncatedDate Public  Alias: DATEND  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  The latest date on which an object (for example a buoy) will be present.  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |

#### frequencyPair

Class «ComplexAttributeType» in package 'Complex Attributes'

A pair of frequencies for transmitting and receiving radio signals. The shore station transmits and receives on the frequencies indicated

frequencyPair

Version 1.0 Phase 1.0 Proposed

raphaelm created on 01-Jan-2018. Last modified 02-Jan-2022

Alias FRQPAR

| ATTRIBUTES |
| --- |
| contactInstructions : text Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: True )  Instructions provided on how to contact a particular person, organisation or service, or any additional information needed.  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| frequencyShoreStationTransmits : Integer Public  Alias: FRQTXM  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: True )  The shore station transmitter frequency expressed in kHz to one decimal place. Units: kHZ, Resolution: 0.1, Format: XXXXXX  Examples:  4379.1 kHz becomes 043791  13162.8 kHz becomes 131628  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| frequencyShoreStationReceives : Integer Public  Alias: FRQRXV  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: True )  The shore station receiver frequency expressed in kHz to one decimal place. Units: kHz, Resolution: 0.1, Format: XXXXXX  Examples:  4379.1 kHz becomes 043791  13162.8 kHz becomes 131628  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |

#### graphic

Class «ComplexAttributeType» in package 'Complex Attributes'

Pictorial information such as a photograph, sketch, or other graphic, optionally accompanied by descriptive information about the graphic and the location relative to its subject from which it was made.

graphic

Version 1.0 Phase 1.0 Proposed

raphaelm created on 01-Jan-2018. Last modified 02-Jan-2022

Alias GRAPHC

| ATTRIBUTES |
| --- |
| pictorialRepresentation : text Public  Multiplicity: ( [1..\*], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| pictureCaption : text Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  Short description of the purpose of the image.  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| sourceDate : Date Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| pictureInformation : text Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  A set of information to provide credits to picture creator, copyright owner etc.  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| bearingInformation : bearingInformation Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Complex». Is static True. Containment is Not Specified. ] |

#### information

Class «ComplexAttributeType» in package 'Complex Attributes'

Provides textual information that cannot be provided using other allowable attributes for the feature, in a defined language. The information may be provided as a string in sub-attribute **text,** or by encoding the file name of a single external text file that contains the text in sub-attribute **file reference**.

Remarks:

* The sub-attribute **text** should be used, for example, to hold the information that is shown on paper charts by cautionary and explanatory notes. No formatting of text is possible within the sub-attribute **text**. If formatted text is required then an associated text file referenced by the sub-attribute **file reference** must be used.
* The sub-attribute **file reference** is generally used for long text strings or those that require formatting, however there is no restriction on the type of text (except for lexical level) that can be held in files referenced by sub-attribute **file reference**.

information

Version 1.0 Phase 1.0 Proposed

raphaelm created on 01-Jan-2018. Last modified 02-Jan-2022

| CONSTRAINTS |
| --- |
| Invariant. count(text + fileReference) > 0  [ Approved, Weight is 0. ] |

| ATTRIBUTES |
| --- |
| fileLocator : text Public  Alias: FILLOC  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  The string encodes the location of a fragment of text or other information in a support file.  Remarks:   * Application schemas must describe how the associated file is identified. The associated file will commonly be named in a **file reference** co-attribute of the same complex attribute. * Each DCEG must specify requirements for the format of the associated file and the semantics of **file locator**. For example, the value of **file locator** may be an HTML ID in an HTML file, line number in a text file) or a bookmark in a PDF file.   [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| fileReference : text Public  Alias: FILREF  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  The string encodes the file name of a single external text file that contains the text.  Remarks:  The attribute **file reference** is generally used for long text strings or those that require formatting, however there is no restriction on the type of text (except for lexical level) that can be held in files referenced by sub-attribute **file reference**.  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| headline : text Public  Alias: HEADLN  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  Words set at the head of a passage or page to introduce or categorize  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| language : ISO639-3 Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  ISO 639-3 value  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| text : text Public  Alias: INFORM  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  A non-formatted digital text string.  Remarks:  The attributeshould be used, for example, to hold the information that is shown on paper charts by short cautionary and explanatory notes. Therefore text populated in text must not exceed 300 characters.  Text may be in English or in a national language defined by the attribute **language**.  No formatting of text is possible within the sub-attribute **text**. If formatted text, or text strings exceeding 300 characters, is required, then the attribute **file reference** must be used.  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |

#### onlineResource

Class «ComplexAttributeType» in package 'Complex Attributes'

Information about online sources from which a resource or data can be obtained (ISO 19115, adapted).

onlineResource

Version 1.0 Phase 1.0 Proposed

raphaelm created on 01-Jan-2018. Last modified 02-Jan-2022

Alias ONLRES

| ATTRIBUTES |
| --- |
| onlineResourceLinkageURL : URL Public  Alias: internetAddress, LINKGE  Universal Resource Locator of the online resource.  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| protocol : text Public  Alias: PROTCL  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  connection protocol to be used. Example: ftp, http get KVP, http POST, etc. (ISO 19115)  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| applicationProfile : text Public  Alias: APPPRF  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  name of an application profile that can be used with the online resource (ISO 19115)  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| nameOfResource : text Public  Alias: NAMRES  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  name of the online resource (ISO 19115, adapted)  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| onlineResourceDescription : text Public  Alias: OLRDES  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  Detailed text description of what the online resource is/does.  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| onlineFunction : onlineFunction Public  Alias: ONLFUN  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  code for function performed by the online resource (ISO 19115)  [ Stereotype is «S100\_Codelist». Is static True. Containment is Not Specified. ] |
| protocolRequest : text Public  Alias: PROTRQ  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  Request used to access the resource. Structure and content depend on the protocol and standard used by the online resource, such as Web Feature Service standard. (ISO 19115, adapted)  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |

#### orientation

Class «ComplexAttributeType» in package 'Complex Attributes'

The angular distance measured from true north to the major axis of the feature.

orientation

Version 1.0 Phase 1.0 Proposed

raphaelm created on 01-Jan-2018. Last modified 02-Jan-2022

Alias ORIENT

| ATTRIBUTES |
| --- |
| orientationUncertainty : Real Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| orientationValue : Real Public  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |

#### periodicDateRange

Class «ComplexAttributeType» in package 'Complex Attributes'

The active period of a recurring event or occurrence.

periodicDateRange

Version 1.0 Phase 1.0 Proposed

raphaelm created on 01-Jan-2018. Last modified 06-Jan-2022

| ATTRIBUTES |
| --- |
| dateStart : S100\_TruncatedDate Public  Alias: DATSTA  The start date or time of the interval.  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| dateEnd : S100\_TruncatedDate Public  Alias: DATEND  The end date or time of the interval.  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |

#### radiocommunications

Class «ComplexAttributeType» in package 'Complex Attributes'

Detailed radiocommunications description with channels, frequencies, preferences and time schedules

radiocommunications

Version 1.0 Phase 1.0 Proposed

raphaelm created on 01-Jan-2018. Last modified 02-Jan-2022

| ATTRIBUTES |
| --- |
| categoryOfCommPref : categoryOfCommPref Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| categoryOfMaritimeBroadcast : categoryOfMaritimeBroadcast Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| categoryOfRadioMethods : categoryOfRadioMethods Public  Alias: CATRMT  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| communicationChannel : text Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| contactInstructions : text Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  supplemental instructions on how or when to contact the individual, organisation, or service  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| frequencyPair : frequencyPair Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Complex». Is static True. Containment is Not Specified. ] |
| signalFrequency : Integer Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| timeIntervalsByDayOfWeek : timeIntervalsByDayOfWeek Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Complex». Is static True. Containment is Not Specified. ] |

#### rxnCode

Class «ComplexAttributeType» in package 'Complex Attributes'

A summary of the impact of the most common types of regulation, restriction, recommendation and nautical information on a vessel.

**Remark**: This attribute converts the subject, topic, and effects of regulations, etc., from plain text or natural language into a set of categories.

rxnCode

Version 1.0 Phase 1.0 Proposed

raphaelm created on 01-Jan-2018. Last modified 02-Jan-2022

| ATTRIBUTES |
| --- |
| categoryOfRxN : categoryOfRxN Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| actionOrActivity : actionOrActivity Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| headline : text Public  Alias: HEADLN  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  Words set at the head of a passage or page to introduce or categorize  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |

#### scheduleByDayOfWeek

Class «ComplexAttributeType» in package 'Complex Attributes'

The nature and timings of a daily schedule by days of the week.

scheduleByDayOfWeek

Version 1.0 Phase 1.0 Proposed

raphael.malyankar created on 01-Jan-2018. Last modified 02-Jan-2022

| ATTRIBUTES |
| --- |
| categoryOfSchedule : categoryOfSchedule Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  Describes the type of schedule, e.g., opening, closure, etc.  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| timeIntervalsByDayOfWeek : timeIntervalsByDayOfWeek Public  Multiplicity: ( [1..\*], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Complex». Is static True. Containment is Not Specified. ] |

#### sourceIndication

Class «ComplexAttributeType» in package 'Complex Attributes'

Proposed definition: Information about the source document, publication, or reference from which object data or textual material included or referenced in a dataset are derived. (S-57 SORIND, adapted.)

Remarks:

* sourceIndication is intended for encoding meta-information that helps the end-user evaluate the reliability or importance of object data or textual material. Its use should be limited to situations where end users may need to evaluate reliability or importance themselves.
* The content of the featureName sub-attribute, if populated, must be the name of the authority or organization which published or distributed the source document.

sourceIndication

Version 1.0 Phase 1.0 Proposed

raphaelm created on 01-Jan-2018. Last modified 02-Jan-2022

| ATTRIBUTES |
| --- |
| categoryOfAuthority : categoryOfAuthority Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Enum». Is static True. Containment is Not Specified. ] |
| countryName : text Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| featureName : featureName Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Complex». Is static True. Containment is Not Specified. ] |
| reportedDate : S100\_TruncatedDate Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| source : text Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  The publication, document, or reference work from which information comes or is acquired.  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| sourceType : sourceType Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  Type of source  [ Stereotype is «S100\_Enum». Is static True. Containment is Not Specified. ] |

#### telecommunications

Class «ComplexAttributeType» in package 'Complex Attributes'

A means or channel of communicating at a distance by electrical or electromagnetic means such as telegraphy, telephony, or broadcasting.

telecommunications

Version 1.0 Phase 1.0 Proposed

raphaelm created on 01-Jan-2018. Last modified 02-Jan-2022

Alias TELCOM

| ATTRIBUTES |
| --- |
| categoryOfCommPref : categoryOfCommPref Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| contactInstructions : text Public  Alias: CONINS  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  instructions on how and when to contact an individual or organisation  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| telcomCarrier : text Public  Alias: TELCRR  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  The name of provider or type of carrier for a telecommunications service  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| telecommunicationIdentifier : text Public  Alias: TELEID  Identifier used for contact by means of a telecommunications service, such as a telephone number  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| telecommunicationService : telecommunicationService Public  Alias: TELSRV  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  Type of telecommunications service  [ Stereotype is «S100\_Codelist». Is static True. Containment is Not Specified. ] |
| scheduleByDayOfWeek : scheduleByDayOfWeek Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Complex». Is static True. Containment is Not Specified. ] |

#### textContent

Class «ComplexAttributeType» in package 'Complex Attributes'

Textual material, or a pointer to a resource providing textual material. May be accompanied by basic information about its source and relationship to the source.

Remarks:

* **textContent** is intended to allow text passages from other publications to be included in, or referenced by, instances of feature or information types.
* Exactly one of sub-attributes **onlineResource** or **information** must be completed in one instance of **textContent**.
* Product specifications may restrict the use or content of **onlineResource** for security. For example, a product specification may forbid populating **onlineResource**.
* Product specification authors must consider whether applications using the data product may be prevented from accessing off-system resources by security policies.

textContent

Version 1.0 Phase 1.0 Proposed

raphaelm created on 01-Jan-2018. Last modified 02-Jan-2022

Alias TXTCON

| CONSTRAINTS |
| --- |
| Invariant. count(information + onlineresource) > 0  [ Approved, Weight is 0. ] |

| ATTRIBUTES |
| --- |
| categoryOfText : categoryOfText Public  Alias: CATTXT  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Enum». Is static True. Containment is Not Specified. ] |
| information : information Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Complex». Is static True. Containment is Not Specified. ] |
| onlineResource : onlineResource Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Complex». Is static True. Containment is Not Specified. ] |
| sourceIndication : sourceIndication Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Complex». Is static True. Containment is Not Specified. ] |

#### timeIntervalsByDayOfWeek

Class «ComplexAttributeType» in package 'Complex Attributes'

Time intervals by days of the week.

timeIntervalsByDayOfWeek

Version 1.0 Phase 1.0 Proposed

raphael.malyankar created on 01-Jan-2018. Last modified 02-Jan-2022

| ATTRIBUTES |
| --- |
| dayOfWeek : dayOfWeek Public  Alias: DYOFWK  Multiplicity: ( [0..7], Allow duplicates: 0, Is ordered: True )  Encodes either range(s) of days or discrete days.  Constraints:  sequential : Pre-condition  [ Stereotype is «S100\_Enum». Is static True. Containment is Not Specified. ] |
| dayOfWeekIsRange : boolean Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  Indicates whether the values in dayOfWeek indicate a range of days (true) or discrete days (false).  Mandatory if co-attribute dayOfWeek has cardinality > 1..  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| timeOfDayStart : Time Public  Alias: TMDYST  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: True )  Starting time of day, possibly for a period within the day.  Distinction: Time start (TIMSTA) (S-101) which has a format YYYYMMDD**T**hhmmss **(mandatory)** in the baseline S-101 DCEG as of October 2015.  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| timeOfDayEnd : Time Public  Alias: TMDYEN  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: True )  Ending time of day, possibly for a period within the day.  Distinction: Time end (TIMEND) (S-101) which has a format YYYYMMDD**T**hhmmss **(mandatory)** in the baseline S-101 DCEG as of October 2015.  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |

#### vesselsMeasurements

Class «ComplexAttributeType» in package 'Complex Attributes'

vesselsMeasurements

Version 1.0 Phase 1.0 Proposed

eivind.mong created on 01-Jan-2018. Last modified 02-Jan-2022

Alias VSLMSM

| ATTRIBUTES |
| --- |
| comparisonOperator : comparisonOperator Public  Alias: COMPOP  [ Stereotype is «S100\_Enum». Is static True. Containment is Not Specified. ] |
| vesselsCharacteristics : vesselsCharacteristics Public  Alias: VSLCAR  [ Stereotype is «S100\_Enum». Is static True. Containment is Not Specified. ] |
| vesselsCharacteristicsValue : real Public  Alias: VSLVAL  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| vesselsCharacteristicsUnit : vesselsCharacteristicsUnit Public  Alias: VSLUNT  [ Stereotype is «S100\_Enum». Is static True. Containment is Not Specified. ] |

### 

### Enumerations

Package in package 'S-131 Domain Model'

Enumerations

Version 1.0 Phase 1.0 Proposed

raphaelm created on 02-Jan-2022. Last modified 02-Jan-2022

#### S-131 CategoryEnumsAndCodelists diagram

Class diagram in package 'Enumerations'

A convenience diagram showing the significant listed values and codelists of feature and information types. Not included are listed values for association classes, text content or source description, or Applicability (they are in other diagrams).

S-131 CategoryEnumsAndCodelists

Version 1.0

raphaelm created on 01-Jan-2018. Last modified 14-Jan-2022



1. S-131 CategoryEnumsAndCodelists

#### S-131 OtherEnumsAndCodelists diagram

Class diagram in package 'Enumerations'

A convenience diagram showing the listed values of other enumerations and codelists. Not included are listed values for category... enumerations, association classes, text content or source description, or Applicability (they are in other diagrams).

S-131 OtherEnumsAndCodelists

Version 1.0

raphaelm created on 01-Jan-2018. Last modified 14-Jan-2022



1. S-131 OtherEnumsAndCodelists

#### New/Updated/S131Specific

Package in package 'Enumerations'

New/Updated/S131Specific

Version 1.0 Phase 1.0 Proposed

raphaelm created on 02-Jan-2022. Last modified 02-Jan-2022

##### berthingAssistance

Enumeration in package 'New/Updated/S131Specific'

Classification of assistance available for any kind of manoeuvring and berthing operations.

(Raphael, restyled NIPWG feature BERAST to make it suitable for an attribute.)

berthingAssistance

Version 1.0 Phase 1.0 Proposed

raphaelm created on 29-Dec-2021. Last modified 07-Jan-2022

| ATTRIBUTES |
| --- |
| Berthing information : Public  Information about assistance or arrangements for a service  [ Is static True. Containment is Not Specified. ] |
| Icebreaker : Public  A ship equipped to make and maintain a channel through ice (Websters Ninth New Collegiate Dictionary, 1983).  [ Is static True. Containment is Not Specified. ] |
| Linesman : Public  Personnel specializing in the mooring and unmooring of vessels.  [Raphael]  [ Is static True. Containment is Not Specified. ] |
| Mooring Boat : Public  A boat which assists berthing a vessel with ropes or anchor.  [ Is static True. Containment is Not Specified. ] |
| Mule : Public  A locomotive to move vessels, e. g. as used in Panama Canal  [ Is static True. Containment is Not Specified. ] |
| Tractor : Public  A tug fitted with multidirectional propulsion units and towing winch in opposing directions from amidships. Tractor tugs are highly manoeuvrable and capable of providing significant thrust in all directions.  [Adapted, WÄRTSILÄ Encyclopedia of Marine and Energy Technology https://www.wartsila.com/encyclopedia/term/tugs and Standard Club's Master's Guide to Berthing, 3rd edition, 2021.]  [Confirm that this is the intended description. Also, if tractor tugs are listed, why not ASD tugs and conventional tugs?]  [ Is static True. Containment is Not Specified. ] |
| Tower : Public  Definition needed. The registry defines it as "A relatively tall, narrow structure that may either stand alone or may form part of another structure." which is probably insufficient for berthing assistance listed value.  [ Is static True. Containment is Not Specified. ] |
| Tug - deep sea : Public  Tug capable of deep-sea operations.  [ Is static True. Containment is Not Specified. ] |
| Tug - Harbour : Public  A strongly built powerful boat used for towing and pushing vessels in the harbour area. (Adapted from Websters Ninth New Collegiate Dictionary, 1983).  [ Is static True. Containment is Not Specified. ] |
| Tug - salvage : Public  A tug having specific equipment for salvage.  Source: WÄRTSILÄ Encyclopedia of Marine and Energy Technology https://www.wartsila.com/encyclopedia/term/tugs  [ Is static True. Containment is Not Specified. ] |

##### categoryOfAnchorage

Enumeration in package 'New/Updated/S131Specific'

Classification of an area where different use types of vessel can remain static.

categoryOfAnchorage

Version 1.0 Phase 1.0 Proposed

raphaelm created on 27-Dec-2021. Last modified 02-Jan-2022

Alias CATACH

| ATTRIBUTES |
| --- |
| unrestricted anchorage : Public = 1  an area in which vessels anchor or may anchor.  [ Is static True. Containment is Not Specified. ] |
| deep water anchorage : Public = 2  an area in which vessels of deep draught anchor or may anchor.  [ Is static True. Containment is Not Specified. ] |
| tanker anchorage : Public = 3  an area in which tankers anchor or may anchor.  [ Is static True. Containment is Not Specified. ] |
| explosives anchorage : Public = 4  an area set apart for anchored ships discharging or receiving explosives.  [ Is static True. Containment is Not Specified. ] |
| quarantine anchorage : Public = 5  an area where a vessel anchors when satisfying quarantine regulations.  [ Is static True. Containment is Not Specified. ] |
| Seaplane Anchorage : Public = 6  An area in which sea-planes anchor or may anchor.  [ Is static True. Containment is Not Specified. ] |
| small craft anchorage : Public = 7  an area in which yachts and small boats anchor or may anchor.  [ Is static True. Containment is Not Specified. ] |
| small craft mooring area : Public = 8  an area in which yachts and small boats moor.  [ Is static True. Containment is Not Specified. ] |
| anchorage for periods up to 24 hours : Public = 9  an area in which vessels anchor or may anchor for periods of up to 24 hours.  [ Is static True. Containment is Not Specified. ] |
| anchorage for a limited period of time : Public = 10  an area in which vessels may anchor for a period of time not to exceed a specific limit.  [ Is static True. Containment is Not Specified. ] |
| Anchorage for Dry Cargo Vessels : Public = 12  An area where dry cargo vessels may anchor.  [ Is static True. Containment is Not Specified. ] |
| Waiting Anchorage : Public = 14  An area in which vessels anchor or may anchor while waiting, for example, for access to a port or berth.  [ Is static True. Containment is Not Specified. ] |

##### categoryOfBerthLocation

Enumeration in package 'New/Updated/S131Specific'

The berth type available

**Source:** Port Information Manual (& briana)

categoryOfBerthLocation

Version 1.0 Phase 1.0 Proposed

raphaelm created on 26-Dec-2021. Last modified 14-Jan-2022

| ATTRIBUTES |
| --- |
| Wharf, Quay with reference location : Public = TBD  A WHARF (A structure serving as a berthing place for vessels) approximately parallel to the SHORELINE and accommodating ships on one side only, the other side being attached to the SHORE. It is usually of solid construction, as contrasted with the open pile construction usually used for PIERS.  Also includes specific references to the berthing locations.  **Source:** adopted from S-32 (briana)  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |
| Wharf, Quay with meter marks : Public = TBD  A WHARF (A structure serving as a berthing place for vessels) approximately parallel to the SHORELINE and accommodating ships on one side only, the other side being attached to the SHORE. It is usually of solid construction, as contrasted with the open pile construction usually used for PIERS.  Also includes meter marks for the berthing locations.  **Source:** adopted from S-32 (briana)  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |
| Pier (Jetty) : Public = TBD  **Name:** Pier  **Definition:** A long, narrow structure extending into the water to afford a berthing place for vessels, to serve as a promenade, etc. See also JETTY.  **Source:** IHO S-32  ---  **NOTE:** the Port Information Manual mentions Jetties ...is this considered the same as a Pier or should it be a separate category?  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |
| Multiple Buoy Mooring : Public = TBD  The Multi Buoy Mooring (MBM) also known as Conventional Buoy Mooring (CBM) includes multiple buoys fixed to the seabed by means of mooring lines and marine anchors. The three to six buoys are permanently installed in a rectangular pattern that allows safe mooring of a vessel which is positioned between the buoys.  **Source:**  https://www.bassioffshore.eu/en/multy-buoy-mooring.aspx  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |

##### categoryOfDepthsDescription

Enumeration in package 'New/Updated/S131Specific'

Classification of significant aspects of depths about which information is provided.

categoryOfDepthsDescription

Version 1.0 Phase 1.0 Proposed

raphaelm created on 28-Dec-2021. Last modified 02-Jan-2022

| ATTRIBUTES |
| --- |
| Shoals : Public  Shoal depths  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |
| General description : Public  General description  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |
| Controlling depths : Public  Description of controlling depths  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |

##### categoryOfMooringWarpingFacility

Enumeration in package 'New/Updated/S131Specific'

A place or structure to which a vessel can be secured.

S-131 modelers proposed adding "ropes from ashore". The other values are from the registry.

categoryOfMooringWarpingFacility

Version 1.0 Phase 1.0 Proposed

raphaelm created on 27-Dec-2021. Last modified 06-Jan-2022

| ATTRIBUTES |
| --- |
| Dolphin : Public = 1  A post or group of posts, used for mooring or warping a vessel, or as an aid to navigation. The dolphin may be in the water, on a wharf or on the beach.  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |
| Deviation Dolphin : Public = 2  A post or group of posts, which a vessel may swing around for compass adjustment.  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |
| Bollard : Public = 3  Small shaped post, mounted on a wharf or dolphin used to secure ship's lines.  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |
| Tie-Up Wall : Public = 4  A section of wall designated for tying-up vessels awaiting transit. Bollards and mooring devices are available for both large and small ships.  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |
| Post or Pile : Public = 5  A long heavy timber or section of steel, wood, concrete, etc., forced into the seabed to serve as a mooring facility.  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |
| Mooring Cable : Public = 6  A chain or very strong fibre or wire rope used to anchor or moor vessels or buoys.  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |
| Mooring Buoy : Public = 7  A buoy secured to the bottom by permanent moorings with means for mooring a vessel by use of its anchor chain or mooring lines.  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |
| Ropes from Ashore : Public = TBD  I can only guess that this means the use of shore lines for mooring rather than ship's (or small craft's) lines? Clarification needed from the original proposer.  (Raphael)  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |

##### categoryOfPortSection

Enumeration in package 'New/Updated/S131Specific'

Classification of port sections by usage.

[Compare to categoryOfWaterwayArea and consider merging.]

categoryOfPortSection

Version 1.0 Phase 1.0 Proposed

raphaelm created on 27-Dec-2021. Last modified 14-Jan-2022

| ATTRIBUTES |
| --- |
| Port Fairway : Public  The main navigable channel in the approaches to, or within, a river or harbour.  Sometimes called the Ship Channel.  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |
| Turning Basin : Public  An area of water or enlargement of a channel used for turning vessels.  [Registry, Feature Turning Basin]  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |
| Harbour Basin : Public  A sheltered body of water available for port operations connecting either with the sea, with an outer port or with another basin. Generally an almost land locked area leading off an inlet, firth or sound. Also, an area of water limited in extent and nearly enclosed by structures alongside which vessels can lie  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |
| Berth Pocket : Public  Body of water at the berth or anchor berth with sufficient footprint to allow the vessel to make fast to the shore or mooring buoys or to anchor  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |
| Pilot Boarding Place : Public  A location offshore where a pilot may board a vessel in preparation to piloting it through local waters.  [Registry, Feature Pilot Boarding Place]  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |
| Anchorage Area : Public  An area in which vessels anchor or may anchor  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |
| Dock Area : Public  An artificially enclosed area within which ships may moor and which may have gates to regulate water level.  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |
| Maneuvering Area : Public  An enlargement of a channel for turning vessels. Also called manoeuvering basin.  [S-32]  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |
| Seaplane Area : Public  An area in which sea-planes anchor or may anchor, or a designated portion of water for the landing and take-off of seaplanes.  [Registry, Seaplane Anchorage & Seaplane Landing Area]  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |

##### categoryOfWaterwayArea

Enumeration in package 'New/Updated/S131Specific'

Classification of waterway areas by usage.

[Compare to categoryOfPortSection and consider merging.]

categoryOfWaterwayArea

Version 1.0 Phase 1.0 Proposed

raphaelm created on 28-Dec-2021. Last modified 14-Jan-2022

| ATTRIBUTES |
| --- |
| Dredged Basin : Public  A basin where the depth is maintained by dredging operations.  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |
| Turning Basin : Public  An area of water or enlargement of a channel in a port, where vessels are enabled to turn, and which is kept clear of obstructions such as buoys for that purpose.  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |
| Channel : Public  That part of a body of water (sometimes dredged) deep enough for NAVIGATION through an area otherwise not navigable. It is usually marked by a single or double line of BUOYS and sometimes by RANGES.  [S-32, Extract]  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |
| Fairway : Public  The main navigable channel in the approaches to, or within, a river or harbour.  Sometimes called the Ship Channel.  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |
| Degaussing Range : Public  An area, usually about two cables diameter, within which ships' magnetic fields may be measured; sensing instruments and cables are installed on the sea bed in the range and there are cables leading from the range to a control position ashore.  [Registry]  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |
| Safety Zone : Public  The area around an installation within which vessels are prohibited from entering without permission.  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |
| Seaplane Operating Area : Public  An area in which sea-planes anchor or may anchor.  [Registry, feature Seaplane Anchorage]  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |
| Dumping Ground : Public  A sea area where dredged material or other potentially more harmful material, for example explosives, chemical waste, is deliberately deposited.  [Registry, feature Dumping Ground]  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |

##### firefightingService

Enumeration in package 'New/Updated/S131Specific'

Classification of firefighting services by method of provision.

firefightingService

Version 1.0 Phase 1.0 Proposed

raphaelm created on 29-Dec-2021. Last modified 02-Jan-2022

| ATTRIBUTES |
| --- |
| Ashore fire brigade : Public = 1  A shore based organised body of people trained to extinguish fires.  (NIPWG Wiki)  [ Is static True. Containment is Not Specified. ] |
| Fire-fighting boat : Public = 2  A boat fitted with fire pumps and other fire-fighting apparatus for assisting vessels and protecting warehouses and piers against damage by fire.  Source: (adapted from International Maritime Dictionary, Second edition 1961)  This appears to be unavailable. Need a more recent reference. (S-32 turned up only two irrelevant results for "fire".)  [ Is static True. Containment is Not Specified. ] |
| Onboard trained fire brigade : Public = 3  An organised body of people with special training in extinguishing fires on vessels and offshore installations.  (Definition from NIPWG Wiki - but the label there is "specialists for fire-fighting aboard vessels or offshore installations")  [ Is static True. Containment is Not Specified. ] |

##### medicalService

Enumeration in package 'New/Updated/S131Specific'

Classification of medical services.

medicalService

Version 1.0 Phase 1.0 Proposed

raphaelm created on 29-Dec-2021. Last modified 02-Jan-2022

| ATTRIBUTES |
| --- |
| Ambulance : Public = 1  A vehicle for conveying the sick or injured to or from a hospital.  (Oxford American Dictionary of Current English)  [ Is static True. Containment is Not Specified. ] |
| De-ratting : Public = 2  Recommend deletion, covered by shipSanitationControl.  [ Is static True. Containment is Not Specified. ] |
| De-ratting Certificate : Public = 3  Recommend deletion, covered by shipSanitationControl.  [ Is static True. Containment is Not Specified. ] |
| De-ratting exemption certificate : Public = 4  Recommend deletion, covered by shipSanitationControl.  [ Is static True. Containment is Not Specified. ] |
| Fumigation : Public = 5  Disinfection or purification with fumes.  (Oxford American Dictionary of Current english, adapted.)  [ Is static True. Containment is Not Specified. ] |
| doctor : Public = 6  A place where a doctor is available to provide medical attention.  (GI registry)  [ Is static True. Containment is Not Specified. ] |
| Quarantine : Public = 7  Isolation of patients with contagious diseases.  Registry concept QuarantineStation, adapted  [ Is static True. Containment is Not Specified. ] |
| Vaccination Centre : Public = 8  A place where vaccinations are administered.  (Raphael)  [ Is static True. Containment is Not Specified. ] |

##### methodOfSecuring

Enumeration in package 'New/Updated/S131Specific'

The method used to secure the vessel to the berth.

methodOfSecuring

Version 1.0 Phase 1.0 Proposed

raphaelm created on 24-Dec-2021. Last modified 14-Jan-2022

| ATTRIBUTES |
| --- |
| Bows to seaward : Public = TBD  Vessel is secured perpendicular to the wharf with bow to seaward.  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |
| Stern to wall (...to seaward?) : Public = TBD  Vessel is secured perpendicular to the wharf with stern to the seaward.  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |
| Mediterranean mooring : Public  Moored perpendicular to the wharf.  Remark: Mediterranean mooring may be bow-to or stern-to the wharf  [Source www.marineinsight.com]  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |
| Baltic mooring : Public  Mooring method/procedure used during onshore wind conditions without a tug.  [Source: www.marineinsight.com]  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |
| Running mooring : Public  Mooring by maneuvering ahead and astern while dropping anchors to secure the vessel with reduced swinging room.  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |
| Standing mooring : Public  Mooring by using mainly wind and tide to position the vessel while dropping anchors to secure the vessel with reduced swinging room, making limited use of the engine.  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |
| Single point mooring : Public  Mooring to a floating buoy or jetty anchored offshore.  Source: www.marineinsight.com  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |
| Conventional mooring : Public  Mooring using the vessel's anchors and buoys to secure the vessel at multiple points. Also known as multiple buoy mooring.  Source: www.marineinsight.com  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |
| Ship to ship mooring : Public  Mooring alongside another vessel.  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |
| Spider buoy mooring : Public  Mooring system supported by a spider buoy. May be capable of quick disconnection during storm conditions.  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |

##### repairService

Enumeration in package 'New/Updated/S131Specific'

Classification of services for the repair of the vessel or onboard equipment.

(source: Raphael)

repairService

Version 1.0 Phase 1.0 Proposed

raphaelm created on 29-Dec-2021. Last modified 07-Jan-2022

| ATTRIBUTES |
| --- |
| Bridge : Public = 1  Bridge repair?  [ Is static True. Containment is Not Specified. ] |
| Compass Adjustment : Public = 2  The process of neutralizing or reducing to a minimum the magnetic effects the vessel itself exerts on a MAGNETIC COMPASS. It is based on the principle that the magnetic effect of the iron and steel of the vessel can be counterbalanced by means of MAGNETS and SOFT IRON placed near the COMPASS. Also called compass adjustment, compass compensation, or magnetic compensation.  (S-32 - compensation of magnetic compass)  [ Is static True. Containment is Not Specified. ] |
| Diver Services : Public = 3  A service for underwater repair  [ Is static True. Containment is Not Specified. ] |
| Engine and Engine Part : Public = 4  A service for repair of an engine or machine parts  [ Is static True. Containment is Not Specified. ] |
| Electronic equipment : Public = 5  A service for repair of electronic equipment  [ Is static True. Containment is Not Specified. ] |
| Hull : Public = 6  A service for repair of the hull and superstructure  [ Is static True. Containment is Not Specified. ] |
| Navigational equipment : Public = 7  A service for repair of navigational and electronic equipment  [ Is static True. Containment is Not Specified. ] |
| Propellers : Public = 8  A service for repairing propellers  [ Is static True. Containment is Not Specified. ] |
| Salvage gear : Public = 9  Service with? for repair of? salvage gear.  [ Is static True. Containment is Not Specified. ] |
| Shafts : Public = 10  Service for repairing propeller shafts.  [ Is static True. Containment is Not Specified. ] |

##### securitySafetyEmergencyService

Enumeration in package 'New/Updated/S131Specific'

The type of security, safety, or emergency service.

securitySafetyEmergencyService

Version 1.0 Phase 1.0 Proposed

raphaelm created on 29-Dec-2021. Last modified 02-Jan-2022

| ATTRIBUTES |
| --- |
| Coast Guard : Public = 1  Organization keeping watch on shipping and coastal waters according to governmental law; normally the authority with responsibility for search and rescue.  [ Is static True. Containment is Not Specified. ] |
| Customs : Public = 2  The agency or establishment for collecting duties, tolls.  [ Is static True. Containment is Not Specified. ] |
| Environmental Emergency Info Centre : Public = 3  Office for reporting or obtaining information about environmental emergencies.  [ Is static True. Containment is Not Specified. ] |
| Emergency Coordination Centre : Public = 4  Organisation for reporting or coordinating response to emergencies.  [ Is static True. Containment is Not Specified. ] |
| Guard and/or Security Service : Public = 5  A place where a vessel is patrolled by a security service or stored in a secure lockup.  [Registry]  [ Is static True. Containment is Not Specified. ] |
| Immigration : Public = 6  The authority controlling people entering a country.  [Registry]  [ Is static True. Containment is Not Specified. ] |
| Police : Public = 7  The department of government, or civil force, charged with maintaining public order.  [Registry]  [ Is static True. Containment is Not Specified. ] |
| Rescue : Public = 8  Registry has Sea Rescue Control: A unit responsible for promoting efficient organization of search and rescue services and for coordinating the conduct of search and rescue operations within a search and rescue region.  Is this description appropriate for S-131, given that it says "...within a search and rescue region"? SAR regions cover large areas of the ocean. If a different defintion is needed, maybe:  port rescue: rescue operations in the port area?  [ Is static True. Containment is Not Specified. ] |

##### shipSanitationControl

Enumeration in package 'New/Updated/S131Specific'

Classification of sanitation control services by ability to perform sanitation control measures or issue completion or exemption certificates.

(Raphael)

shipSanitationControl

Version 1.0 Phase 1.0 Proposed

raphaelm created on 29-Dec-2021. Last modified 02-Jan-2022

| ATTRIBUTES |
| --- |
| Sanitation Measures Only : Public = 1  The authority can complete ship sanitation control measures but is unable to issue a certificate.  (NIPWG Wiki; the label has been changed to specify that this value means only control measures)  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |
| SSCC : Public = 2  The authority can issue a Ship Sanitation Control Certificate after satisfactorily completing or supervising the completion of ship sanitation control measures.  (NIPWG - World Health Organization International Health Regulations (2005))  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |
| SSCEC : Public = 3  The authority is able to issue Ship Sanitation Control Exemption Certificate after checking that no evidence of a public health risk is found on board.  (NIPWG - World Health Organization International Health Regulations (2005))  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |

##### technicalPortService

Enumeration in package 'New/Updated/S131Specific'

Classification of services for the adjustment of vessel equipment or for assessments pertaining to cargo, compliance with regulations, safety, or security. Does not include repairs to the vessel or onboard equipment.

(source - Raphael)

technicalPortService

Version 1.0 Phase 1.0 Proposed

raphaelm created on 29-Dec-2021. Last modified 02-Jan-2022

| ATTRIBUTES |
| --- |
| Compass Adjustment : Public  The process of neutralizing or reducing to a minimum the magnetic effects the vessel itself exerts on a MAGNETIC COMPASS. It is based on the principle that the magnetic effect of the iron and steel of the vessel can be counterbalanced by means of MAGNETS and SOFT IRON placed near the COMPASS. Also called compass adjustment, compass compensation, or magnetic compensation.  (S-32 - compensation of magnetic compass)  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |
| Degaussing : Public  Neutralization of the strength of the magnetic field of a vessel, by means of suitably arranged electric coils permanently installed in the vessel. (S-32)  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |
| Cargo Survey : Public  Evaluation or monitoring of the quantity, stowage, loading and unloading, and condition of cargo, and the effects of cargoes on vessel stability and safety.  (Source: Raphael - abstracted from Wikipedia and Lloyd's Maritime Academy web site.)  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |
| Vetting Service : Public  Quality and compliance assessments.  (Source - Raphael.)  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |

##### transportationService

Enumeration in package 'New/Updated/S131Specific'

Classification of transportation service by method of transport.

transportationService

Version 1.0 Phase 1.0 Proposed

raphaelm created on 29-Dec-2021. Last modified 02-Jan-2022

| ATTRIBUTES |
| --- |
| Airport : Public  A defined area on land (including any buildings, installations and equipment) intended to be used either wholly or in part for the arrival, departure and surface movement of aircraft.  [Registry - concept register.]  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |
| Bicycle : Public  Bicycle path or transportation facilities.  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |
| Boatman : Public  Small boat transportation.  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |
| Bus : Public  Bus  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |
| Ferry : Public  A vessel for transporting passengers, vehicles, and/or goods across a stretch of water, especially as a regular service.  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |
| Highway : Public  A hard surfaced (metalled) road; a main through route.  [Registry - majorRoad]  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |
| Launch : Public  Large open or half decked boat.  [S-32]  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |
| Railway : Public  A rail or set of parallel rails on which a train, tram, or rail wagon runs.  [S-32]  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |
| Road : Public  A route with a specially prepared surface that is intended for use by wheeled vehicles or pedestrians.  [S-32]  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |
| Sea : Public  Transportation by sea.  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |
| Tunnel : Public  A passage that is open to the atmosphere at both ends, buried under the sea bed or laid over the sea floor or bored under the ground or through mountains.  [S-32]  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |

##### wasteDisposalService

Enumeration in package 'New/Updated/S131Specific'

Classification of waste disposal services by the nature of waste processed by the service.

wasteDisposalService

Version 1.0 Phase 1.0 Proposed

raphaelm created on 29-Dec-2021. Last modified 07-Jan-2022

| ATTRIBUTES |
| --- |
| MARPOL I Dirty ballast water : Public = 1  Dirty ballast is created when seawater is pumped into empty fuel tanks for the purpose of increasing ship stability. The seawater mixes with residual fuel producing “dirty” ballast. Pollutants in dirty ballast may include residual fuel, fuel additives (e.g., biocides), oil and grease, petroleum hydrocarbons, and metals (e.g., copper, nickel, silver, and zinc). (http://www.globalsecurity.org/military/systems/ship/shipbreaking-green.htm 14.Dec. 2007)  [NIPWG Wiki]  [ Is static True. Containment is Not Specified. ] |
| MARPOL II Category A : Public = 2  MARPOL II Category A  [ Is static True. Containment is Not Specified. ] |
| MARPOL II Category B : Public = 3  MARPOL II Category B  [ Is static True. Containment is Not Specified. ] |
| MARPOL II Category C : Public = 4  MARPOL II Category C  [ Is static True. Containment is Not Specified. ] |
| MARPOL II Category D : Public = 5  MARPOL II Category D  [ Is static True. Containment is Not Specified. ] |
| MARPOL IV Sewage : Public = 6  drainage and other wastes from any form of toilets and urinals; drainage from medical premises (dispensary, sick bay, etc) via wash basins, wash tubs and scuppers located in such premises; drainage from spaces containing living animals; other waste waters when mixed with the drainages defined above.  [NIPWG Wiki]  [ Is static True. Containment is Not Specified. ] |
| MARPOL V Garbage : Public = 7  Garbage means all kinds of victual, domestic and operational waste excluding fresh fish and parts thereof, generated during the normal operation of the ship and liable to be disposed of continuously or periodically except those substances which are defined or listed in other Annexes to the present MARPOL Convention.  [NIPWG Wiki]  [ Is static True. Containment is Not Specified. ] |
| MARPOL I Oily bilge water : Public = 8  Water contaminated by oil that builds up in the bottom of a ship's bilge. (adapted McGraw-Hill Zanichelli Dizionario Enciclopedico Scientifico e Tecnico Inglese-Italiano Italiano-Inglese, Zanichelli, Bologna, 1998)  [ Is static True. Containment is Not Specified. ] |
| MARPOL I Oily mixtures containing chemicals : Public = 9  Any mix of oils additionally contaminated by one or more chemicals.  [NIPWG Wiki]  [ Is static True. Containment is Not Specified. ] |
| MARPOL I Scale and Sludge from tanker cleaning : Public = 10  The solid and semi-liquid deposits removed from the walls and floor of tanks during tanker cleaning.  [NIPWG Wiki]  [ Is static True. Containment is Not Specified. ] |
| Slop disposal : Public = 11  Definition needed. Which MARPOL Annex is this in?  [ Is static True. Containment is Not Specified. ] |
| MARPOL I Sludge from fuel oil purifier : Public = 12  semi-liquid deposits removed from fuel oil purifier  [NIPWG Wiki]  [ Is static True. Containment is Not Specified. ] |
| MARPOL I Tank Washing (Slops) : Public = 13  When switching cargoes, tankers are often required to clean their cargo tanks of residue left over from previous cargo. The remaining oil and water left over from a tank washing is typically stored in one or more slop tanks. Various lubrication and other oils spilled during ship operations may also be stored in the slop tanks. (www.marineornithology.org 14.Dec. 2007)  [NIPWG Wiki]  [ Is static True. Containment is Not Specified. ] |
| MARPOL II Category X : Public  Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a major hazard to either marine resources or human health and, therefore, justify the prohibition of the discharge into the marine environment;  [NIPWG Wiki]  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |
| MARPOL II Category Y : Public  Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment;  [NIPWG Wiki]  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |
| MARPOL II Category Z : Public  Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a minor hazard to either marine resources or human health and therefore justify less stringent restrictions on the quality and quantity of the discharge into the marine environment;  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |
| MARPOL II Category OS : Public  Substances which have been evaluated and found to fall outside Category X, Y or Z because they are considered to present no harm to marine resources, human health, amenities or other legitimate uses of the sea when discharged into the sea from tank cleaning of deballasting operations. The discharge of bilge or ballast water or other residues or mixtures containing these substances are not subject to any requirements of MARPOL Annex II;  [NIPWG Wiki]  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |

##### dynamicResource

Enumeration in package 'New/Updated/S131Specific'

Whether a vessel must use a shore-based or other resource to obtain up-to-date information.

dynamicResource

Version 1.0 Phase 1.0 Proposed

raphaelm created on 09-Feb-2018. Last modified 02-Jan-2022

| ATTRIBUTES |
| --- |
| static : Public = 1  The information is static, or a source of up-to-date information is unavailable or unknown.  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |
| mandatory external dynamic : Public = 2  An external source of up-to-date information is available and interaction with it to obtain up-to-date information is required.  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |
| optional external dynamic : Public = 3  An external source of up-to-date information is available but interaction with it to obtain up-to-date information is not required.  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |
| onboard dynamic : Public = 4  Up-to-date information may be computed using only onboard resources.  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |

##### status

Enumeration in package 'New/Updated/S131Specific'

The condition of an object at a given instant in time

status

Version 1.0 Phase 1.0 Proposed

raphaelm created on 01-Jan-2018. Last modified 02-Jan-2022

Alias STATUS

| ATTRIBUTES |
| --- |
| permanent : Public = 1  Intended to last or function indefinitely  [ Is static True. Containment is Not Specified. ] |
| occasional : Public = 2  Acting on special occasions; happening irregularly  [ Is static True. Containment is Not Specified. ] |
| recommended : Public = 3  Presented as worthy of confidence, acceptance, use, etc.  [ Is static True. Containment is Not Specified. ] |
| not in use : Public = 4  Use has ceased, but the facility still exists intact; disused.  [ Is static True. Containment is Not Specified. ] |
| periodic/intermittent : Public = 5  Recurring at intervals  [ Is static True. Containment is Not Specified. ] |
| reserved : Public = 6  Set apart for some specific use  [ Is static True. Containment is Not Specified. ] |
| temporary : Public = 7  Meant to last only for a time  [ Is static True. Containment is Not Specified. ] |
| private : Public = 8  Administered by an individual or corporation, rather than a State or a public body.  [ Is static True. Containment is Not Specified. ] |
| mandatory : Public = 9  Compulsory; enforced.  [ Is static True. Containment is Not Specified. ] |
| illuminated : Public = 12  Lit by floodlights, strip lights, etc.  [ Is static True. Containment is Not Specified. ] |
| public : Public = 14  Belonging to, available to, used or shared by, the community as a whole and not restricted to private use.  [ Is static True. Containment is Not Specified. ] |
| synchronised : Public = 15  Occur at a time, coincide in point of time, be contemporary or simultaneous  [ Is static True. Containment is Not Specified. ] |
| watched : Public = 16  Looked at or observed over a period of time especially so as to be aware of any movement or change.  [ Is static True. Containment is Not Specified. ] |
| un-watched : Public = 17  Usually automatic in operation, without any permanently-stationed personnel to superintend it.  [ Is static True. Containment is Not Specified. ] |
| existence doubtful : Public = 18  A feature that has been reported but has not been definitely determined to exist.  [ Is static True. Containment is Not Specified. ] |
| buoyed : Public = 28  Marked by buoys  [ Is static True. Containment is Not Specified. ] |

#### actionOrActivity

Class «S100\_Codelist» in package 'Enumerations'

The action or activity of a vessel

actionOrActivity

Version 1.0 Phase 1.0 Proposed

raphaelm created on 01-Jan-2018. Last modified 02-Jan-2022

Alias ACTION

| ATTRIBUTES |
| --- |
| navigating with a pilot : Public = 1  Carrying a qualified pilot as part of the vessel navigation team.  [ Is static True. Containment is Not Specified. ] |
| entering port : Public = 2  navigating a vessel into a port  [ Is static True. Containment is Not Specified. ] |
| leaving port : Public = 3  Navigating a vessel out of a port.  [ Is static True. Containment is Not Specified. ] |
| berthing : Public = 4  Attaching a vessel to a wharf or jetty.  [ Is static True. Containment is Not Specified. ] |
| slipping : Public = 5  Detaching a vessel from a wharf or jetty.  [ Is static True. Containment is Not Specified. ] |
| anchoring : Public = 6  Attaching a vessel to the seabed by means of an anchor and cable.  [ Is static True. Containment is Not Specified. ] |
| weighing anchor : Public = 7  Detaching a vessel from the seabed by recovering an anchor and cable.  [ Is static True. Containment is Not Specified. ] |
| transiting : Public = 8  Navigating a vessel along a route or through a narrow gap, such as under a bridge or through a lock.  [ Is static True. Containment is Not Specified. ] |
| overtaking : Public = 9  Navigating a vessel past another traveling broadly in the same direction.  [ Is static True. Containment is Not Specified. ] |
| reporting : Public = 10  Providing details such as the name, location or intentions of a vessel  [ Is static True. Containment is Not Specified. ] |
| working cargo : Public = 11  Loading or unloading cargo  [ Is static True. Containment is Not Specified. ] |
| landing : Public = 12  Placing crew or passengers on shore.  [ Is static True. Containment is Not Specified. ] |
| diving : Public = 13  Placing a swimmer with an air supply below the sea surface.  [ Is static True. Containment is Not Specified. ] |
| fishing : Public = 14  Hunting or catching fish.  [ Is static True. Containment is Not Specified. ] |
| discharging overboard : Public = 15  Releasing anything into the sea; often ballast water; or spoil from dredging elsewhere.  [ Is static True. Containment is Not Specified. ] |
| passing : Public = 16  Navigating a vessel past another traveling broadly in the opposite direction.  [ Is static True. Containment is Not Specified. ] |

#### categoryOfRadioMethods

Enumeration in package 'Enumerations'

Categories of radiocommunications based on frequency band and radio traffic method.

categoryOfRadioMethods

Version 1.0 Phase 1.0 Proposed

raphaelm created on 28-May-2018. Last modified 07-Jan-2022

Alias CATRMT

| ATTRIBUTES |
| --- |
| Low Frequency (LF) voice traffic : Public = 1  Frequency in a frequency range between 30 and 300 kHz used for voice traffic  [ Is static True. Containment is Not Specified. ] |
| Medium Frequency (MF) voice traffic : Public = 2  Frequency in a frequency range between 300 and 3 000kHz used for voice traffic  [ Is static True. Containment is Not Specified. ] |
| High Frequency (HF) voice traffic : Public = 3  Frequency in a frequency range between 3 and 30 MHz used for voice traffic  [ Is static True. Containment is Not Specified. ] |
| Very High Frequency (VHF) voice traffic : Public = 4  Frequency in a frequency range between 30 and 300 MHz used for voice traffic  [ Is static True. Containment is Not Specified. ] |
| High Frequency Narrow Band Direct Printing : Public = 5  High Frequency Narrow Band Direct Printing  [ Is static True. Containment is Not Specified. ] |
| NAVTEX : Public = 6  Narrow-band direct-printing telegraphy system for transmission of maritime safety information.  [ Is static True. Containment is Not Specified. ] |
| SafetyNET : Public = 7  SafetyNET is an international automatic direct-printing satellite-based service for the promulgation of navigational and meteorological warnings, meteorological forecasts and other urgent safety-related messages - maritime safety information (MSI) - to ships.  [ Is static True. Containment is Not Specified. ] |
| NBDP Telegraphy : Public = 8  Narrow Band Direct Printing Telegraphy. A communications system consisting of teletypewriters connected to a telephonic network to send and receive wireless signals.  [ Is static True. Containment is Not Specified. ] |
| facsimile : Public = 9  A method or device for transmitting documents, drawings, photographs, or the like, by means of radio or telephone for exact reproduction elsewhere.  [ Is static True. Containment is Not Specified. ] |
| NAVIP : Public = 10  A Russian system transmitting navigational information, send by radio and containing information relevant to coastal waters of foreign countries and high seas.  [ Is static True. Containment is Not Specified. ] |
| Low Frequency (LF) digital traffic : Public = 11  Frequency in a frequency range between 30 and 300 kHz used for digital traffic  [ Is static True. Containment is Not Specified. ] |
| Medium Frequency (MF) digital traffic : Public = 12  Frequency in a frequency range between 300 and 3000kHz used for digital traffic  [ Is static True. Containment is Not Specified. ] |
| High Frequency (HF) digital traffic : Public = 13  Frequency in a frequency range between 3 and 30 MHz used for digital traffic  [ Is static True. Containment is Not Specified. ] |
| Very High Frequency (VHF) digital traffic : Public = 14  Frequency in a frequency range between 30 and 300 MHz used for digital traffic  [ Is static True. Containment is Not Specified. ] |
| Low Frequency (LF) telegraph traffic : Public = 15  Frequency in a frequency range between 30 and 300 kHz used for telegraph traffic  [ Is static True. Containment is Not Specified. ] |
| Medium Frequency (MF) telegraph traffic : Public = 16  Frequency in a frequency range between 300 and 3 000kHz used for telegraph traffic  [ Is static True. Containment is Not Specified. ] |
| High Frequency (HF) telegraph traffic : Public = 17  Frequency in a frequency range between 3 and 30 MHz used for telegraph traffic  [ Is static True. Containment is Not Specified. ] |
| Medium Frequency (MF) Digital Selective Call traffic : Public = 18  Frequency in a frequency range between 300 and 3000kHz used for Digital Selective Call traffic  [ Is static True. Containment is Not Specified. ] |
| High Frequency (HF) Digital Selective Call traffic : Public = 19  Frequency in a frequency range between 3 and 30 MHz used for Digital Selective Call traffic  [ Is static True. Containment is Not Specified. ] |
| Very High Frequency (VHF) Digital Selective Call traffic : Public = 20  Frequency in a frequency range between 30 and 300 MHz used for Digital Selective Call traffic  [ Is static True. Containment is Not Specified. ] |

#### condition

Enumeration in package 'Enumerations'

The various conditions of buildings and other constructions.

condition

Version 1.0 Phase 1.0 Proposed

raphaelm created on 22-Aug-2018. Last modified 14-Jan-2022

| ATTRIBUTES |
| --- |
| under construction : Public = 1  a structure that is in the process of being built.  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |
| under reclamation : Public = 3  an area of the sea that is being reclaimed as land, usually by the dumping of earth and other material.  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |
| planned construction : Public = 5  an area where a future construction is planned.  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |

#### categoryOfRxN

Class «S100\_Codelist» in package 'Enumerations'

The principal subject matter of regulations, restrictions, recommendations or nautical information

categoryOfRxN

Version 1.0 Phase 1.0 Proposed

raphaelm created on 01-Jan-2018. Last modified 02-Jan-2022

| ATTRIBUTES |
| --- |
| navigation : Public = 1  Pertaining to navigation  [ Is static True. Containment is Not Specified. ] |
| communication : Public = 2  Pertaining to communications  [ Is static True. Containment is Not Specified. ] |
| environmental protection : Public = 3  Pertaining to environmental protection  [ Is static True. Containment is Not Specified. ] |
| wildlife protection : Public = 4  Pertaining to wildlife protection  [ Is static True. Containment is Not Specified. ] |
| security : Public = 5  Pertaining to security  [ Is static True. Containment is Not Specified. ] |
| customs : Public = 6  Pertaining to customs  [ Is static True. Containment is Not Specified. ] |
| cargo operation : Public = 7  Pertaining to cargo operations  [ Is static True. Containment is Not Specified. ] |
| refuge : Public = 8  Pertaining to a place of safety or refuge  [ Is static True. Containment is Not Specified. ] |
| health : Public = 9  pertaining to health  [ Is static True. Containment is Not Specified. ] |
| natural resources or exploitation : Public = 10  Pertaining to natural resources or exploitation  [ Is static True. Containment is Not Specified. ] |
| port : Public = 11  Pertaining to a port  [ Is static True. Containment is Not Specified. ] |
| finance : Public = 12  Pertaining to finance  [ Is static True. Containment is Not Specified. ] |
| agriculture : Public = 13  Pertaining to agriculture  [ Is static True. Containment is Not Specified. ] |

#### categoryOfSchedule

Class «S100\_Codelist» in package 'Enumerations'

Describes the type of schedule, e.g., opening, closure, etc.

categoryOfSchedule

Version 1.0 Phase 1.0 Proposed

raphael.malyankar created on 01-Jan-2018. Last modified 02-Jan-2022

Alias CATSCH

| ATTRIBUTES |
| --- |
| normal operation : Public = 1  The service, office, is open, fully manned, and operating normally, or the area is accessible as usual.  [ Is static True. Containment is Not Specified. ] |
| closure : Public = 2  The service, office, or area is closed.  [ Is static True. Containment is Not Specified. ] |
| unmanned operation : Public = 3  The service is available but not manned.  [ Is static True. Containment is Not Specified. ] |

#### categoryOfVessel

Class «S100\_Codelist» in package 'Enumerations'

Classification of vessels by function or use.

categoryOfVessel

Version 1.0 Phase 1.0 Proposed

raphaelm created on 01-Jan-2018. Last modified 02-Jan-2022

Alias CATVSL

| ATTRIBUTES |
| --- |
| general cargo vessel : Public = 1  a vessel designed to carry general cargo  [ Is static True. Containment is Not Specified. ] |
| container carrier : Public = 2  a vessel designed to carry ISO containers  [ Is static True. Containment is Not Specified. ] |
| tanker : Public = 3  a vessel designed to carry bulk liquid or gas, including LPG and LNG  [ Is static True. Containment is Not Specified. ] |
| bulk carrier : Public = 4  a vessel designed to carry bulk solid material  [ Is static True. Containment is Not Specified. ] |
| passenger vessel : Public = 5  a vessel designed to carry passengers; often a cruise ship  [ Is static True. Containment is Not Specified. ] |
| roll-on roll-off : Public = 6  a vessel designed to allow road vehicles to be driven on and off; often a ferry  [ Is static True. Containment is Not Specified. ] |
| refrigerated cargo vessel : Public = 7  a vessel designed to carry refrigerated cargo  [ Is static True. Containment is Not Specified. ] |
| fishing vessel : Public = 8  a vessel designed to catch or hunt fish  [ Is static True. Containment is Not Specified. ] |
| service : Public = 9  a vessel which provides a service such as a tug, anchor handler, survey or supply vessel  [ Is static True. Containment is Not Specified. ] |
| warship : Public = 10  a vessel designed for the conduct of military operations  [ Is static True. Containment is Not Specified. ] |
| towed or pushed composite unit : Public = 11  either a tug and tow, or any combination of a tug providing propulsion to barges or vessels secured ahead or alongside  [ Is static True. Containment is Not Specified. ] |
| tug and tow : Public = 12  a combination of tug(s) and non-powered tow(s)  [ Is static True. Containment is Not Specified. ] |
| light recreational : Public = 13  A pleasure boat or watercraft, or an excursion vessel used for short cruises such as whale watching  [ Is static True. Containment is Not Specified. ] |
| semi-submersible offshore installation : Public = 14  An installation which is designed to float at all times and which is normally anchored in position when deployed in the offshore gas and oil industry.  [ Is static True. Containment is Not Specified. ] |
| jackup exploration or project installation : Public = 15  An exploration or project installation with legs which can be raised and lowered. The legs are raised when the installation is repositioned. When stationary the legs are lowered to the sea floor and the working platform is raised clear of the sea surface  [ Is static True. Containment is Not Specified. ] |
| livestock carrier : Public = 16  A vessel designed to carry large quantities of live animals.  [ Is static True. Containment is Not Specified. ] |
| sport fishing : Public = 17  A vessel used in fishing for pleasure or competition.  [ Is static True. Containment is Not Specified. ] |

#### onlineFunction

Class «S100\_Codelist» in package 'Enumerations'

code for function performed by the online resource (ISO 19115)

onlineFunction

Version 1.0 Phase 1.0 Proposed

raphaelm created on 01-Jan-2018. Last modified 02-Jan-2022

Alias ONLFUN

| ATTRIBUTES |
| --- |
| download : Public = 1  online instructions for transferring data from one storage device or system to another. (ISO 19115:2014)  [ Is static True. Containment is Not Specified. ] |
| information : Public = 2  online information about the resource (ISO 19115:2014)  [ Is static True. Containment is Not Specified. ] |
| offlineAccess : Public = 3  online instructions for requesting the resource from the provider (ISO 19115:2014)  [ Is static True. Containment is Not Specified. ] |
| order : Public = 4  online order process for obtaining the resource (ISO 19115:2014).  [ Is static True. Containment is Not Specified. ] |
| search : Public = 5  online search interface for seeking out information about the resource (ISO 19115:2014).  [ Is static True. Containment is Not Specified. ] |
| completeMetadata : Public = 6  complete metadata provided (ISO 19115:2014).  [ Is static True. Containment is Not Specified. ] |
| browseGraphic : Public = 7  browse graphic provided (ISO 19115:2014).  [ Is static True. Containment is Not Specified. ] |
| upload : Public = 8  online resource upload capability provided (ISO 19115:2014).  [ Is static True. Containment is Not Specified. ] |
| emailService : Public = 9  online email service provided (ISO 19115:2014)  [ Is static True. Containment is Not Specified. ] |
| browsing : Public = 10  online browsing provided (ISO 19115:2014)  [ Is static True. Containment is Not Specified. ] |
| fileAccess : Public = 11  online file access provided (ISO 19115:2014).  [ Is static True. Containment is Not Specified. ] |

#### telecommunicationService

Class «S100\_Codelist» in package 'Enumerations'

Classification of methods of communication over a distance by electrical or electromagnetic means.

telecommunicationService

Version 1.0 Phase 1.0 Proposed

raphaelm created on 01-Jan-2018. Last modified 02-Jan-2022

Alias TELSRV

| ATTRIBUTES |
| --- |
| voice : Public = 1  The transfer or exchange of information by using sounds that are being made by mouth and throat when speaking  [ Is static True. Containment is Not Specified. ] |
| facsimile : Public = 2  a system of transmitting and reproducing graphic matter (as printing or still pictures) by means of signals sent over telephone lines  [ Is static True. Containment is Not Specified. ] |
| sms : Public = 3  Short Message Service, a form of text messaging communication on phones and mobile phones  [ Is static True. Containment is Not Specified. ] |
| data : Public = 4  facts or information used usually to calculate, analyze, or plan something  [ Is static True. Containment is Not Specified. ] |
| streamedData : Public = 5  Data that is constantly received by and presented to an end-user while being delivered by a provider.  [ Is static True. Containment is Not Specified. ] |
| telex : Public = 6  a system of communication in which messages are sent over long distances by using a telephone system and are printed by using a special machine (called a teletypewriter)  [ Is static True. Containment is Not Specified. ] |
| telegraph : Public = 7  an apparatus, system, or process for communication at a distance by electric transmission over wire  [ Is static True. Containment is Not Specified. ] |
| email : Public = 8  Messages and other data exchanged between individuals using computers in a network.  [ Is static True. Containment is Not Specified. ] |

#### cardinalDirection

Enumeration in package 'Enumerations'

Principal and intermediate compass points.

cardinalDirection

Version 1.0 Phase 1.0 Proposed

raphaelm created on 01-Jan-2018. Last modified 02-Jan-2022

Alias CARDIR

| ATTRIBUTES |
| --- |
| N : Public = 1  North  [ Is static True. Containment is Not Specified. ] |
| NNE : Public = 2  Northnortheast  [ Is static True. Containment is Not Specified. ] |
| NE : Public = 3  Northeast  [ Is static True. Containment is Not Specified. ] |
| ENE : Public = 4  Eastnortheast  [ Is static True. Containment is Not Specified. ] |
| E : Public = 5  East  [ Is static True. Containment is Not Specified. ] |
| ESE : Public = 6  Eastsoutheast  [ Is static True. Containment is Not Specified. ] |
| SE : Public = 7  Southeast  [ Is static True. Containment is Not Specified. ] |
| SSE : Public = 8  Southsoutheast  [ Is static True. Containment is Not Specified. ] |
| S : Public = 9  South  [ Is static True. Containment is Not Specified. ] |
| SSW : Public = 10  Southsouthwest  [ Is static True. Containment is Not Specified. ] |
| SW : Public = 11  Southwest  [ Is static True. Containment is Not Specified. ] |
| WSW : Public = 12  Westsouthwest  [ Is static True. Containment is Not Specified. ] |
| W : Public = 13  West  [ Is static True. Containment is Not Specified. ] |
| WNW : Public = 14  Westnorthwest  [ Is static True. Containment is Not Specified. ] |
| NW : Public = 15  Northwest  [ Is static True. Containment is Not Specified. ] |
| NNW : Public = 16  Northnorthwest  [ Is static True. Containment is Not Specified. ] |

#### categoryOfAuthority

Enumeration in package 'Enumerations'

The type of person, government agency or organisation granted powers of managing or controlling access to and/or activity in an area.

categoryOfAuthority

Version 1.0 Phase 1.0 Proposed

raphaelm created on 01-Jan-2018. Last modified 02-Jan-2022

Alias CATAUT

| ATTRIBUTES |
| --- |
| customs : Public = 1  The agency or establishment for collecting duties, tolls. (Merriam-Websters online Dictionary 23rd February 2006, amended).  [ Is static True. Containment is Not Specified. ] |
| border control : Public = 2  The administration to prevent or detect and prosecute violations of rules and regulations at international boundaries (adapted from Merriam-Websters online Dictionary 23rd February 2006).  [ Is static True. Containment is Not Specified. ] |
| police : Public = 3  The department of government, or civil force, charged with maintaining public order. (Adapted from OED)  [ Is static True. Containment is Not Specified. ] |
| port : Public = 4  Person or corporation, owners of, or entrusted with or invested with the power of managing a port. May be called a Harbour Board, Port Trust, Port Commission, Harbour Commission, Marine Department (NP 100 8th Edition 14 Oct 2004)  [ Is static True. Containment is Not Specified. ] |
| immigration : Public = 5  The authority controlling people entering a country.  [ Is static True. Containment is Not Specified. ] |
| health : Public = 6  The authority with responsibility for checking the validity of the health declaration of a vessel and for declaring free pratique.  [ Is static True. Containment is Not Specified. ] |
| coast guard : Public = 7  Organisation keeping watch on shipping and coastal waters according to governmental law; normally the authority with responsibility for search and rescue.  [ Is static True. Containment is Not Specified. ] |
| agricultural : Public = 8  The authority with responsibility for preventing infection of the agriculture of a country and for the protection of the agricultural interests of a country.  [ Is static True. Containment is Not Specified. ] |
| military : Public = 9  A military authority which provides control of access to or approval for transit through designated areas or airspace.  [ Is static True. Containment is Not Specified. ] |
| private company : Public = 10  A private or publicly owned company or commercial enterprise which exercises control of facilities, for example a calibration area.  [ Is static True. Containment is Not Specified. ] |
| maritime police : Public = 11  A governmental or military force with jurisdiction in territorial waters. Examples could include Gendarmerie Maritime, Carabinierie, and Guardia Civil.  [ Is static True. Containment is Not Specified. ] |
| environmental : Public = 12  An authority with responsibility for the protection of the environment.  [ Is static True. Containment is Not Specified. ] |
| fishery : Public = 13  An authority with responsibility for the control of fisheries.  [ Is static True. Containment is Not Specified. ] |
| finance : Public = 14  an authority with responsibility for the control and movement of money.  [ Is static True. Containment is Not Specified. ] |
| maritime : Public = 15  A national or regional authority charged with administration of maritime affairs.  [ Is static True. Containment is Not Specified. ] |

#### categoryOfCargo

Enumeration in package 'Enumerations'

Classification of the different types of cargo that a ship may be carrying.

categoryOfCargo

Version 1.0 Phase 1.0 Proposed

raphaelm created on 01-Jan-2018. Last modified 02-Jan-2022

Alias CATCGO

| ATTRIBUTES |
| --- |
| bulk : Public = 1  Normally dry cargo which is transported to and from the vessel on conveyors or grabs  [ Is static True. Containment is Not Specified. ] |
| container : Public = 2  One of a number of standard sized cargo carrying units, secured using standard corner attachments and bars  [ Is static True. Containment is Not Specified. ] |
| general : Public = 3  Break bulk cargo normally loaded by crane  [ Is static True. Containment is Not Specified. ] |
| liquid : Public = 4  Any cargo loaded by pipeline  [ Is static True. Containment is Not Specified. ] |
| passenger : Public = 5  A fee paying traveller  [ Is static True. Containment is Not Specified. ] |
| livestock : Public = 6  Live animals carried in bulk  [ Is static True. Containment is Not Specified. ] |
| dangerous or hazardous : Public = 7  Dangerous or hazardous cargo as described by the IMO International Maritime Dangerous Goods code  [ Is static True. Containment is Not Specified. ] |
| heavy lift : Public = 8  Indivisible heavy items of weight generally over 100 tons, and width or height greater than 100 meters.  [ Is static True. Containment is Not Specified. ] |
| ballast : Public = 9  Material carried by a ship to ensure its stability.  [ Is static True. Containment is Not Specified. ] |

#### categoryOfCommPref

Enumeration in package 'Enumerations'

Classification of frequencies for communication based on preference.

categoryOfCommPref

Version 1.0 Phase 1.0 Proposed

raphaelm created on 01-Jan-2018. Last modified 02-Jan-2022

Alias CATFRP

| ATTRIBUTES |
| --- |
| preferred calling : Public = 1  the first choice channel or frequency to be used when calling a radio station  [ Is static True. Containment is Not Specified. ] |
| alternate calling : Public = 2  a channel or frequency to be used for calling a radio station when the preferred channel or frequency is busy or is suffering from interference  [ Is static True. Containment is Not Specified. ] |
| preferred working : Public = 3  the first choice channel or frequency to be used when working with a radio station  [ Is static True. Containment is Not Specified. ] |
| alternate working : Public = 4  a channel or frequency to be used for working with a radio station when the preferred working channel or frequency is busy or is suffering from interference  [ Is static True. Containment is Not Specified. ] |

#### categoryOfDangerousOrHazardousCargo

Enumeration in package 'Enumerations'

Classification of dangerous goods or hazardous materials based on the International Maritime Dangerous Goods Code (IMDG Code).

categoryOfDangerousOrHazardousCargo

Version 1.0 Phase 1.0 Proposed

raphaelm created on 01-Jan-2018. Last modified 02-Jan-2022

Alias CATDHC

| ATTRIBUTES |
| --- |
| IMDG Code Class 1 Div. 1.1 : Public = 1  Explosives, Division 1: substances and articles which have a mass explosion hazard  [ Is static True. Containment is Not Specified. ] |
| IMDG Code Class 1 Div. 1.2 : Public = 2  Explosives, Division 2: substances and articles which have a projection hazard but not a mass explosion hazard  [ Is static True. Containment is Not Specified. ] |
| IMDG Code Class 1 Div. 1.3 : Public = 3  Explosives, Division 3: substances and articles which have a fire hazard and either a minor blast hazard or a minor projection hazard or both, but not a mass explosion hazard  [ Is static True. Containment is Not Specified. ] |
| IMDG Code Class 1 Div. 1.4 : Public = 4  Explosives, Division 4: substances and articles which present no significant hazard  [ Is static True. Containment is Not Specified. ] |
| IMDG Code Class 1 Div. 1.5 : Public = 5  Explosives, Division 5: very insensitive substances which have a mass explosion hazard  [ Is static True. Containment is Not Specified. ] |
| IMDG Code Class 1 Div. 1.6 : Public = 6  Explosives, Division 6: extremely insensitive articles which do not have a mass explosion hazard  [ Is static True. Containment is Not Specified. ] |
| IMDG Code Class 2 Div. 2.1 : Public = 7  Gases, flammable gases  [ Is static True. Containment is Not Specified. ] |
| IMDG Code Class 2 Div. 2.2 : Public = 8  Gases, non-flammable, non-toxic gases  [ Is static True. Containment is Not Specified. ] |
| IMDG Code Class 2 Div. 2.3 : Public = 9  Gases, toxic gases  [ Is static True. Containment is Not Specified. ] |
| IMDG Code Class 3 : Public = 10  flammable liquids  [ Is static True. Containment is Not Specified. ] |
| IMDG Code Class 4 Div. 4.1 : Public = 11  flammable solids, self-reactive substances and desensitized explosives  [ Is static True. Containment is Not Specified. ] |
| IMDG Code Class 4 Div. 4.2 : Public = 12  substances liable to spontaneous combustion  [ Is static True. Containment is Not Specified. ] |
| IMDG Code Class 4 Div. 4.3 : Public = 13  substances which, in contact with water, emit flammable gases  [ Is static True. Containment is Not Specified. ] |
| IMDG Code Class 5 Div. 5.1 : Public = 14  oxidizing substances  [ Is static True. Containment is Not Specified. ] |
| IMDG Code Class 5 Div. 5.2 : Public = 15  organic peroxides  [ Is static True. Containment is Not Specified. ] |
| IMDG Code Class 6 Div. 6.1 : Public = 16  toxic substances  [ Is static True. Containment is Not Specified. ] |
| IMDG Code Class 6. Div. 6.2 : Public = 17  infectious substances  [ Is static True. Containment is Not Specified. ] |
| IMDG Code Class 7 : Public = 18  Radioactive material  [ Is static True. Containment is Not Specified. ] |
| IMDG Code Class 8 : Public = 19  Corrosive substances  [ Is static True. Containment is Not Specified. ] |
| IMDG Code Class 9 : Public = 20  Miscellaneous dangerous substances and articles  [ Is static True. Containment is Not Specified. ] |
| Harmful Substances in packaged form : Public = 21  Harmful substances are those substances which are identified as marine pollutants in the International Maritime Dangerous Goods Code (IMDG Code). Packaged form is defined as the forms of containment specified for harmful substances in the IMDG Code. (MARPOL (73/78) Annex III)  [ Is static True. Containment is Not Specified. ] |

#### categoryOfHarbourFacility

Enumeration in package 'Enumerations'

Classification of harbour use.

categoryOfHarbourFacility

Version 1.0 Phase 1.0 Proposed

raphaelm created on 28-Dec-2021. Last modified 06-Jan-2022

Alias CATHAF

| ATTRIBUTES |
| --- |
| RoRo Terminal : Public = 1  A terminal for roll-on roll-off ferries.  [ Is static True. Containment is Not Specified. ] |
| ferry terminal : Public = 3  a terminal for passenger and vehicle ferries.  [ Is static True. Containment is Not Specified. ] |
| fishing harbour : Public = 4  a harbour with facilities for fishing boats.  [ Is static True. Containment is Not Specified. ] |
| yacht harbour/marina : Public = 5  A harbour facility for small boats, yachts, etc., where supplies, repairs, and various services are available.  [ Is static True. Containment is Not Specified. ] |
| naval base : Public = 6  a centre of operations for naval vessels  [ Is static True. Containment is Not Specified. ] |
| tanker terminal : Public = 7  a terminal for the bulk handling of liquid cargoes.  [ Is static True. Containment is Not Specified. ] |
| passenger terminal : Public = 8  a terminal for the loading and unloading of passengers.  [ Is static True. Containment is Not Specified. ] |
| shipyard : Public = 9  a place where ships are built or repaired  [ Is static True. Containment is Not Specified. ] |
| container terminal : Public = 10  A terminal with facilities to load/unload or store shipping containers.  [ Is static True. Containment is Not Specified. ] |
| bulk terminal : Public = 11  a terminal for the handling of bulk materials such as iron ore, coal, etc.  [ Is static True. Containment is Not Specified. ] |
| Ship Lift : Public = 12  A platform powered by synchronous electric motors (for example syncrolift) used to lift vessels (larger than boats) in and out of the water.  [ Is static True. Containment is Not Specified. ] |
| straddle carrier : Public = 13  A wheeled vehicle designed to lift and carry containers or vessels within its own framework. It is used for moving, and sometimes stacking, shipping containers and vessels.  [ Is static True. Containment is Not Specified. ] |
| Service harbour : Public = 14  A harbour within the floating equipment (dredges, tugs...) of harbour services are stationed.  [ Is static True. Containment is Not Specified. ] |
| Pilotage Service : Public = 15  The services of a person who directs the movements of a vessel through pilot waters, usually a person who has demonstrated extensive knowledge of channels, aids to navigation, dangers to navigation, etc., in a particular area and is licensed for that area, are available.  [ Is static True. Containment is Not Specified. ] |
| Service and Repair : Public = 16  A place where mechanical services or repairs can be undertaken to engines or other vessel equipment.  [ Is static True. Containment is Not Specified. ] |
| Quarantine Station : Public = 17  [ Is static True. Containment is Not Specified. ] |

#### categoryOfPreference

Enumeration in package 'Enumerations'

The selection of a first choice compared to other options.

Remark: Renamed preferenceOfPilotBoardingPlace according to February 2018 discussion on NIPWG Wiki.

categoryOfPreference

Version 1.0 Phase 1.0 Proposed

raphaelm created on 09-Feb-2018. Last modified 02-Jan-2022

Alias PRFPIL

| ATTRIBUTES |
| --- |
| primary : Public = 1  The preferred first choice used in normal conditions.  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |
| alternate : Public = 2  The preferred choice in extraordinary conditions.  Remark: Tentative.  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |

#### categoryOfRelationship

Enumeration in package 'Enumerations'

Expresses constraints or requirements on vessel actions or activities in relation to a geographic feature, facility, or service.

categoryOfRelationship

Version 1.0 Phase 1.0 Proposed

raphaelm created on 01-Jan-2018. Last modified 02-Jan-2022

Alias CATREL

| ATTRIBUTES |
| --- |
| prohibited : Public = 1  use of facility, waterway or service is forbidden  [ Is static True. Containment is Not Specified. ] |
| not recommended : Public = 2  use of facility, waterway or service is not recommended  [ Is static True. Containment is Not Specified. ] |
| permitted : Public = 3  use of facility, waterway, or service is permitted but not required  [ Is static True. Containment is Not Specified. ] |
| recommended : Public = 4  use of facility, waterway, or service is recommended  [ Is static True. Containment is Not Specified. ] |
| required : Public = 5  use of facility, waterway, or service is required  [ Is static True. Containment is Not Specified. ] |
| not required : Public = 6  use of facility, waterway or service is not required  [ Is static True. Containment is Not Specified. ] |

#### categoryOfText

Enumeration in package 'Enumerations'

Classification of completeness of textual information in relation to the source.

categoryOfText

Version 1.0 Phase 1.0 Proposed

raphaelm created on 01-Jan-2018. Last modified 02-Jan-2022

Alias CATTXT

| ATTRIBUTES |
| --- |
| abstract or summary : Public = 1  A statement summarizing the important points of a text.  [ Is static True. Containment is Not Specified. ] |
| extract : Public = 2  An excerpt or excerpts from a text.  [ Is static True. Containment is Not Specified. ] |
| full text : Public = 3  The whole text  [ Is static True. Containment is Not Specified. ] |

#### categoryOfVesselRegistry

Enumeration in package 'Enumerations'

The locality of vessel registration or enrolment relative to the nationality of a port, territorial sea, administrative area, exclusive zone or other location.

categoryOfVesselRegistry

Version 1.0 Phase 1.0 Proposed

raphaelm created on 01-Jan-2018. Last modified 02-Jan-2022

Alias CATRGY

| ATTRIBUTES |
| --- |
| domestic : Public = 1  The vessel is registered or enrolled under the same national flag as the port, harbour, territorial sea, exclusive economic zone, or administrative area in which the object that possesses this attribute applies or is located.  [ Is static True. Containment is Not Specified. ] |
| foreign : Public = 2  The vessel is registered or enrolled under a national flag different from the port, harbour, territorial sea, exclusive economic zone, or other administrative area in which the object that possesses this attribute applies or is located.  [ Is static True. Containment is Not Specified. ] |

#### comparisonOperator

Enumeration in package 'Enumerations'

Numerical comparison.

Remarks: The definition of COMPOP provides the relation between the value given in the model and the real ship's value.

comparisonOperator

Version 1.0 Phase 1.0 Proposed

raphaelm created on 01-Jan-2018. Last modified 02-Jan-2022

Alias COMPOP

| ATTRIBUTES |
| --- |
| greater than : Public = 1  The value of the left value is greater than that of the right.(http://en.wikipedia.org/wiki/Logical\_connective)  [ Is static True. Containment is Not Specified. ] |
| greater than or equal to : Public = 2  The value of the left expression is greater than or equal to that of the right. (http://en.wikipedia.org/wiki/Logical\_connective)  [ Is static True. Containment is Not Specified. ] |
| less than : Public = 3  The value of the left expression is less than that of the right. (http://en.wikipedia.org/wiki/Logical\_connective)  [ Is static True. Containment is Not Specified. ] |
| less than or equal to : Public = 4  The value of the left expression is less than or equal to that of the right. (http://en.wikipedia.org/wiki/Logical\_connective)  [ Is static True. Containment is Not Specified. ] |
| equal to : Public = 5  The two values are equivalent. (adapted http://en.wikipedia.org/wiki/Logical\_connective)  [ Is static True. Containment is Not Specified. ] |
| not equal to : Public = 6  The two values are not equivalent. (adapted http://en.wikipedia.org/wiki/Logical\_connective)  [ Is static True. Containment is Not Specified. ] |

#### dayOfWeek

Enumeration in package 'Enumerations'

Days of the week.

dayOfWeek

Version 1.0 Phase 1.0 Proposed

raphaelm created on 01-Jan-2018. Last modified 02-Jan-2022

Alias DYOFWK

| ATTRIBUTES |
| --- |
| Sunday : Public = 1  The first day of the week.  [ Is static True. Containment is Not Specified. ] |
| Monday : Public = 2  The second day of the week.  [ Is static True. Containment is Not Specified. ] |
| Tuesday : Public = 3  The third day of the week.  [ Is static True. Containment is Not Specified. ] |
| Wednesday : Public = 4  The fourth day of the week.  [ Is static True. Containment is Not Specified. ] |
| Thursday : Public = 5  The fifth day of the week.  [ Is static True. Containment is Not Specified. ] |
| Friday : Public = 6  The sixth day of the week.  [ Is static True. Containment is Not Specified. ] |
| Saturday : Public = 7  saturday  the day of the week before Sunday and following Friday (together with Sunday forming part of the weekend)  [ Is static True. Containment is Not Specified. ] |

#### iSPSLevel

Enumeration in package 'Enumerations'

Classification of ISPS security levels according to the ISPS Code.

iSPSLevel

Version 1.0 Phase 1.0 Proposed

raphaelm created on 08-Jan-2018. Last modified 05-Jan-2022

Alias ISPSLV

| ATTRIBUTES |
| --- |
| ISPS Level 1 : Public = 1  The level for which minimum appropriate protective security measures shall be maintained at all times.  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |
| ISPS Level 2 : Public = 2  The level for which appropriate additional protective security measures shall be maintained for a period of time as a result of heightened risk of a security incident.  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |
| ISPS Level 3 : Public = 3  The level for which further specific protective security measures shall be maintained for a limited period of time when a security incident is probable or imminent, although it may not be possible to identify the specific target.  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |

#### logicalConnectives

Enumeration in package 'Enumerations'

Expresses whether all the constraints described by its co-attributes must be satisfied, or only one such constraint need be satisfied.

Remarks:

* This attribute is intended to be used with co-attributes that encode limits on vessel dimensions, type of cargo, and other characteristics.
* The combination of constraints described by logicalConnective and its co-attributes defines a subset of vessels to which information described by a feature or information type instance applies (or does not apply, is required, recommended, etc.).
* The relationship between the vessel subset and the information is indicated by an association - see PermissionType and InclusionType).
* The two listed values of logicalConnective are two of the basic operations of Boolean logic. The third basic operation (not) is not used.

Example:

An Applicability object with attributes as below:

logicalConnectives=1

vesselsMeasurements [vesselsCharacteristics=10/vesselsCharacteristicsValue=50.0/ComparisonOperator=1]

vesselsMeasurements [vesselsCharacteristics=6/vesselsCharacteristicsValue=10.0/ComparisonOperator=1]

implies the limitation applies only when LOA (code 10) is greater than 50.0 and draught (code 6) is greater than 10.0

logicalConnectives

Version 1.0 Phase 1.0 Proposed

raphaelm created on 01-Jan-2018. Last modified 02-Jan-2022

Alias LOGCON

| ATTRIBUTES |
| --- |
| logical conjunction : Public = 1  all the conditions described by the other attributes of the object, or sub-attributes of the same complex attribute, are true  [ Is static True. Containment is Not Specified. ] |
| logical disjunction : Public = 2  at least one of the conditions described by the other attributes of the object, or sub-attributes of the same complex attributes, is true  [ Is static True. Containment is Not Specified. ] |

#### membership

Enumeration in package 'Enumerations'

Indicates whether a vessel is included or excluded from the regulation / restriction / recommendation / nautical information

membership

Version 1.0 Phase 1.0 Proposed

raphaelm created on 01-Jan-2018. Last modified 02-Jan-2022

Alias MBRSHP

| ATTRIBUTES |
| --- |
| included : Public = 1  Vessels with these characteristics are included in the regulation/restriction/recommendation/nautical information.  [ Is static True. Containment is Not Specified. ] |
| excluded : Public = 2  Vessels with these characteristics are excluded from the regulation/restriction/recommendation/nautical information.  [ Is static True. Containment is Not Specified. ] |

#### operation

Enumeration in package 'Enumerations'

Suggested definition: Indicates whether the minimum or maximum value should be used to describe a condition or in application processing.

Remarks:

* Attribute operation is intended to be used in conjunction with other attributes (or sub-attributes of a complex attribute) to indicate how their values must be combined in order to describe a condition.
* Null attributes are ignored.

Example: Complex attribute underkeelAllowance with UKCFIX=2.5, UKCVAR=10.00, operation=1 indicates that the under-keel allowance required is the greater of 2.5 metres or 10% of the ship's draught.

Remarks: OPERAT is intended to be used in conjunction with other attributes (or sub-attributes of a complex attribute) to indicate how their values must be combined in order to describe a condition. Null attributes are ignored.

Example: Complex attribute underkeelAllowance with UKCFIX=2.5, UKCVAR=10.00, OPERAT=1 inicates that the under-keel allowance required is the greater of 2.5 metres or 10% of the ship's draught.

operation

Version 1.0 Phase 1.0 Proposed

raphaelm created on 01-Jan-2018. Last modified 02-Jan-2022

Alias OPERAT

| ATTRIBUTES |
| --- |
| largest value : Public = 1  The numerically largest value computed from the applicable attributes or sub-attributes  [ Is static True. Containment is Not Specified. ] |
| smallest value : Public = 2  The numerically smallest value computed from the applicable attributes or sub-attributes  [ Is static True. Containment is Not Specified. ] |

#### sourceType

Enumeration in package 'Enumerations'

Type of the source.

sourceType

Version 1.0 Phase 1.0 Proposed

raphaelm created on 01-Jan-2018. Last modified 02-Jan-2022

Alias SORTYP

| ATTRIBUTES |
| --- |
| law or regulation : Public = 1  treaty, convention, or international agreement; law or regulation issued by a national or other authority  [ Is static True. Containment is Not Specified. ] |
| official publication : Public = 2  publication not having the force of law, issued by an international organisation or a national or local administration  [ Is static True. Containment is Not Specified. ] |
| mariner report, confirmed : Public = 7  Reported by mariner(s) and confirmed by another source  [ Is static True. Containment is Not Specified. ] |
| mariner report, not confirmed : Public = 8  reported by mariner(s) but not confirmed  [ Is static True. Containment is Not Specified. ] |
| industry publications and reports : Public = 9  shipping and other industry publication, including graphics, charts and web sites  [ Is static True. Containment is Not Specified. ] |
| remotely sensed images : Public = 10  information obtained from satellite images  [ Is static True. Containment is Not Specified. ] |
| photographs : Public = 11  information obtained from photographs  [ Is static True. Containment is Not Specified. ] |
| products issued by HO services : Public = 12  information obtained from products issued by Hydropgrahic Offices  [ Is static True. Containment is Not Specified. ] |
| news media : Public = 13  information obtained from news media  [ Is static True. Containment is Not Specified. ] |
| traffic data : Public = 14  information obtained from the analysis of traffic data  [ Is static True. Containment is Not Specified. ] |

#### vesselsCharacteristics

Enumeration in package 'Enumerations'

Characteristics of vessels.

Remarks:

This is an enumeration of different properties of vessels which are often used in specifying whether they are subject to rules or restrictions.

The properties covered by this attribute are those of the vessel itself, such as dimensional and tonnage properties. The type of vessel and the cargo carried by a vessel are characterized by different attributes (see categoryOfVessel, categoryOfCargo, categoryOfDangerousOrHazardousCargo).

vesselsCharacteristics

Version 1.0 Phase 1.0 Proposed

raphaelm created on 01-Jan-2018. Last modified 02-Jan-2022

Alias VSLCAR

| ATTRIBUTES |
| --- |
| length overall : Public = 1  The maximum length of the ship (L.O.A.). (http://en.wikipedia.org/wiki/Ship\_measurements; 24 July 2010)  [ Is static True. Containment is Not Specified. ] |
| length at waterline : Public = 2  The ship's length measured at the waterline (L.W.L.). (http://en.wikipedia.org/wiki/Ship\_measurements; 24 July 2010)  [ Is static True. Containment is Not Specified. ] |
| breadth : Public = 3  The width or beam of the vessel. (Adapted from http://en.wikipedia.org/wiki/Ship\_measurements; 24 July 2010)  [ Is static True. Containment is Not Specified. ] |
| draught : Public = 4  The depth of water necessary to float a vessel fully loaded. (http://en.wikipedia.org/wiki/Ship\_measurements; 24 July 2010)  [ Is static True. Containment is Not Specified. ] |
| height : Public = 5  The height of the highest point of a vessel's structure (e.g. radar aerial, funnel, cranes, masthead) above her waterline.  (UKHO NP100/2009)  [ Is static True. Containment is Not Specified. ] |
| displacement tonnage : Public = 6  A measurement of the weight of the vessel, usually used for warships. (Merchant ships are usually measured based on the volume of cargo space; see tonnage). Displacement is expressed either in long tons of 2,240 pounds or metric tonnes of 1,000 kg. Since the two units are very close in size (2,240 pounds = 1,016 kg and 1,000 kg = 2,205 pounds), it is common not to distinguish between them. To preserve secrecy, nations sometimes misstate a warship's displacement. (http://en.wikipedia.org/wiki/Ship\_measurements; 24 July 2010)  [ Is static True. Containment is Not Specified. ] |
| displacement tonnage, light : Public = 7  The weight of the ship excluding cargo, fuel, ballast, stores, passengers, and crew, but with water in the boilers to steaming level. (http://en.wikipedia.org/wiki/Ship\_measurements; 24 July 2010)  [ Is static True. Containment is Not Specified. ] |
| displacement tonnage, loaded : Public = 8  The weight of the ship including cargo, passengers, fuel, water, stores, dunnage and such other items necessary for use on a voyage, which brings the vessel down to her load draft. (http://en.wikipedia.org/wiki/Ship\_measurements; 24 July 2010)  [ Is static True. Containment is Not Specified. ] |
| deadweight tonnage : Public = 9  The difference between displacement, light and displacement, loaded. A measure of the ship's total carrying capacity. (http://en.wikipedia.org/wiki/Ship\_measurements; 24 July 2010)  [ Is static True. Containment is Not Specified. ] |
| gross tonnage : Public = 10  The entire internal cubic capacity of the ship expressed in tons of 100 cubic feet to the ton, except certain spaces with are exempted such as: peak and other tanks for water ballast, open forecastle bridge and poop, access of hatchways, certain light and air spaces, domes of skylights, condenser, anchor gear, steering gear, wheel house, galley and cabin for passengers. (http://en.wikipedia.org/wiki/Ship\_measurements; 24 July 2010)  [ Is static True. Containment is Not Specified. ] |
| net tonnage : Public = 11  Obtained from the gross tonnage by deducting crew and navigating spaces and allowances for propulsion machinery.(http://en.wikipedia.org/wiki/Ship\_measurements; 24 July 2010)  [ Is static True. Containment is Not Specified. ] |
| Panama Canal/Universal Measurement System net tonnage : Public = 12  the Panama Canal/Universal Measurement System (PC/UMS) is based on net tonnage, modified for Panama Canal purposes. PC/UMS is based on a mathematical formula to calculate a vessel's total volume; a PC/UMS net ton is equivalent to 100 cubic feet of capacity.  (Adapted from http://en.wikipedia.org/wiki/Tonnage 4 Oct 2010)  [ Is static True. Containment is Not Specified. ] |
| Suez Canal net tonnage : Public = 13  the Suez Canal Net Tonnage (SCNT) is derived with a number of modifications from the former net register tonnage of the Moorsom System and was established by the International Commission of Constantinople in its Protocol of 18 December 1873. It is still in use, as amended by the Rules of Navigation of the Suez Canal Authority, and is registered in the Suez Canal Tonnage Certificate.  (Adapted from http://en.wikipedia.org/wiki/Tonnage 4 Oct 2010)  [ Is static True. Containment is Not Specified. ] |
| Suez Canal gross tonnage : Public = 14  Suez Canal Gross Tonnage (SCGT) is derived with a number of modifications from the former net register tonnage of the Moorsom System and was established by the International Commission of Constantinople in its Protocol of 18 December 1873. It is still in use, as amended by the Rules of Navigation of the Suez Canal Authority, and is registered in the Suez Canal Tonnage Certificate.  [ Is static True. Containment is Not Specified. ] |

#### vesselsCharacteristicsUnit

Enumeration in package 'Enumerations'

the unit used for vessel characteristics attribute

vesselsCharacteristicsUnit

Version 1.0 Phase 1.0 Proposed

raphaelm created on 01-Jan-2018. Last modified 02-Jan-2022

Alias VSLUNT

| ATTRIBUTES |
| --- |
| metre : Public = 1  The metre (or meter) is the base unit of length in the International System of Units (SI). It is defined as the distance travelled by light in vacuum in 1/299,792,458 of a second.  [ Is static True. Containment is Not Specified. ] |
| foot : Public = 2  A foot (plural: feet) is a non-SI unit of length in a number of different systems including English units, Imperial units, and United States customary units. The most commonly used foot today is the international foot. There are three feet in a yard and 12 inches in a foot.  [ Is static True. Containment is Not Specified. ] |
| metric ton : Public = 3  The tonne or metric ton (U.S.), often redundantly referred to as a metric tonne, is a unit of mass equal to 1,000 kg (2,205 lb) or approximately the mass of one cubic metre of water at four degrees Celsius. It is sometimes abbreviated as mt in the United States, but this conflicts with other SI symbols. The tonne is not a unit in the International System of Units (SI), but is accepted for use with the SI. In SI units and prefixes, the tonne is a megagram (Mg). The Imperial and US customary units comparable to the tonne are both spelled ton in English, though they differ in mass. Pronunciation of tonne (the word used in the UK) and ton is usually identical, but is not too confusing unless accuracy is important as the tonne and UK long ton differ by only 1.6%.  [ Is static True. Containment is Not Specified. ] |
| ton : Public = 4  Long ton (weight ton or imperial ton) is the name for the unit called the "ton" in the avoirdupois or Imperial system of measurements, as used in the United Kingdom and several other Commonwealth countries. It has been mostly replaced by the tonne, and in the United States by the short ton. One long ton is equal to 2,240 pounds (1,016 kg) or 35 cubic feet (0.9911 m3) of salt water with a density of 64 lb/ft³ (1.025 g/ml). It has some limited use in the United States, most commonly in measuring the displacement of ships, and was the unit prescribed for warships by the Washington Naval Treaty—for example battleships were limited to a mass of 35,000 long tons (36,000 t; 39,000 ST).  [ Is static True. Containment is Not Specified. ] |
| short ton : Public = 5  The short ton is a unit of weight equal to 2,000 pounds (907.18474 kg). In the United States it is often called simply ton without distinguishing it from the metric ton (tonne, 1,000 kilograms) or the long ton (2,240 pounds / 1,016.0469088 kilograms); rather, the other two are specifically noted. There are, however, some U.S. applications for which unspecified tons normally means long tons (for example, Navy ships) or metric tons (world grain production figures).  Both the long and short ton are defined as 20 hundredweights, but a hundredweight is 100 pounds (45.359237 kg) in the U.S. system (short or net hundredweight) and 112 pounds (50.80234544 kg) in the Imperial system (long or gross hundredweight).  [ Is static True. Containment is Not Specified. ] |
| gross ton : Public = 6  Gross tonnage (GT) is a function of the volume of all ship's enclosed spaces (from keel to funnel) measured to the outside of the hull framing. There is a sliding scale factor. So GT is a kind of capacity-derived index that is used to rank a ship for purposes of determining manning, safety and other statutory requirements and is expressed simply as GT, which is a unitless entity, even though its derivation is tied to the cubic meter unit of volumetric capacity.  Tonnage measurements are now governed by an IMO Convention (International Convention on Tonnage Measurement of Ships, 1969 (London-Rules)), which applies to all ships built after July 1982. In accordance with the Convention, the correct term to use now is GT, which is a function of the moulded volume of all enclosed spaces of the ship.  [ Is static True. Containment is Not Specified. ] |
| net ton : Public = 7  Net tonnage (NT) is based on a calculation of the volume of all cargo spaces of the ship. It indicates a vessel’s earning space and is a function of the moulded volume of all cargo spaces of the ship.  [ Is static True. Containment is Not Specified. ] |
| Panama Canal/Universal Measurement System net tonnage : Public = 8  The Panama Canal/Universal Measurement System (PC/UMS) is based on net tonnage, modified for Panama Canal purposes. PC/UMS is based on a mathematical formula to calculate a vessel's total volume; a PC/UMS net ton is equivalent to 100 cubic feet of capacity.  [ Is static True. Containment is Not Specified. ] |
| Suez Canal Net Tonnage : Public = 9  The Suez Canal Net Tonnage (SCNT) is derived with a number of modifications from the former net register tonnage of the Moorsom System and was established by the International Commission of Constantinople in its Protocol of 18 December 1873. It is still in use, as amended by the Rules of Navigation of the Suez Canal Authority, and is registered in the Suez Canal Tonnage Certificate.  [ Is static True. Containment is Not Specified. ] |
| none : Public = 10  Can be used for net and gross tonnages, including Panama Canal/Universal Measurement System net tonnage and The Suez Canal Net Tonnage.  [ Is static True. Containment is Not Specified. ] |
| cubic metres : Public = 11  cubic metres  [ Is static True. Containment is Not Specified. ] |
| Suez Canal Gross Tonnage : Public = 12  The Suez Canal Gross Tonnage (SCGT) is derived with a number of modifications from the former net register tonnage of the Moorsom System and was established by the International Commission of Constantinople in its Protocol of 18 December 1873. It is still in use, as amended by the Rules of Navigation of the Suez Canal Authority, and is registered in the Suez Canal Tonnage Certificate.  [ Is static True. Containment is Not Specified. ] |

### FeatureType

Class «FeatureType» in package 'S-131 Domain Model'

Generalized feature type which carry all the common attributes

FeatureType

Version 1.0 Phase 1.0 Proposed

eivind.mong created on 01-Jan-2018. Last modified 27-Dec-2021

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Realization from «FeatureType» FeatureType to «metaclass» S100\_GF\_FeatureType  [ Direction is 'Source -> Destination'. ] |

| INCOMING STRUCTURAL RELATIONSHIPS |
| --- |
| Generalization from «FeatureType» PilotageDistrict to «FeatureType» FeatureType  [ Direction is 'Source -> Destination'. ] |
| Generalization from «FeatureType» CautionArea to «FeatureType» FeatureType  [ Direction is 'Source -> Destination'. ] |
| Generalization from «FeatureType» RadarRange to «FeatureType» FeatureType  [ Direction is 'Source -> Destination'. ] |
| Generalization from «FeatureType» RouteingMeasure to «FeatureType» FeatureType  [ Direction is 'Source -> Destination'. ] |
| Generalization from «FeatureType» RouteingMeasureArea to «FeatureType» FeatureType  [ Direction is 'Source -> Destination'. ] |
| Generalization from «FeatureType» RouteingMeasureLine to «FeatureType» FeatureType  [ Direction is 'Source -> Destination'. ] |
| Generalization from «FeatureType» OrganisationContactArea to «FeatureType» FeatureType  [ Direction is 'Source -> Destination'. ] |
| Generalization from «FeatureType» RadioCallingInPoint to «FeatureType» FeatureType  [ Direction is 'Source -> Destination'. ] |
| Generalization from «FeatureType» ConcentrationOfShippingHazardArea to «FeatureType» FeatureType  [ Direction is 'Source -> Destination'. ] |
| Generalization from «FeatureType» SignalStationWarning to «FeatureType» FeatureType  [ Direction is 'Source -> Destination'. ] |
| Generalization from «FeatureType» UnderkeelClearanceAllowanceArea to «FeatureType» FeatureType  [ Direction is 'Source -> Destination'. ] |

| CONNECTORS |
| --- |
| Dependency Spatial Attributes Source -> Destination  From: FeatureType : Class, Public  To: S127\_Geometry : Class, Public |
| Dependency Source -> Destination  From: FeatureType : Class, Public  To: S-412 Metadata : Package, Public |

| ATTRIBUTES |
| --- |
| locationMRN : URN Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  Location identifier, based on MRN. This can be either a specific identifier for an identified physical location or a type-only identifier for a logical location, such as BERTH.  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| GLN : text Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  Definition: A globally unique, standardised identifier for parties and locations in business processes or supply chains.  Remarks. Global Location Numbers may be used to identify physical or digital locations, legal entities, organisational subdivisions or departments. A Global Location Number must conform to the GLN format specified in GS1 General Specifications.  Source: GS1 General Specifications, Release 21.0.1. Adapted.  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| featureName : featureName Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Complex». Is static True. Containment is Not Specified. ] |
| fixedDateRange : fixedDateRange Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Complex». Is static True. Containment is Not Specified. ] |
| periodicDateRange : periodicDateRange Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Complex». Is static True. Containment is Not Specified. ] |
| rxnCode : rxnCode Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Complex». Is static True. Containment is Not Specified. ] |
| graphic : graphic Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Complex». Is static True. Containment is Not Specified. ] |
| sourceIndication : sourceIndication Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Complex». Is static True. Containment is Not Specified. ] |
| textContent : textContent Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Complex». Is static True. Containment is Not Specified. ] |

| ASSOCIATIONS | |
| --- | --- |
| AssociationClass (direction: Source -> Destination) PermissionType  Association class for associations describing whether the subsets of vessels determined by the ship characteristics specified in APPLIC may (or must, etc.) transit, enter, or use a feature. | |
| Source: Public vslLocation (Class) FeatureType «FeatureType»  Cardinality: [0..\*] | Target: Public permission (Class) Applicability «InformationType»  Cardinality: [0..\*] |
| Association (direction: Unspecified) TextAssociation  A feature association for the binding between a geo feature and the cartographically positioned location for text. | |
| Source: Public identifies (Class) FeatureType «FeatureType»  Cardinality: [1]  A pointer to a specific feature(s). | Target: Public positions (Class) TextPlacement «FeatureType»  Cardinality: [0..1]  A pointer to a specific cartographically positioned location for text. |
| Association (direction: Unspecified) AdditionalInformation  A feature association for the binding between at least one instance of a geo feature and an instance of an information type. | |
| Source: Public informationProvidedFor (Class) FeatureType «FeatureType»  Cardinality: [1..\*]  A pointer to a specific feature(s) for which further information is required. | Target: Public providesInformation (Class) NauticalInformation «InformationType»  Cardinality: [0..\*]  A pointer to an object that provides more information about the referencing feature or information type. |
| Association (direction: Source -> Destination) AssociatedRxN  Association between a geographic location and a regulation, restriction, recommendation, or nautical information | |
| Source: Public appliesInLocation (Class) FeatureType «FeatureType»  Cardinality: [1..\*]  The location in which the information item applies | Target: Public theRxN (Class) AbstractRXN «InformationType»  Cardinality: [0..\*]  The regulation, restriction, recommendation, or nautical information |

### Layout

Class «FeatureType» in package 'S-131 Domain Model'

Layout

Version 1.0 Phase 1.0 Proposed

raphaelm created on 24-Dec-2021. Last modified 24-Dec-2021

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Generalization from «FeatureType» Layout to «FeatureType» SupervisedArea  [ Direction is 'Source -> Destination'. ] |

| INCOMING STRUCTURAL RELATIONSHIPS |
| --- |
| Generalization from «FeatureType» HarbourAreaSection to «FeatureType» Layout  [ Direction is 'Source -> Destination'. ] |
| Generalization from «FeatureType» WaterwayArea to «FeatureType» Layout  [ Direction is 'Source -> Destination'. ] |
| Generalization from «FeatureType» HarbourAreaAdministrative to «FeatureType» Layout  [ Direction is 'Source -> Destination'. ] |
| Generalization from «FeatureType» Berth to «FeatureType» Layout  [ Direction is 'Source -> Destination'. ] |
| Generalization from «FeatureType» MooringWarpingFacility to «FeatureType» Layout  [ Direction is 'Source -> Destination'. ] |
| Generalization from «FeatureType» OuterLimit to «FeatureType» Layout  [ Direction is 'Source -> Destination'. ] |
| Generalization from «FeatureType» AnchorBerth to «FeatureType» Layout  [ Direction is 'Source -> Destination'. ] |
| Generalization from «FeatureType» Terminal to «FeatureType» Layout  [ Direction is 'Source -> Destination'. ] |
| Generalization from «FeatureType» BerthPosition to «FeatureType» Layout  [ Direction is 'Source -> Destination'. ] |

### OrganisationContactArea

Class «FeatureType» in package 'S-131 Domain Model'

A feature often associated with contact information for an organization that exercises a management role or offers a service in the location.

Remark: It is not a requirement that every instance of the feature be associated with a management, reporting, or service organization.

OrganisationContactArea

Version 1.0 Phase 1.0 Proposed

raphaelm created on 01-Jan-2018. Last modified 23-Nov-2021

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Generalization from «FeatureType» OrganisationContactArea to «FeatureType» FeatureType  [ Direction is 'Source -> Destination'. ] |

| INCOMING STRUCTURAL RELATIONSHIPS |
| --- |
| Generalization from «FeatureType» SupervisedArea to «FeatureType» OrganisationContactArea  [ Direction is 'Source -> Destination'. ] |
| Generalization from «FeatureType» SignalStationTraffic to «FeatureType» OrganisationContactArea  [ Direction is 'Source -> Destination'. ] |
| Generalization from «FeatureType» RouteingSystem to «FeatureType» OrganisationContactArea  [ Direction is 'Source -> Destination'. ] |
| Generalization from «FeatureType» PilotBoardingPlace to «FeatureType» OrganisationContactArea  [ Direction is 'Source -> Destination'. ] |
| Generalization from «FeatureType» IspsCodeSecurityLevel to «FeatureType» OrganisationContactArea  [ Direction is 'Source -> Destination'. ] |

| ASSOCIATIONS | |
| --- | --- |
| Association (direction: Source -> Destination) SrvContact  Contact details for a service or facility | |
| Source: Public servicePlace (Class) OrganisationContactArea «FeatureType»  Cardinality: [1..\*]  Pointer to service or facility | Target: Public theContactDetails (Class) ContactDetails «InformationType»  Cardinality: [0..\*]  A pointer to a Contact Details object |

### PhysicalInfrastructure

Class «FeatureType» in package 'S-131 Domain Model'

The physical features related to facilities within a harbour.

(new)

PhysicalInfrastructure

Version 1.0 Phase 1.0 Proposed

kusal created on 29-Dec-2021. Last modified 02-Jan-2022

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Generalization from «FeatureType» PhysicalInfrastructure to «FeatureType» SupervisedArea  [ Direction is 'Source -> Destination'. ] |

| INCOMING STRUCTURAL RELATIONSHIPS |
| --- |
| Generalization from «FeatureType» DryDock to «FeatureType» PhysicalInfrastructure  [ Direction is 'Source -> Destination'. ] |
| Generalization from «FeatureType» FloatingDock to «FeatureType» PhysicalInfrastructure  [ Direction is 'Source -> Destination'. ] |
| Generalization from «FeatureType» GridIron to «FeatureType» PhysicalInfrastructure  [ Direction is 'Source -> Destination'. ] |
| Generalization from «FeatureType» Syncrolift to «FeatureType» PhysicalInfrastructure  [ Direction is 'Source -> Destination'. ] |
| Generalization from «FeatureType» StraddleCarrier to «FeatureType» PhysicalInfrastructure  [ Direction is 'Source -> Destination'. ] |

| ATTRIBUTES |
| --- |
| verticalClearanceValue : Real Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  The vertical clearance measured from the horizontal plane towards the feature overhead.  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| geometry : Point,Surface Public  [ Stereotype is «S100\_Spatial». Is static True. Containment is Not Specified. ] |

| ASSOCIATIONS | |
| --- | --- |
| Association (direction: Unspecified) Infrastructure  The infrastructure facilities in an area | |
| Source: Public infrastructureLocation (Class) Terminal «FeatureType»  Cardinality: [0..1]  Reference to the feature within which the infrastructure is located. | Target: Public hasInfrastructure (Class) PhysicalInfrastructure «FeatureType»  Cardinality: [0..\*]  Reference to the feature describing a particular instance of physical infrastructure. |
| Association (direction: Unspecified) Infrastructure  The infrastructure facilities in an area | |
| Source: Public infrastructureLocation (Class) HarbourAreaSection «FeatureType»  Cardinality: [0..1]  Reference to the feature within which the infrastructure is located. | Target: Public hasInfrastructure (Class) PhysicalInfrastructure «FeatureType»  Cardinality: [0..\*]  Reference to the feature describing a particular instance of physical infrastructure. |

### SupervisedArea

Class «FeatureType» in package 'S-131 Domain Model'

A location which may be supervised by a responsible or controlling authority.

Remarks:

It is not a requirement that every feature instance be associated with an authority.

Note that having ReportableServiceArea as well as SupervisedArea allows the subclasses to link to ContactDetails both directly and via Authority, which may not be desirable because it gives encoders two ways to reach almost the same result.

SupervisedArea

Version 1.0 Phase 1.0 Proposed

raphaelm created on 01-Jan-2018. Last modified 23-Nov-2021

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Generalization from «FeatureType» SupervisedArea to «FeatureType» OrganisationContactArea  [ Direction is 'Source -> Destination'. ] |

| INCOMING STRUCTURAL RELATIONSHIPS |
| --- |
| Generalization from «FeatureType» MilitaryPracticeArea to «FeatureType» SupervisedArea  [ Direction is 'Source -> Destination'. ] |
| Generalization from «FeatureType» PhysicalInfrastructure to «FeatureType» SupervisedArea  [ Direction is 'Source -> Destination'. ] |
| Generalization from «FeatureType» ReportableServiceArea to «FeatureType» SupervisedArea  [ Direction is 'Source -> Destination'. ] |
| Generalization from «FeatureType» Layout to «FeatureType» SupervisedArea  [ Direction is 'Source -> Destination'. ] |
| Generalization from «FeatureType» RestrictedAreaNavigational to «FeatureType» SupervisedArea  [ Direction is 'Source -> Destination'. ] |
| Generalization from «FeatureType» RestrictedAreaRegulatory to «FeatureType» SupervisedArea  [ Direction is 'Source -> Destination'. ] |

| ASSOCIATIONS | |
| --- | --- |
| Association (direction: Source -> Destination) SrvControl  Association between a geographically located service and the organisation that controls it. | |
| Source: Public controlledService (Class) SupervisedArea «FeatureType»  Cardinality: [0..\*]  The service controlled by an organisation or authority | Target: Public controlAuthority (Class) Authority «InformationType»  Cardinality: [0..1]  The controlling organization or authority for a geographically located service |

### AnchorBerth

Class «FeatureType» in package 'S-131 Domain Model'

A designated area of water where a vessel, sea plane, etc., may anchor.

AnchorBerth

Version 1.0 Phase 1.0 Proposed

raphaelm created on 27-Dec-2021. Last modified 27-Dec-2021

Alias ACHBRT

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Generalization from «FeatureType» AnchorBerth to «FeatureType» Layout  [ Direction is 'Source -> Destination'. ] |

| ATTRIBUTES |
| --- |
| categoryOfAnchorage : categoryOfAnchorage Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| radius : Real Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| status : status Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| scaleMinimum : Integer Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| geometry : Public  Constraints:  Point : Invariant  [ Stereotype is «S100\_Spatial». Is static True. Containment is Not Specified. ] |

| ASSOCIATIONS | |
| --- | --- |
| Association (direction: Unspecified) AuxiliaryFacility  Describes the relationship between a primary feature and a feature that plays a supporting role in the use of the primary facility by a vessel. | |
| Source: Public primaryFacility (Class) AnchorBerth «FeatureType»  A reference to the primary feature in an Auxiliaryfacility relationship. | Target: Public auxiliaryFacility (Class) MooringWarpingFacility «FeatureType»  Cardinality: [0..\*]  A reference to a feature that supplements or supports the use of the primary feature in an AuxiliaryFacility relationship. |

### Berth

Class «FeatureType» in package 'S-131 Domain Model'

Place in which a ship is moored at wharf.

Berth

Version 1.0 Phase 1.0 Proposed

created on 24-Dec-2021. Last modified 24-Dec-2021

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Generalization from «FeatureType» Berth to «FeatureType» Layout  [ Direction is 'Source -> Destination'. ] |
| Aggregation from «FeatureType» Berth to «FeatureType» HarbourAreaSection  A division of a feature into parts of type(s) different from the type of the whole.  [ Name is ManifoldSection. Direction is 'Source -> Destination'. ] |
| Aggregation from «FeatureType» Berth to «FeatureType» Terminal  [ Direction is 'Source -> Destination'. ] |

| INCOMING STRUCTURAL RELATIONSHIPS |
| --- |
| Aggregation from «FeatureType» BerthPosition to «FeatureType» Berth  Demarcation of location(s) within a feature by relation to another feature or features.  [ Name is Demarcation. Direction is 'Destination -> Source'. ] |

| ATTRIBUTES |
| --- |
| availableBerthingLength : Real Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  **Name:** Available Berthing Length  **Definition:** The total length of berthing space available between the berth’s extent  **Source:** adapted from the Port Information Manual (briana)  (Can't find it in the Port Information Manual - Raphael.)  **Definition 2**: The length of a berth or dock which is available for use. (NIPWG Wiki)  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| minimumDepth : Real Public  **Name:** Minimum Depth  **Definition:** the minimum depth measured at the berth location  **Source:** briana  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| berthElevation : Real Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  **Name:** Berth Elevation  **Definition:** The vertical distance of the berth measured from a specified vertical DATUM usually MEAN SEA LEVEL.  The term elevation is sometimes confused with ALTITUDE. For paper NAUTICAL CHARTS, this term is often synonymous with HEIGHT.  **Source:** adapted from IHO S-32 (briana)  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| cathodicProtectionSystem : Boolean Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  **Name:** Cathodic Protection System  **Definition:** Cathodic protection (CP) is a technique used to control the corrosion of a metal surface by making it the cathodic side of an electrochemical cell. ... Cathodic protection systems are used to protect a wide range of metallic structures in various environments. The most common applications include: Water and fuel pipelines.  **Source:** https://www.abriox.com/just-what-is-cathodic-protection  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| categoryOfBerthLocation : categoryOfBerthLocation Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  **Name:** Category of Berth Location  **Definition:** The berth type available  **Source:** adapted from the Port Information Manual (briana)  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| portFacilityNumber : text Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  **Name:** Port Facility Number  **Definition:** the IMO port facility number.  Format: : IMO GISIS format; UN/LOCODE-4 digit number  **Source:** adapted from Port Information Manual (briana)  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| locationByMetreMark : locationByMetreMark Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  One or more metre mark numbers, defining a point on or a linear extent of a wharf or quay.  (Source: Raphael)  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| methodOfSecuring : methodOfSecuring Public  The method used to secure the vessel to the berth.  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| geometry : Point,Curve,Surface Public  [ Stereotype is «S100\_Spatial». Is static True. Containment is Not Specified. ] |
| uNLocationCode : text Public  Used to encode the UN Location Code (http://www.unece.org/cefact/locode/service/location.html) or - in Europe - the Inland Ship Reporting Standard (ISRS) Code.  Note: This is defined in the Inland ENC domain of the GI registry, with a Remark specific to Inland ENC and some strange additional data - this should be revised:  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| terminalIdentifier : text Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  **Name:** Terminal Identifier  **Definition:** The unique identifier for a given terminal, links to Terminal feature type.  **Source:** briana  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |

### BerthPosition

Class «FeatureType» in package 'S-131 Domain Model'

The position along the line of a berth, specified by one point (e.g. bollard, manifold or ramp number), allowing the ship to berth in the correct position along the berth**.**

BerthPosition

Version 1.0 Phase 1.0 Proposed

raphaelm created on 28-Dec-2021. Last modified 14-Jan-2022

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Aggregation from «FeatureType» BerthPosition to «FeatureType» Berth  Demarcation of location(s) within a feature by relation to another feature or features.  [ Name is Demarcation. Direction is 'Destination -> Source'. ] |
| Generalization from «FeatureType» BerthPosition to «FeatureType» Layout  [ Direction is 'Source -> Destination'. ] |

| ATTRIBUTES |
| --- |
| bollardNumber : Real Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  **Name:** Bollard Number  **Definition:** An identifier used to locate a specific bollard (a Small shaped post, mounted on a wharf or dolphin used to secure ship’s lines.  **Source**: [S-32 IHO Hydrographic Dictionary](http://iho-ohi.net/S32/index.php))  ----  **Definition2:**The number is either the bollard number/meter mark, manifold or ramp number.  **Source2:** Port Information Manual ( & briana)  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| locationByMetreMark : locationByMetreMark Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  One or more metre mark numbers, defining a point on or a linear extent of a wharf or quay.  (Source: Raphael)  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| availableBerthingLength : Real Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  **Name:** Available Berthing Length  **Definition:** The total length of berthing space available between the berth’s extent  **Source:** adapted from the Port Information Manual (briana)  (Can't find it in the Port Information Manual - Raphael.)  **Definition 2**: The length of a berth or dock which is available for use. (NIPWG Wiki)  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| geometry : Point Public  A single point. In decimal degrees to a defined precision, (minus to indicate South and West). Datum WGS 84.  [ Stereotype is «S100\_Spatial». Is static True. Containment is Not Specified. ] |

| ASSOCIATIONS | |
| --- | --- |
| Association (direction: Unspecified) AuxiliaryFacility  Describes the relationship between a primary feature and a feature that plays a supporting role in the use of the primary facility by a vessel. | |
| Source: Public primaryFacility (Class) BerthPosition «FeatureType»  A reference to the primary feature in an Auxiliaryfacility relationship. | Target: Public auxiliaryFacility (Class) MooringWarpingFacility «FeatureType»  Cardinality: [0..\*]  A refernce to a feature that supplements or supports the use of the primary feature in an AuxiliaryFacility relationship. |

### DryDock

Class «FeatureType» in package 'S-131 Domain Model'

**Name:** Dry Dock

**Definition:** An artificial basin fitted with a gate or caisson, into which vessels can be floated and the water pumped out to expose the vessel's bottom. Also called graving dock.

**Source:** Hydrographic Dictionary, Part I Volume I, English

DryDock

Version 1.0 Phase 1.0 Proposed

kusal created on 29-Dec-2021. Last modified 29-Dec-2021

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Generalization from «FeatureType» DryDock to «FeatureType» PhysicalInfrastructure  [ Direction is 'Source -> Destination'. ] |

| ATTRIBUTES |
| --- |
| sillDepth : Real Public  The greatest depth over a sill.  [Source: S-32]  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |

### FloatingDock

Class «FeatureType» in package 'S-131 Domain Model'

**Name:** Floating Dock

**Definition:** A form of dry dock consisting of a floating structure of one or more sections which can be partly submerged by controlled flooding to receive a vessel, then raised by pumping out the water so that the vessel's bottom can be exposed.

**Source:** Hydrographic Dictionary, Part I Volume I, English

FloatingDock

Version 1.0 Phase 1.0 Proposed

kusal created on 29-Dec-2021. Last modified 29-Dec-2021

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Generalization from «FeatureType» FloatingDock to «FeatureType» PhysicalInfrastructure  [ Direction is 'Source -> Destination'. ] |

| ATTRIBUTES |
| --- |
| sillDepth : Real Public  The greatest depth over a sill.  [Source: S-32]  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |

### GridIron

Class «FeatureType» in package 'S-131 Domain Model'

**Name:** Gridiron

**Definition:** A structure in the intertidal zone serving as a support for vessels at low stages of the tide to permit work on the exposed portion of the vessel's hull.

**Source:** Hydrographic Dictionary, Part I Volume I, English

GridIron

Version 1.0 Phase 1.0 Proposed

kusal created on 29-Dec-2021. Last modified 29-Dec-2021

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Generalization from «FeatureType» GridIron to «FeatureType» PhysicalInfrastructure  [ Direction is 'Source -> Destination'. ] |

| ATTRIBUTES |
| --- |
| sillDepth : Real Public  The greatest depth over a sill.  [Source: S-32]  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |

### HarbourAreaAdministrative

Class «FeatureType» in package 'S-131 Domain Model'

The area over which a harbour authority has jurisdiction.

HarbourAreaAdministrative

Version 1.0 Phase 1.0 Proposed

raphaelm created on 28-Dec-2021. Last modified 01-Jan-2022

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Generalization from «FeatureType» HarbourAreaAdministrative to «FeatureType» Layout  [ Direction is 'Source -> Destination'. ] |

| INCOMING STRUCTURAL RELATIONSHIPS |
| --- |
| Aggregation from «FeatureType» HarbourAreaSection to «FeatureType» HarbourAreaAdministrative  [ Direction is 'Source -> Destination'. ] |

| ATTRIBUTES |
| --- |
| uNLocationCode : text Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  Used to encode the UN Location Code (http://www.unece.org/cefact/locode/service/location.html) or - in Europe - the Inland Ship Reporting Standard (ISRS) Code.  (See notes in Berth.uNLocationCode.)  [ Stereotype is «simpleAttribute». Is static True. Containment is Not Specified. ] |
| countryCode : text Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  **Definition:** IHO identifier for each country. A two letter code  **Source:** adapted from IHO website (briana)  [Source should be either S-62 or the IHO producer codes register (need to check what the registry has for definition source. There are 194 entries in the IHO Producer code register (Member and Other States) so this attribute should ideally become a "closed dictionary" type codelist.]  [ Stereotype is «simpleAttribute». Is static True. Containment is Not Specified. ] |
| applicableLoadLineZone : text Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  **Definition:**  The load line zone in which the port is located. Defined by the International Convention on Load Lines.  **Source:** Port Information Manual  [ Stereotype is «simpleAttribute». Is static True. Containment is Not Specified. ] |
| iSPSLevel : iSPSLevel Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  Classification of ISPS security levels according to the ISPS Code.  **Source:** Registry  [ Stereotype is «simpleAttribute». Is static True. Containment is Not Specified. ] |
| categoryOfHarbourFacility : categoryOfHarbourFacility Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  Classification of harbour use.  [ Stereotype is «simpleAttribute». Is static True. Containment is Not Specified. ] |
| geometry : Point,Surface Public  [ Stereotype is «SpatialAttribute». Is static True. Containment is Not Specified. ] |
| availablePortServices : availablePortServices Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  A list of services that are available for the given port.  **Source:** briana  [ Stereotype is «simpleAttribute». Is static True. Containment is Not Specified. ] |
| generalHarbourInformation : generalHarbourInformation Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  General, introductory information about the port. This should be confined to information not contained in any other attributes, features, or information types.  **Source:** adapted from the Port Information Manual  [ Stereotype is «simpleAttribute». Is static True. Containment is Not Specified. ] |

| ASSOCIATIONS | |
| --- | --- |
| Association (direction: Unspecified) JurisdictionalLimit  The limit(s) of a jurisdiction claimed by a coastal State. | |
| Source: Public limitReference (Class) HarbourAreaAdministrative «FeatureType»  Reference to the feature for which a coastal State claims a specific jurisdiction different from the feature's geographic boundary. | Target: Public limitExtent (Class) OuterLimit «FeatureType»  Cardinality: [0..1]  Reference to a feature demarcating the extent to which a coastal State claims or may claim a specific jurisdiction. |

### HarbourAreaSection

Class «FeatureType» in package 'S-131 Domain Model'

A section of the area over which a harbour authority has jurisdiction.

Source: As for HarbourArea, adapted.

HarbourAreaSection

Version 1.0 Phase 1.0 Proposed

raphaelm created on 28-Dec-2021. Last modified 07-Jan-2022

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Generalization from «FeatureType» HarbourAreaSection to «FeatureType» Layout  [ Direction is 'Source -> Destination'. ] |
| Aggregation from «FeatureType» HarbourAreaSection to «FeatureType» HarbourAreaAdministrative  [ Direction is 'Source -> Destination'. ] |
| Aggregation from «FeatureType» HarbourAreaSection to «FeatureType» HarbourAreaSection  A division of a feature into parts of the same type as the whole.  [ Name is Subsection. Direction is 'Source -> Destination'. ] |

| INCOMING STRUCTURAL RELATIONSHIPS |
| --- |
| Aggregation from «FeatureType» Berth to «FeatureType» HarbourAreaSection  A division of a feature into parts of type(s) different from the type of the whole.  [ Name is ManifoldSection. Direction is 'Source -> Destination'. ] |
| Aggregation from «FeatureType» WaterwayArea to «FeatureType» HarbourAreaSection  A division of a feature into parts of type(s) different from the type of the whole.  [ Name is ManifoldSection. Direction is 'Source -> Destination'. ] |
| Aggregation from «FeatureType» HarbourAreaSection to «FeatureType» HarbourAreaSection  A division of a feature into parts of the same type as the whole.  [ Name is Subsection. Direction is 'Source -> Destination'. ] |
| Aggregation from «FeatureType» Terminal to «FeatureType» HarbourAreaSection  A division of a feature into parts of type(s) different from the type of the whole.  [ Name is ManifoldSection. Direction is 'Source -> Destination'. ] |

| ATTRIBUTES |
| --- |
| categoryOfPortSection : categoryOfPortSection Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  **Name:** Category of Port Section / Category of Waterway  **Definition:** The various categories of water sections within a port (Anchorage, Fairway, Turning Basin, Basin, Berth Pocket)  **Source:** adapted from Port Information Manual (briana)  [ Stereotype is «simpleAttribute». Is static True. Containment is Not Specified. ] |
| categoryOfHarbourFacility : categoryOfHarbourFacility Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  **Name:** Category of Harbour Facility  **Definition:** Classification of harbour use.  **Source:** S-101 IHO Electronic Navigational Chart Product Specification  **Allowed Values:**  4 - Fishing Harbour  5 - Yacht Harbour/Marina  6 - Naval Base  9 - Shipyard  12 - Ship Lift  13 - Straddle Carrier  14 - Service Harbour  15 - Pilotage Service  16 - Service and Repair  17 - Quarantine Station  ---  **NOTE:** all terminal related options are allowed in the Terminal feature  [ Stereotype is «simpleAttribute». Is static True. Containment is Not Specified. ] |
| iSPSLevel : iSPSLevel Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  Classification of ISPS security levels according to the ISPS Code.  **Source:** Registry  [ Stereotype is «simpleAttribute». Is static True. Containment is Not Specified. ] |
| generalLayoutOfPortFacilities : text Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  **Name:** General Layout of Port Facilities  **Definition:** used to describe information pertaining to the port infrastructure between the Pilot Boarding Place and the Berth.  This can be general information for specific port sections (e.g. depth of berthing pocket).  **Source:** adapted from the Port Information Manual (4.1 - General)  [ Stereotype is «simpleAttribute». Is static True. Containment is Not Specified. ] |
| geometry : Point,Surface Public  [ Stereotype is «SpatialAttribute». Is static True. Containment is Not Specified. ] |

| ASSOCIATIONS | |
| --- | --- |
| Association (direction: Unspecified) Infrastructure  The infrastructure facilities in an area | |
| Source: Public infrastructureLocation (Class) HarbourAreaSection «FeatureType»  Cardinality: [0..1]  Reference to the feature within which the infrastructure is located. | Target: Public hasInfrastructure (Class) PhysicalInfrastructure «FeatureType»  Cardinality: [0..\*]  Reference to the feature describing a particular instance of physical infrastructure. |

### MooringWarpingFacility

Class «FeatureType» in package 'S-131 Domain Model'

The equipment or structure used to secure a vessel.

MooringWarpingFacility

Version 1.0 Phase 1.0 Proposed

raphaelm created on 24-Dec-2021. Last modified 24-Dec-2021

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Generalization from «FeatureType» MooringWarpingFacility to «FeatureType» Layout  [ Direction is 'Source -> Destination'. ] |

| ATTRIBUTES |
| --- |
| categoryOfMooringWarpingFacility : categoryOfMooringWarpingFacility Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  A place or structure to which a vessel can be secured.  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| mooringFacilityIdentifier : Integer Public  **Name:** Mooring Facility Id  **Definition:** The unique identifier for a given mooring facility.  **Source:** briana; Restyled by Raphael to be like terminalIdentifier  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| geometry : Point Public  [ Stereotype is «S100\_Spatial». Is static True. Containment is Not Specified. ] |

| ASSOCIATIONS | |
| --- | --- |
| Association (direction: Unspecified) AuxiliaryFacility  Describes the relationship between a primary feature and a feature that plays a supporting role in the use of the primary facility by a vessel. | |
| Source: Public primaryFacility (Class) BerthPosition «FeatureType»  A reference to the primary feature in an Auxiliaryfacility relationship. | Target: Public auxiliaryFacility (Class) MooringWarpingFacility «FeatureType»  Cardinality: [0..\*]  A refernce to a feature that supplements or supports the use of the primary feature in an AuxiliaryFacility relationship. |
| Association (direction: Unspecified) AuxiliaryFacility  Describes the relationship between a primary feature and a feature that plays a supporting role in the use of the primary facility by a vessel. | |
| Source: Public primaryFacility (Class) AnchorBerth «FeatureType»  A reference to the primary feature in an Auxiliaryfacility relationship. | Target: Public auxiliaryFacility (Class) MooringWarpingFacility «FeatureType»  Cardinality: [0..\*]  A reference to a feature that supplements or supports the use of the primary feature in an AuxiliaryFacility relationship. |

### OuterLimit

Class «FeatureType» in package 'S-131 Domain Model'

The extent to which a coastal State claims or may claim a specific jurisdiction in accordance with the provisions of International Law.

Source: Pre-existing Registry concept.

NB: There is no feature class OuterLimit in the registry at present, though there are OuterLimitOfXYZ features (e.g., OuterLimitOfTheRoadstead).

OuterLimit

Version 1.0 Phase 1.0 Proposed

raphaelm created on 28-Dec-2021. Last modified 06-Jan-2022

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Generalization from «FeatureType» OuterLimit to «FeatureType» Layout  [ Direction is 'Source -> Destination'. ] |

| ATTRIBUTES |
| --- |
| limitDescription : limitDescription Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  Description of the area covered by the information specified  **Source:**Port Information Manual  http://wp12183585.server-he.de/npubwiki/wiki/images/7/73/Port\_Information\_Manual.pdf  [ Stereotype is «S100\_Complex». Is static True. Containment is Not Specified. ] |
| geometry : Curve,Surface Public  **Name:** geometry  **Definition:** the physical delineation of the given feature.  **Source:** briana  [ Stereotype is «SpatialAttribute». Is static True. Containment is Not Specified. ] |
| markedBy : markedBy Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  The navigational aids used to mark an area or object  **Source:** briana  [ Stereotype is «S100\_Complex». Is static True. Containment is Not Specified. ] |
| landmarks : landmarks Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  Description of selected landmarks that have significance in the area.  **Encoding note for DCEG**: no aids to navigations here, they belong in majorLights, usefulMarks, offshoreMarks and markedBy  [ Stereotype is «S100\_Complex». Is static True. Containment is Not Specified. ] |
| offshoreMarks : offshoreMarks Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  Navigational aids that are useful in situational awareness when offshore  **Source:** briana  [ Stereotype is «S100\_Complex». Is static True. Containment is Not Specified. ] |
| majorLights : majorLights Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  Lighted Aids to Navigation that have great significance in an area  **Source:** briana  [ Stereotype is «S100\_Complex». Is static True. Containment is Not Specified. ] |
| usefulMarks : usefulMarks Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  Navigational aids that are useful in situational awareness  **Source:**briana  [ Stereotype is «S100\_Complex». Is static True. Containment is Not Specified. ] |

| ASSOCIATIONS | |
| --- | --- |
| Association (direction: Source -> Destination) LimitEntrance  Association between a limit feature and the entrance for the limit. | |
| Source: Public limitReference (Class) OuterLimit «FeatureType»  Reference to the limit area for which the entrance is described. | Target: Public entranceReference (Class) Entrance «InformationType»  Reference to an information type describing the entrance to a limit area. |
| Association (direction: Unspecified) JurisdictionalLimit  The limit(s) of a jurisdiction claimed by a coastal State. | |
| Source: Public limitReference (Class) HarbourAreaAdministrative «FeatureType»  Reference to the feature for which a coastal State claims a specific jurisdiction different from the feature's geographic boundary. | Target: Public limitExtent (Class) OuterLimit «FeatureType»  Cardinality: [0..1]  Reference to a feature demarcating the extent to which a coastal State claims or may claim a specific jurisdiction. |

### StraddleCarrier

Class «FeatureType» in package 'S-131 Domain Model'

**Name:** Straddle Carrier

**Definition:** A wheeled vehicle designed to lift and carry containers or vessels within its own framework. It is used for moving, and sometimes stacking, shipping containers and vessels.

**Source:** IHO Definition: S-57 Edition 3.1, Appendix A – Chapter 2, Page 2.39, November 2000.

----

categoryOfHarbourFacility = 13

StraddleCarrier

Version 1.0 Phase 1.0 Proposed

kusal created on 29-Dec-2021. Last modified 29-Dec-2021

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Generalization from «FeatureType» StraddleCarrier to «FeatureType» PhysicalInfrastructure  [ Direction is 'Source -> Destination'. ] |

### Syncrolift

Class «FeatureType» in package 'S-131 Domain Model'

**Name:** Syncrolift

**Definition:** A platform powered by synchronous electric motors (for example syncrolift) used to lift vessels (larger than boats) in and out of the water.

**Source:** IHO Definition (Adapted from S-57 Edition 3.1, Appendix A – Chapter 2, Page 2.38, November 2000).

---

categoryOfHarbourFacility = 12

ship lift

Syncrolift

Version 1.0 Phase 1.0 Proposed

kusal created on 29-Dec-2021. Last modified 29-Dec-2021

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Generalization from «FeatureType» Syncrolift to «FeatureType» PhysicalInfrastructure  [ Direction is 'Source -> Destination'. ] |

### Terminal

Class «FeatureType» in package 'S-131 Domain Model'

A terminal covers that area on shore which provides buildings and constructions for the transfer of cargo or passengers from and to ships. (Defined in GI Registry, Inland ENC Domain.)

Terminal

Version 1.0 Phase 1.0 Proposed

raphaelm created on 28-Dec-2021. Last modified 01-Jan-2022

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Aggregation from «FeatureType» Terminal to «FeatureType» HarbourAreaSection  A division of a feature into parts of type(s) different from the type of the whole.  [ Name is ManifoldSection. Direction is 'Source -> Destination'. ] |
| Generalization from «FeatureType» Terminal to «FeatureType» Layout  [ Direction is 'Source -> Destination'. ] |

| INCOMING STRUCTURAL RELATIONSHIPS |
| --- |
| Aggregation from «FeatureType» Berth to «FeatureType» Terminal  [ Direction is 'Source -> Destination'. ] |

| ATTRIBUTES |
| --- |
| portFacilityNumber : text Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  **Name:** Port Facility Number  **Definition:** the IMO port facility number.  Format: : IMO GISIS format; UN/LOCODE-4 digit number  **Source:** adapted from Port Information Manual (briana)  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| categoryOfHarbourFacility : categoryOfHarbourFacility Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  Classification of harbour use.  **allowed values:**  1 = RoRo terminal  3 = Ferry terminal  7 = Tanker Terminal  8 = Passenger Terminal  10 = Container Terminal  11 = Bulk Terminal  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| terminalIdentifier : text Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  **Name:** Terminal Id  **Definition:** The unique identifier for a given terminal  **Source:** briana  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| geometry : Point,Surface Public  [ Stereotype is «SpatialAttribute». Is static True. Containment is Not Specified. ] |
| sMDGTerminalCode : text Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  Code from the SMDG Terminal Code List.  Remark: The SMDG Terminal Code List (TCL) contains codes for container handling terminal facilities that are called by seagoing cargo vessels in maritime transport. The SMDG terminal code is used when necessary to define a geographic subset of a UN/LOCODE.  Source: Description of the SMDG Terminal Code List (TCL)v 1.01, at https://smdg.org/documents/smdg-code-lists/, adapted. SMDG e.V., (“Ship Message Design Group”)  (Raphael)  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| uNLocationCode : text Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  Used to encode the UN Location Code (http://www.unece.org/cefact/locode/service/location.html) or - in Europe - the Inland Ship Reporting Standard (ISRS) Code.  (See notes in Berth.uNLocationCode.)  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |

| ASSOCIATIONS | |
| --- | --- |
| Association (direction: Unspecified) Infrastructure  The infrastructure facilities in an area | |
| Source: Public infrastructureLocation (Class) Terminal «FeatureType»  Cardinality: [0..1]  Reference to the feature within which the infrastructure is located. | Target: Public hasInfrastructure (Class) PhysicalInfrastructure «FeatureType»  Cardinality: [0..\*]  Reference to the feature describing a particular instance of physical infrastructure. |

### WaterwayArea

Class «FeatureType» in package 'S-131 Domain Model'

An area in which uniform general information of the waterway exists.

WaterwayArea

Version 1.0 Phase 1.0 Proposed

raphaelm created on 01-Jan-2018. Last modified 23-Nov-2021

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Realization from «FeatureType» WaterwayArea to «metaclass» DynamicFeature  [ Direction is 'Source -> Destination'. ] |
| Generalization from «FeatureType» WaterwayArea to «FeatureType» Layout  [ Direction is 'Source -> Destination'. ] |
| Aggregation from «FeatureType» WaterwayArea to «FeatureType» HarbourAreaSection  A division of a feature into parts of type(s) different from the type of the whole.  [ Name is ManifoldSection. Direction is 'Source -> Destination'. ] |

| ATTRIBUTES |
| --- |
| categoryOfPortSection : categoryOfPortSection Public  **Name:** Category of Port Section / Category of Waterway  **Definition:** The various categories of water sections within a port (Anchorage, Fairway, Turning Basin, Basin, Berth Pocket)  **Source:** adapted from Port Information Manual (briana)  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| depthsDescription : depthsDescription Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  **Name:** DepthsDescription  **Definition:** textual description explaining the depth of the area.  **Source:** briana  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| locationByText : text Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  **Revised to use the existing attribute locationByText (***A textual rendering of a geographic location***).**  **Name:** Location Description  **Definition:** A descriptive explanation of the location of a specific area.  **Source:** briana  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| geometry : Surface Public  [ Stereotype is «S100\_Spatial». Is static True. Containment is Not Specified. ] |
| markedBy : markedBy Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  **Name:** Marked By  **Definition:** the navigational aids used to mark an area or object  **Source:** briana  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |

### InformationType

Class «InformationType» in package 'S-131 Domain Model'

Generalized information type which carry all the common attributes

InformationType

Version 1.0 Phase 1.0 Proposed

eivind.mong created on 01-Jan-2018. Last modified 23-Nov-2021

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Realization from «InformationType» InformationType to «metaclass» S100\_GF\_InformationType  [ Direction is 'Source -> Destination'. ] |

| INCOMING STRUCTURAL RELATIONSHIPS |
| --- |
| Generalization from «InformationType» Authority to «InformationType» InformationType  [ Direction is 'Source -> Destination'. ] |
| Generalization from «InformationType» Applicability to «InformationType» InformationType  [ Direction is 'Source -> Destination'. ] |
| Generalization from «InformationType» AbstractRXN to «InformationType» InformationType  [ Direction is 'Source -> Destination'. ] |
| Generalization from «InformationType» ContactDetails to «InformationType» InformationType  [ Direction is 'Source -> Destination'. ] |
| Generalization from «InformationType» ServiceHours to «InformationType» InformationType  [ Direction is 'Source -> Destination'. ] |
| Generalization from «InformationType» ShipReport to «InformationType» InformationType  [ Direction is 'Source -> Destination'. ] |
| Generalization from «InformationType» Entrance to «InformationType» InformationType  [ Direction is 'Source -> Destination'. ] |
| Generalization from «InformationType» NonStandardWorkingDay to «InformationType» InformationType  [ Direction is 'Source -> Destination'. ] |

| ATTRIBUTES |
| --- |
| featureName : featureName Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Complex». Is static True. Containment is Not Specified. ] |
| fixedDateRange : fixedDateRange Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Complex». Is static True. Containment is Not Specified. ] |
| periodicDateRange : periodicDateRange Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Complex». Is static True. Containment is Not Specified. ] |
| graphic : graphic Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Complex». Is static True. Containment is Not Specified. ] |
| sourceIndication : sourceIndication Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Complex». Is static True. Containment is Not Specified. ] |
| textContent : textContent Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Complex». Is static True. Containment is Not Specified. ] |

| ASSOCIATIONS | |
| --- | --- |
| Association (direction: Unspecified) AdditionalInformation  A feature association for the binding between at least one instance of a geo feature and an instance of an information type. | |
| Source: Public informationProvidedFor (Class) InformationType «InformationType»  Cardinality: [1..\*]  A pointer to a specific feature(s) for which further information is required. | Target: Public providesInformation (Class) NauticalInformation «InformationType»  Cardinality: [0..\*]  A pointer to an object that provides more information about the referencing feature or information type. |

### AbstractRXN

Class «InformationType» in package 'S-131 Domain Model'

An abstract superclass for information types that encode rules, recommendations, and general information in text or graphic form.

Remarks: Subtypes of AbstractRxN carry the same attributes, but differ in the nature of information they encode. There are currently four such subtypes: Regulations, Restrictions, Recommendations, and NauticalInformation.

AbstractRXN

Version 1.0 Phase 1.0 Proposed

raphaelm created on 01-Jan-2018. Last modified 23-Nov-2021

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Generalization from «InformationType» AbstractRXN to «InformationType» InformationType  [ Direction is 'Source -> Destination'. ] |

| INCOMING STRUCTURAL RELATIONSHIPS |
| --- |
| Generalization from «InformationType» Restrictions to «InformationType» AbstractRXN  [ Direction is 'Source -> Destination'. ] |
| Generalization from «InformationType» NauticalInformation to «InformationType» AbstractRXN  [ Direction is 'Source -> Destination'. ] |
| Generalization from «InformationType» Recommendations to «InformationType» AbstractRXN  [ Direction is 'Source -> Destination'. ] |
| Generalization from «InformationType» Regulations to «InformationType» AbstractRXN  [ Direction is 'Source -> Destination'. ] |

| CONNECTORS |
| --- |
| Dependency Source -> Destination  From: DynamicFeature : Metaclass, Public  To: AbstractRXN : Class, Public |

| ATTRIBUTES |
| --- |
| categoryOfAuthority : categoryOfAuthority Public  Alias: CATAUT  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Enum». Is static True. Containment is Not Specified. ] |
| rxnCode : rxnCode Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Complex». Is static True. Containment is Not Specified. ] |

| ASSOCIATIONS | |
| --- | --- |
| AssociationClass (direction: Source -> Destination) InclusionType | |
| Source: Public theApplicableRXN (Class) AbstractRXN «InformationType»  Cardinality: [0..\*] | Target: Public isApplicableTo (Class) Applicability «InformationType»  Cardinality: [0..\*] |
| Association (direction: Bi-Directional) RelatedOrganisation  Related organisation. | |
| Source: Public theOrganisation (Class) Authority «InformationType»  Cardinality: [0..\*]  The organisation to which information relates | Target: Public theInformation (Class) AbstractRXN «InformationType»  Cardinality: [0..\*]  Information related to an organisation |
| Association (direction: Source -> Destination) AssociatedRxN  Association between a geographic location and a regulation, restriction, recommendation, or nautical information | |
| Source: Public appliesInLocation (Class) FeatureType «FeatureType»  Cardinality: [1..\*]  The location in which the information item applies | Target: Public theRxN (Class) AbstractRXN «InformationType»  Cardinality: [0..\*]  The regulation, restriction, recommendation, or nautical information |

### Applicability

Class «InformationType» in package 'S-131 Domain Model'

Describes the relationship between vessel characteristics and: (i) the applicability of an associated information object or feature to the vessel; or, (ii) the use of a facility, place, or service by the vessel; or, (iii) passage of the vessel through an area.

Applicability

Version 1.0 Phase 1.0 Proposed

eivind.mong created on 01-Jan-2018. Last modified 23-Nov-2021

Alias APPLIC

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Generalization from «InformationType» Applicability to «InformationType» InformationType  [ Direction is 'Source -> Destination'. ] |

| CONNECTORS |
| --- |
| Dependency Source -> Destination  From: DynamicFeature : Metaclass, Public  To: Applicability : Class, Public |

| ATTRIBUTES |
| --- |
| inBallast : Boolean Public  Alias: BALAST  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  Whether the vessel is in ballast.  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| categoryOfCargo : categoryOfCargo Public  Alias: CATCGO  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Enum». Is static True. Containment is Not Specified. ] |
| categoryOfDangerousOrHazardousCargo : categoryOfDangerousOrHazardousCargo Public  Alias: CATDHC  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Enum». Is static True. Containment is Not Specified. ] |
| categoryOfVessel : categoryOfVessel Public  Alias: CATVSL  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Enum». Is static True. Containment is Not Specified. ] |
| categoryOfVesselRegistry : categoryOfVesselRegistry Public  Alias: CATRGY  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Enum». Is static True. Containment is Not Specified. ] |
| logicalConnectives : logicalConnectives Public  Alias: LOGCON  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Enum». Is static True. Containment is Not Specified. ] |
| thicknessOfIceCapability : Integer Public  Alias: ICECAP  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  The thickness of ice that the ship can safely transit  Unit: centimetres  Resolution: 1  Format: xxx  Example: 080 for ice which has a thickness of 80 cm  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| information : information Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Complex». Is static True. Containment is Not Specified. ] |
| vesselPerformance : text Public  Alias: PRFMNC  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  A description of the required handling characteristics of a vessel including hull design, main and auxilliary machinery, cargo handling equipment, navigation equipment and manoeuvring behaviour.  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| vesselsMeasurements : vesselsMeasurements Public  Alias: VSLMSM  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Complex». Is static True. Containment is Not Specified. ] |

| ASSOCIATIONS | |
| --- | --- |
| AssociationClass (direction: Source -> Destination) PermissionType  Association class for associations describing whether the subsets of vessels determined by the ship characteristics specified in APPLIC may (or must, etc.) transit, enter, or use a feature. | |
| Source: Public vslLocation (Class) FeatureType «FeatureType»  Cardinality: [0..\*] | Target: Public permission (Class) Applicability «InformationType»  Cardinality: [0..\*] |
| AssociationClass (direction: Source -> Destination) InclusionType | |
| Source: Public theApplicableRXN (Class) AbstractRXN «InformationType»  Cardinality: [0..\*] | Target: Public isApplicableTo (Class) Applicability «InformationType»  Cardinality: [0..\*] |
| Association (direction: Source -> Destination) ReportReqmt  Association between types of reports and classes of vessels which must file report of the type described | |
| Source: Public theShipReport (Class) ShipReport «InformationType»  Cardinality: [0..\*]  The report to be filed by a vessel | Target: Public mustBeFiledBy (Class) Applicability «InformationType»  Cardinality: [0..\*]  The class (generally, qualifying vessels) which must file the report |

### Authority

Class «InformationType» in package 'S-131 Domain Model'

A person or organization that has the legally delegated or invested authority, capacity, or power to perform a designated function or exert administrative control.

Authority

Version 1.0 Phase 1.0 Proposed

eivind.mong created on 01-Jan-2018. Last modified 23-Nov-2021

Alias AUTORI

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Generalization from «InformationType» Authority to «InformationType» InformationType  [ Direction is 'Source -> Destination'. ] |

| CONNECTORS |
| --- |
| Dependency Source -> Destination  From: DynamicFeature : Metaclass, Public  To: Authority : Class, Public |

| ATTRIBUTES |
| --- |
| categoryOfAuthority : categoryOfAuthority Public  Alias: CATAUT  [ Stereotype is «S100\_Enum». Is static True. Containment is Not Specified. ] |
| textContent : textContent Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Complex». Is static True. Containment is Not Specified. ] |

| ASSOCIATIONS | |
| --- | --- |
| Association (direction: Source -> Destination) AuthorityContact  Contact information for an authority | |
| Source: Public theAuthority (Class) Authority «InformationType»  Cardinality: [0..\*]  A pointer to an Authority object | Target: Public theContactDetails (Class) ContactDetails «InformationType»  Cardinality: [0..\*]  A pointer to an Contact Details object |
| Association (direction: Source -> Destination) ReptAuthority  The authority with which a report must be filed. | |
| Source: Public reportTo (Class) Authority «InformationType»  Cardinality: [0..\*]  The organisation or place to which a report is sent. | Target: Public theShipReport (Class) ShipReport «InformationType»  Cardinality: [0..\*]  The report to be filed by a vessel |
| Association (direction: Source -> Destination) AuthorityHours  Service hours for an authority | |
| Source: Public theAuthority\_srvHrs (Class) Authority «InformationType»  Cardinality: [0..\*]  The authority for which service hours are given | Target: Public theServiceHours (Class) ServiceHours «InformationType»  Cardinality: [0..\*]  Service hours for an authority ore service provider |
| Association (direction: Bi-Directional) RelatedOrganisation  Related organisation. | |
| Source: Public theOrganisation (Class) Authority «InformationType»  Cardinality: [0..\*]  The organisation to which information relates | Target: Public theInformation (Class) AbstractRXN «InformationType»  Cardinality: [0..\*]  Information related to an organisation |
| Association (direction: Source -> Destination) SrvControl  Association between a geographically located service and the organisation that controls it. | |
| Source: Public controlledService (Class) SupervisedArea «FeatureType»  Cardinality: [0..\*]  The service controlled by an organisation or authority | Target: Public controlAuthority (Class) Authority «InformationType»  Cardinality: [0..1]  The controlling organization or authority for a geographically located service |

### ContactDetails

Class «InformationType» in package 'S-131 Domain Model'

Information on how to reach a person or organisation by postal, internet, telephone, telex and radio systems.

ContactDetails

Version 1.0 Phase 1.0 Proposed

eivind.mong created on 01-Jan-2018. Last modified 23-Nov-2021

Alias CONDET

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Generalization from «InformationType» ContactDetails to «InformationType» InformationType  [ Direction is 'Source -> Destination'. ] |

| CONNECTORS |
| --- |
| Dependency Source -> Destination  From: DynamicFeature : Metaclass, Public  To: ContactDetails : Class, Public |

| ATTRIBUTES |
| --- |
| callName : text Public  Alias: CALNAM  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  The designated call name of a station, e.g. radio station, radar station, pilot. This is the name used when calling a radio station by radio i.e. "Singapore Pilots".  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| callSign : text Public  Alias: CALSGN  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  The designated call-sign of a radio station.  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| categoryOfCommPref : categoryOfCommPref Public  Alias: CATFRP  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Enum». Is static True. Containment is Not Specified. ] |
| communicationChannel : text Public  Alias: COMCHA  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| contactAddress : contactAddress Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Complex». Is static True. Containment is Not Specified. ] |
| frequencyPair : frequencyPair Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Complex». Is static True. Containment is Not Specified. ] |
| contactInstructions : text Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  supplemental instructions on how or when to contact the individual, organisation, or service  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| information : information Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Complex». Is static True. Containment is Not Specified. ] |
| language : ISO639-3 Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  The language is encoded by a character code following ISO 639-3  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| mMSICode : text Public  Alias: MMSICO  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  The Maritime Mobile Service Identity (MMSI) Code is formed of a series of nine digits which are transmitted over the radio path in order to uniquely identify ship stations, ship earth stations,coast stations, coast earth stations, and group calls. These identities are formed in such a way that the identity or part thereof can be used by telephone and telex subscribers connected to the general telecommunications network principally to call ships automatically.  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| onlineResource : onlineResource Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  Information about online sources from which a resource or data can be obtained (ISO 19115, adapted)  [ Stereotype is «S100\_Complex». Is static True. Containment is Not Specified. ] |
| telecommunications : telecommunications Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  information for contact by means of a telecommunications service.  Distinctions: emailAddress, internetAddress, callName, callSign, COMCHA  [ Stereotype is «S100\_Complex». Is static True. Containment is Not Specified. ] |
| radiocommunications : radiocommunications Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Complex». Is static True. Containment is Not Specified. ] |

| ASSOCIATIONS | |
| --- | --- |
| Association (direction: Source -> Destination) SrvContact  Contact details for a service or facility | |
| Source: Public servicePlace (Class) OrganisationContactArea «FeatureType»  Cardinality: [1..\*]  Pointer to service or facility | Target: Public theContactDetails (Class) ContactDetails «InformationType»  Cardinality: [0..\*]  A pointer to a Contact Details object |
| Association (direction: Source -> Destination) AuthorityContact  Contact information for an authority | |
| Source: Public theAuthority (Class) Authority «InformationType»  Cardinality: [0..\*]  A pointer to an Authority object | Target: Public theContactDetails (Class) ContactDetails «InformationType»  Cardinality: [0..\*]  A pointer to an Contact Details object |

### Entrance

Class «InformationType» in package 'S-131 Domain Model'

The SEAWARD end of a CHANNEL, HARBOUR, DOCK, etc.

**Source:** S-32

Entrance

Version 1.0 Phase 1.0 Proposed

raphaelm created on 29-Dec-2021. Last modified 14-Jan-2022

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Generalization from «InformationType» Entrance to «InformationType» InformationType  [ Direction is 'Source -> Destination'. ] |

| ATTRIBUTES |
| --- |
| entranceDescription : text Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  Description of entrance  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| associatedFeatureName : text Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  Names of associated features.  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| markedBy : markedBy Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  The navigational aids used to mark an area or object  **Source:** briana  [ Stereotype is «S100\_Complex». Is static True. Containment is Not Specified. ] |
| landmarks : landmarks Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  Description of selected landmarks that have significance in the area.  [ Stereotype is «S100\_Complex». Is static True. Containment is Not Specified. ] |
| offshoreMarks : offshoreMarks Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  Navigational aids that are useful in situational awareness when offshore  **Source:** briana  [ Stereotype is «S100\_Complex». Is static True. Containment is Not Specified. ] |
| majorLights : majorLights Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  Lighted Aids to Navigation that have great significance in an area  **Source:** briana  [ Stereotype is «S100\_Complex». Is static True. Containment is Not Specified. ] |
| localKnowledgeNeeded : text Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  Description of any local knowledge need to traverse a location.  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| usefulMarks : usefulMarks Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  Navigational aids that are useful in situational awareness  **Source:**briana  [ Stereotype is «S100\_Complex». Is static True. Containment is Not Specified. ] |
| approachDescription : text Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  Description of the approach to a location.  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |

| ASSOCIATIONS | |
| --- | --- |
| Association (direction: Source -> Destination) LimitEntrance  Association between a limit feature and the entrance for the limit. | |
| Source: Public limitReference (Class) OuterLimit «FeatureType»  Reference to the limit area for which the entrance is described. | Target: Public entranceReference (Class) Entrance «InformationType»  Reference to an information type describing the entrance to a limit area. |

### NauticalInformation

Class «InformationType» in package 'S-131 Domain Model'

Nautical information about a related area or facility.

Constraint: If **Regulations.textContent** is populated, there cannot be **textualDescription** or **information** attributes directly bound to the **Regulations**.. A similar constraint applies to the information types **Recommendations**, **Restrictions**, and **NauticalInformation**.

NauticalInformation

Version 1.0 Phase 1.0 Proposed

eivind.mong created on 01-Jan-2018. Last modified 23-Nov-2021

Alias NATINF

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Generalization from «InformationType» NauticalInformation to «InformationType» AbstractRXN  [ Direction is 'Source -> Destination'. ] |

| CONNECTORS |
| --- |
| Dependency Source -> Destination  From: DynamicFeature : Metaclass, Public  To: NauticalInformation : Class, Public |

| ASSOCIATIONS | |
| --- | --- |
| Association (direction: Unspecified) AdditionalInformation  A feature association for the binding between at least one instance of a geo feature and an instance of an information type. | |
| Source: Public informationProvidedFor (Class) InformationType «InformationType»  Cardinality: [1..\*]  A pointer to a specific feature(s) for which further information is required. | Target: Public providesInformation (Class) NauticalInformation «InformationType»  Cardinality: [0..\*]  A pointer to an object that provides more information about the referencing feature or information type. |
| Association (direction: Unspecified) AdditionalInformation  A feature association for the binding between at least one instance of a geo feature and an instance of an information type. | |
| Source: Public informationProvidedFor (Class) FeatureType «FeatureType»  Cardinality: [1..\*]  A pointer to a specific feature(s) for which further information is required. | Target: Public providesInformation (Class) NauticalInformation «InformationType»  Cardinality: [0..\*]  A pointer to an object that provides more information about the referencing feature or information type. |

### NonStandardWorkingDay

Class «InformationType» in package 'S-131 Domain Model'

Days when many services are not available. Often days of festivity or recreation or public holidays when normal working hours are limited, especially a national or religious festival, etc.

NonStandardWorkingDay

Version 1.0 Phase 1.0 Proposed

eivind.mong created on 01-Jan-2018. Last modified 23-Nov-2021

Alias NSWKDY

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Generalization from «InformationType» NonStandardWorkingDay to «InformationType» InformationType  [ Direction is 'Source -> Destination'. ] |

| ATTRIBUTES |
| --- |
| dateFixed : S100\_TruncatedDate Public  Alias: FIXDAT  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  The date when a festival or national holiday recurs on the same day each year in the Gregorian calendar.  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| dateVariable : text Public  Alias: VARDAT  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  A day which is not fixed in the Gregorian calendar.  Examples: The fourth Thursday in November; new moon day of Kartika (Diwali); Easter Sunday.  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| information : information Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Complex». Is static True. Containment is Not Specified. ] |

| ASSOCIATIONS | |
| --- | --- |
| Association (direction: Source -> Destination) ExceptionalWorkday  Exception to the usual working day | |
| Source: Public theServiceHours\_nsdy (Class) ServiceHours «InformationType»  Cardinality: [0..\*]  The usual service hours to which an exception applies | Target: Public partialWorkingDay (Class) NonStandardWorkingDay «InformationType»  Cardinality: [0..\*]  The work hours for a non-standard workday |

### Recommendations

Class «InformationType» in package 'S-131 Domain Model'

Recommendations for a related area or facility.

Constraint: If **Regulations.textContent** is populated, there cannot be **textualDescription** or **information** attributes directly bound to the **Regulations**.. A similar constraint applies to the information types **Recommendations**, **Restrictions**, and **NauticalInformation**.

Recommendations

Version 1.0 Phase 1.0 Proposed

eivind.mong created on 01-Jan-2018. Last modified 23-Nov-2021

Alias RCMDTS

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Generalization from «InformationType» Recommendations to «InformationType» AbstractRXN  [ Direction is 'Source -> Destination'. ] |

### Regulations

Class «InformationType» in package 'S-131 Domain Model'

Regulations for a related area or facility.

Constraint: If **Regulations.textContent** is populated, there cannot be **textualDescription** or **information** attributes directly bound to the **Regulations**.. A similar constraint applies to the information types **Recommendations**, **Restrictions**, and **NauticalInformation**.

Regulations

Version 1.0 Phase 1.0 Proposed

eivind.mong created on 01-Jan-2018. Last modified 23-Nov-2021

Alias REGLTS

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Generalization from «InformationType» Regulations to «InformationType» AbstractRXN  [ Direction is 'Source -> Destination'. ] |

### Restrictions

Class «InformationType» in package 'S-131 Domain Model'

Restrictions for a related area or facility.

Constraint: If **Regulations.textContent** is populated, there cannot be **textualDescription** or **information** attributes directly bound to the **Regulations**.. A similar constraint applies to the information types **Recommendations**, **Restrictions**, and **NauticalInformation**.

Restrictions

Version 1.0 Phase 1.0 Proposed

eivind.mong created on 01-Jan-2018. Last modified 23-Nov-2021

Alias RESDES

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Generalization from «InformationType» Restrictions to «InformationType» AbstractRXN  [ Direction is 'Source -> Destination'. ] |

### ServiceHours

Class «InformationType» in package 'S-131 Domain Model'

The time when a service is available and known exceptions.

ServiceHours

Version 1.0 Phase 1.0 Proposed

eivind.mong created on 01-Jan-2018. Last modified 23-Nov-2021

Alias SRVHRS

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Generalization from «InformationType» ServiceHours to «InformationType» InformationType  [ Direction is 'Source -> Destination'. ] |

| ATTRIBUTES |
| --- |
| scheduleByDayOfWeek : scheduleByDayOfWeek Public  Multiplicity: ( [1..\*], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Complex». Is static True. Containment is Not Specified. ] |
| information : information Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Complex». Is static True. Containment is Not Specified. ] |

| ASSOCIATIONS | |
| --- | --- |
| Association (direction: Source -> Destination) ExceptionalWorkday  Exception to the usual working day | |
| Source: Public theServiceHours\_nsdy (Class) ServiceHours «InformationType»  Cardinality: [0..\*]  The usual service hours to which an exception applies | Target: Public partialWorkingDay (Class) NonStandardWorkingDay «InformationType»  Cardinality: [0..\*]  The work hours for a non-standard workday |
| Association (direction: Unspecified) LocationHours  Working hours for a service or facility described by a geographic location  Remarks: This association links a geo feature to a Service Hours object. Distinction: authyHours, which links an information type (Authority) to a Service Hours object. | |
| Source: Public location\_srvHrs (Class) PilotService «FeatureType»  Cardinality: [0..\*]  The location for which service hours are given | Target: Public theServiceHours (Class) ServiceHours «InformationType»  Cardinality: [0..1]  Service hours for an authority or service provider |
| Association (direction: Source -> Destination) AuthorityHours  Service hours for an authority | |
| Source: Public theAuthority\_srvHrs (Class) Authority «InformationType»  Cardinality: [0..\*]  The authority for which service hours are given | Target: Public theServiceHours (Class) ServiceHours «InformationType»  Cardinality: [0..\*]  Service hours for an authority ore service provider |
| Association (direction: Unspecified) LocationHours  Working hours for a service or facility described by a geographic location  Remarks: This association links a geo feature to a Service Hours object. Distinction: authyHours, which links an information type (Authority) to a Service Hours object. | |
| Source: Public location\_srvHrs (Class) MilitaryPracticeArea «FeatureType»  Cardinality: [0..\*]  The location for which service hours are given | Target: Public theServiceHours (Class) ServiceHours «InformationType»  Cardinality: [0..1]  Service hours for an authority or service provider |

### InclusionType

AssociationClass «S100\_AssociationClass» in package 'S-131 Domain Model'

Association class specifying the relationship between the subset of vessels described by an APPLIC data object and a regulation (restriction, recommendation, or nautical information).

InclusionType

Version 1.0 Phase 1.0 Proposed

raphaelm created on 01-Jan-2018. Last modified 23-Nov-2021

Alias INCTYP

| ATTRIBUTES |
| --- |
| membership : membership Public  Alias: MBRSHP  Indicates whether a vessel is included or excluded from the regulation / restriction / recommendation / nautical information.  [ Stereotype is «S100\_Enum». Is static True. Containment is Not Specified. ] |

### PermissionType

AssociationClass «S100\_AssociationClass» in package 'S-131 Domain Model'

Association class for associations describing whether the subsets of vessels determined by the ship characteristics specified in APPLIC may (or must, etc.) transit, enter, or use a feature.

PermissionType

Version 1.0 Phase 1.0 Proposed

eivind.mong created on 01-Jan-2018. Last modified 23-Nov-2021

Alias PERMIS

| ATTRIBUTES |
| --- |
| categoryOfRelationship : categoryOfRelationship Public  This attribute expresses the level of insistence for or against an action or activity by a vessel of the subset described by the APPLIC object at one end in relation to the feature at the other end of the association.  [ Stereotype is «S100\_Enum». Is static True. Containment is Not Specified. ] |

## S-131 Meta Features

Package in package 'S-131 V0.2'

S-131 Meta Features

Version 1.0 Phase 1.0 Proposed

raphaelm created on 15-Nov-2021. Last modified 15-Nov-2021

### S-131 Q of NonBathy data diagram

Class diagram in package 'S-131 Meta Features'

S-131 Q of NonBathy data

Version 1.0

raphaelm created on 01-Jan-2018. Last modified 14-Jan-2022



1. S-131 Q of NonBathy data

### S-131 Meta Features diagram

Class diagram in package 'S-131 Meta Features'

Classes for meta- feature types and complex attributes used by them.

Remarks: The NPUBS model of meta-features extends the S-101 model by adding attributes for **information** and **source indication**.

S-131 Meta Features

Version 1.0

raphaelm created on 01-Jan-2018. Last modified 14-Jan-2022



1. S-131 Meta Features

### S-131 Meta FeatureEnums diagram

Class diagram in package 'S-131 Meta Features'

Enumerations used by meta-features.

S-131 Meta FeatureEnums

Version 1.0

raphaelm created on 01-Jan-2018. Last modified 14-Jan-2022



1. S-131 Meta FeatureEnums

### DataQuality

Class in package 'S-131 Meta Features'

Abstract feature type for data quality meta-features

DataQuality

Version 1.0 Phase 1.0 Mandatory

raphaelm created on 01-Jan-2018. Last modified 23-Nov-2021

| INCOMING STRUCTURAL RELATIONSHIPS |
| --- |
| Generalization from QualityOfTemporalVariation to DataQuality  [ Direction is 'Source -> Destination'. ] |

| ATTRIBUTES |
| --- |
| information : information Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  Use of attribute **information** is discouraged for nautical publications data quality meta-features.  [ Stereotype is «S100\_Complex». Is static True. Containment is Not Specified. ] |
| geometry : GM\_OrientableSurface Public  Multiplicity: ( [1..\*], Allow duplicates: 0, Is ordered: False )  Permitted spatial primitives  [ Stereotype is «S100\_Spatial». Is static True. Containment is Not Specified. ] |

### QualityOfTemporalVariation

Class in package 'S-131 Meta Features'

Abstract type for meta-feature which can describe temporal variation.

QualityOfTemporalVariation

Version 1.0 Phase 1.0 Proposed

raphaelm created on 01-Jan-2018. Last modified 23-Nov-2021

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Generalization from QualityOfTemporalVariation to DataQuality  [ Direction is 'Source -> Destination'. ] |

| INCOMING STRUCTURAL RELATIONSHIPS |
| --- |
| Generalization from «FeatureType» QualityOfNonBathymetricData to QualityOfTemporalVariation  [ Direction is 'Source -> Destination'. ] |

| ATTRIBUTES |
| --- |
| categoryOfTemporalVariation : categoryOfTemporalVariation Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  Constraints:  VS : Invariant  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |

### DataCoverage

Class «FeatureType» in package 'S-131 Meta Features'

A geographical area that describes the coverage and extent of spatial objects.

DataCoverage

Version 1.0 Phase 1.0 Proposed

raphaelm created on 01-Jan-2018. Last modified 23-Nov-2021

Alias M\_COVR

| ATTRIBUTES |
| --- |
| maximumDisplayScale : Integer Public  Constraints:  C1 : Invariant  VS : Invariant  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| minimumDisplayScale : Integer Public  Constraints:  C1 : Invariant  VS : Invariant  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| geometry : GM\_OrientableSurface Public  Multiplicity: ( [1..\*], Allow duplicates: 0, Is ordered: False )  Permitted spatial primitives  [ Stereotype is «S100\_Spatial». Is static True. Containment is Not Specified. ] |

### QualityOfNonBathymetricData

Class «FeatureType» in package 'S-131 Meta Features'

An area within which a uniform assessment of the quality of the non-bathymetric data exists.

QualityOfNonBathymetricData

Version 1.0 Phase 1.0 Proposed

raphaelm created on 01-Jan-2018. Last modified 23-Nov-2021

Alias M\_ACCY

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Generalization from «FeatureType» QualityOfNonBathymetricData to QualityOfTemporalVariation  [ Direction is 'Source -> Destination'. ] |

| ATTRIBUTES |
| --- |
| horizontalDistanceUncertainty : Real Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  The best estimate of the horizontal accuracy of horizontal clearances and distances.  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| horizontalPositionUncertainty : horizontalPositionUncertainty Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  The best estimate of the accuracy of a position.  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| orientationUncertainty : Real Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  The best estimate of the accuracy of a bearing  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| sourceIndication : sourceIndication Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Complex». Is static True. Containment is Not Specified. ] |
| surveyDateRange : surveyDateRange Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Complex». Is static True. Containment is Not Specified. ] |

### horizontalPositionUncertainty

Class «ComplexAttributeType» in package 'S-131 Meta Features'

The best estimate of the accuracy of a position.

horizontalPositionUncertainty

Version 1.0 Phase 1.0 Proposed

raphaelm created on 25-Nov-2018. Last modified 23-Nov-2021

| ATTRIBUTES |
| --- |
| uncertaintyFixed : Real Public  The best estimate of the fixed vertical accuracy component for depths, heights, vertical distances and vertical clearances. N**ote: Definition may need to be updated if it is used for horizontal measurements.**  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| uncertaintyVariableFactor : Real Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  The factor to be applied to the variable component of an uncertainty equation so as to provide the best estimate of the variable horizontal or vertical accuracy component for positions, depths, heights, vertical distances and vertical clearances.  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |

### surveyDateRange

Class «ComplexAttributeType» in package 'S-131 Meta Features'

The complex attribute describes the period of the hydrographic survey, as the time between its sub-attributes.

surveyDateRange

Version 1.0 Phase 1.0 Proposed

raphaelm created on 01-Jan-2018. Last modified 23-Nov-2021

| ATTRIBUTES |
| --- |
| dateStart : S100\_TruncatedDate Public  Alias: DATSTA  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  The start date or time of the interval.  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| dateEnd : S100\_TruncatedDate Public  Alias: DATEND  The end date or time of the interval.  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |

### categoryOfTemporalVariation

Enumeration in package 'S-131 Meta Features'

An assessment of the likelihood of change over time.

categoryOfTemporalVariation

Version 1.0 Phase 1.0 Proposed

raphaelm created on 01-Jan-2018. Last modified 23-Nov-2021

| ATTRIBUTES |
| --- |
| Extreme Event : Public = 1  Alias: event  Indication of the possible impact of a significant event (for example hurricane, earthquake, volcanic eruption, landslide, etc), which is considered likely to have changed the seafloor or landscape significantly.  [ Is static True. Containment is Not Specified. ] |
| Likely to Change and Significant Shoaling Expected : Public = 2  Continuous or frequent change (for example river siltation, sand waves, seasonal storms, ice bergs, etc.) that is likely to result in new significant shoaling.  Properties:  S127:suppress = 1  [ Is static True. Containment is Not Specified. ] |
| Likely to Change But Significant Shoaling Not Expected : Public = 3  Continuous or frequent change (for example sand wave shift, seasonal storms, ice bergs, etc.) that is not likely to result in new significant shoaling.  Properties:  S127:suppress = 1  [ Is static True. Containment is Not Specified. ] |
| Likely to Change : Public = 4  Continuous or frequent change to non-bathymetric features (for example river siltation, glacier creep/recession, sand dunes, buoys, marine farms, etc.).  [ Is static True. Containment is Not Specified. ] |
| Unlikely to Change : Public = 5  Significant change to the seafloor is not expected.  [ Is static True. Containment is Not Specified. ] |
| Unassessed : Public = 6  Temporal variation not assessed or cannot be determined  Properties:  S127:suppress = 1  [ Is static True. Containment is Not Specified. ] |

## S-131 Cartographic Features

Package in package 'S-131 V0.2'

S-131 Cartographic Features

Version 1.0 Phase 1.0 Proposed

raphaelm created on 15-Nov-2021. Last modified 15-Nov-2021

### S-131 Cartographic Features diagram

Class diagram in package 'S-131 Cartographic Features'

S-131 Cartographic Features

Version 1.0

raphaelm created on 01-Jan-2018. Last modified 14-Jan-2022



1. S-131 Cartographic Features

### textJustification

Enumeration in package 'S-131 Cartographic Features'

The anchor point of a text string.

textJustification

Version 1.0 Phase 1.0 Proposed

raphaelm created on 01-Jan-2018. Last modified 23-Nov-2021

| ATTRIBUTES |
| --- |
| left : Public = 1  The anchor point is at the start of the text string.  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |
| centred : Public = 2  The anchor point is at the centre of the text string.  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |
| right : Public = 3  The anchor point is at the end of the text string.  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |

### TextPlacement

Class «FeatureType» in package 'S-131 Cartographic Features'

The Text Placement feature is used in association with the Feature

Name attribute or a light description to optimise text positioning in ECDIS.

Remarks:

* The **Text Placement** feature is used by the ECDIS to position the associated text, which has been populated using an attribute(s) for the related feature. This attribute is identified by populating the attribute **text type**. Alternatively, the text to be displayed may be encoded using the attribute **text**.
* Only one of the attributes **text** or **text type** are allowable for each instance of **Text Placement**.
* **Text Placement** should only be associated with features of type point, and used in areas where it is important that text clear navigationally relevant areas, e.g. shipping channels and dredged areas.

TextPlacement

Version 1.0 Phase 1.0 Proposed

raphaelm created on 01-Jan-2018. Last modified 23-Nov-2021

| ATTRIBUTES |
| --- |
| flipBearing : Real Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  The bearing at which text is re-located to the opposite side of a feature when screen display is oriented away from true north.  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| scaleMinimum : Integer Public  Alias: SCAMIN  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  Constraints:  positive :  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| textJustification : textJustification Public  The anchor point of a text string.  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| text : text Public  Alias: INFORM  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  A non-formatted digital text string.  Remarks:  The attributeshould be used, for example, to hold the information that is shown on paper charts by short cautionary and explanatory notes. Therefore text populated in text must not exceed 300 characters.  Text may be in English or in a national language defined by the attribute **language**.  No formatting of text is possible within the sub-attribute **text**. If formatted text, or text strings exceeding 300 characters, is required, then the attribute **file reference** must be used.  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| textType : textType Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Simple». Is static True. Containment is Not Specified. ] |
| geometry : GM\_Point Public  Multiplicity: ( [1..\*], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «S100\_Spatial». Is static True. Containment is Not Specified. ] |

| ASSOCIATIONS | |
| --- | --- |
| Association (direction: Unspecified) TextAssociation  A feature association for the binding between a geo feature and the cartographically positioned location for text. | |
| Source: Public identifies (Class) FeatureType «FeatureType»  Cardinality: [1]  A pointer to a specific feature(s). | Target: Public positions (Class) TextPlacement «FeatureType»  Cardinality: [0..1]  A pointer to a specific cartographically positioned location for text. |

### textType

Enumeration in package 'S-131 Cartographic Features'

The attribute from which a text string is derived.

(S-122) Remark: S-122 does not include light features and therefore listed value '2: light characteristic' is omitted from the S-122 application schema.

textType

Version 1.0 Phase 1.0 Proposed

raphaelm created on 01-Jan-2018. Last modified 23-Nov-2021

| ATTRIBUTES |
| --- |
| feature name : Public = 1  The type of attribute that will be passed via the text string  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |