

S-124 V0.3.1

Package in package 'S-124'

Improving types to not reuse other complex attributes than dedicated ones.

merging and removing information types that are not needed with the option of no geometry in feature classes.

model changes to allow for portray of NW categories, since information type attributes are not available to portrayal functions (see Part 9, 9-8).

Amended featureName to remove spatial attribute as complex attributes cannot have spatial attributes (see Part 3, Figure 3-2 Attributes).

S-124 V0.3.1

Version 0.2.3 Phase 1.0 Proposed

monge created on 14/05/2020. Last modified 14/05/2020

S-124 Domain Model diagram

Package diagram in package 'S-124 V0.3.1'

Overview of S-124 packages and their relationships.

S-124 Domain Model

Version 0.2

monge created on 14/05/2020. Last modified 28/05/2020

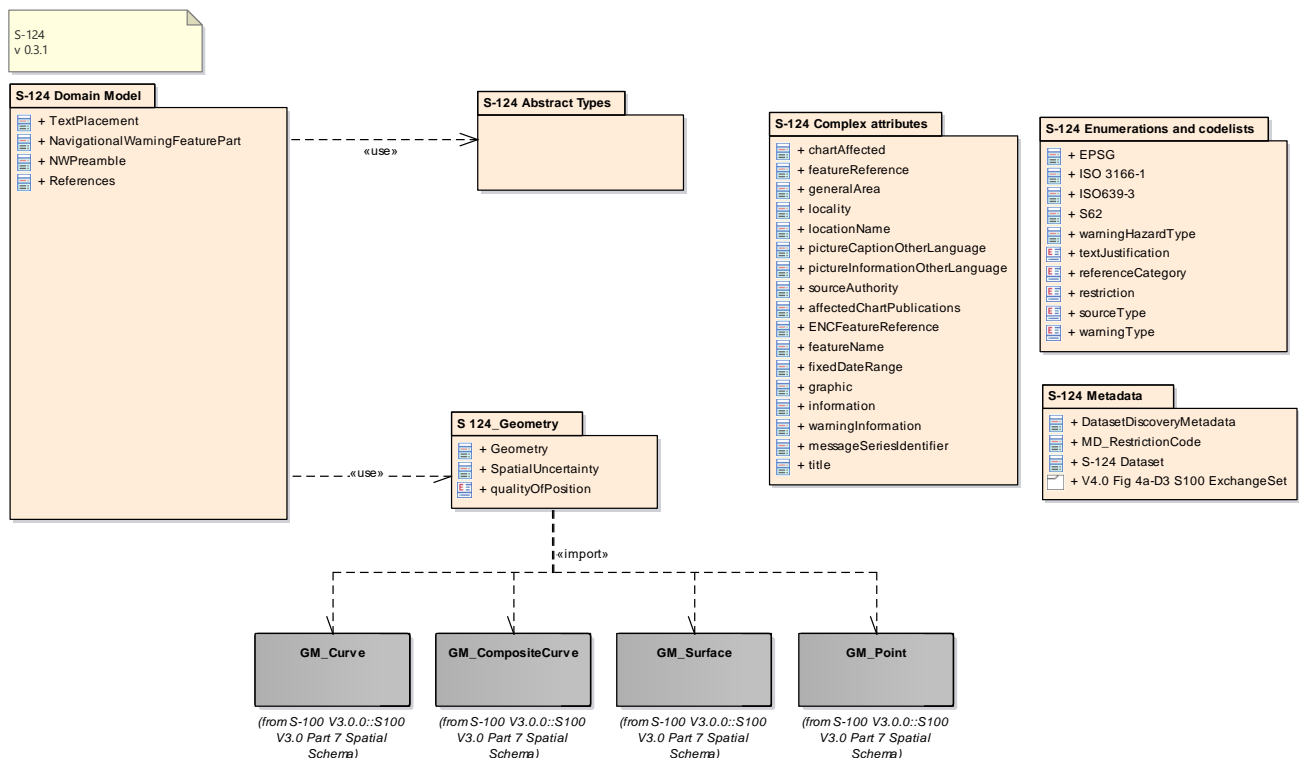


Figure 1: S-124 Domain Model

S-124 Realizations of S-100 4.0.0 GFM diagram

Class diagram in package 'S-124 V0.3.1'

This diagram describes how the S-124 types are realized from the S-100 GFM.

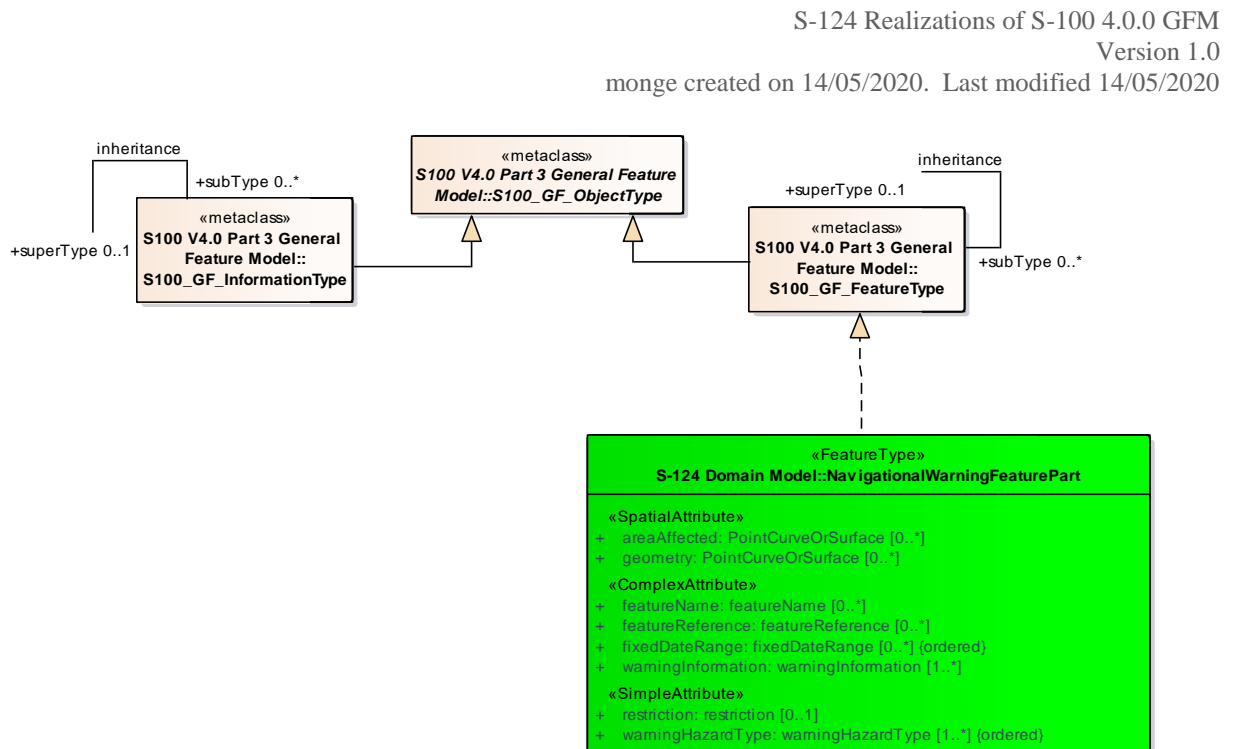


Figure 2: S-124 Realizations of S-100 4.0.0 GFM

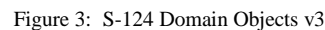
S-124 Domain Objects v3 diagram

Class diagram in package 'S-124 V0.3.1'

All the features, information types, complex attributes, and enumerations in the main part of the domain model.

Meta-features and quality features (if any) will be shown in other diagrams.

S-124 Domain Objects v3
Version 3.0
monge created on 14/05/2020. Last modified 14/05/2020



Package in package 'S-124 V0.3.1'

S-124 Complex attributes
Version 1.0
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Class diagram in package 'S-124 Complex attributes'

S-124 Complex attributes
Version 1.0
monge created on 14/05/2020. Last modified 14/05/2020

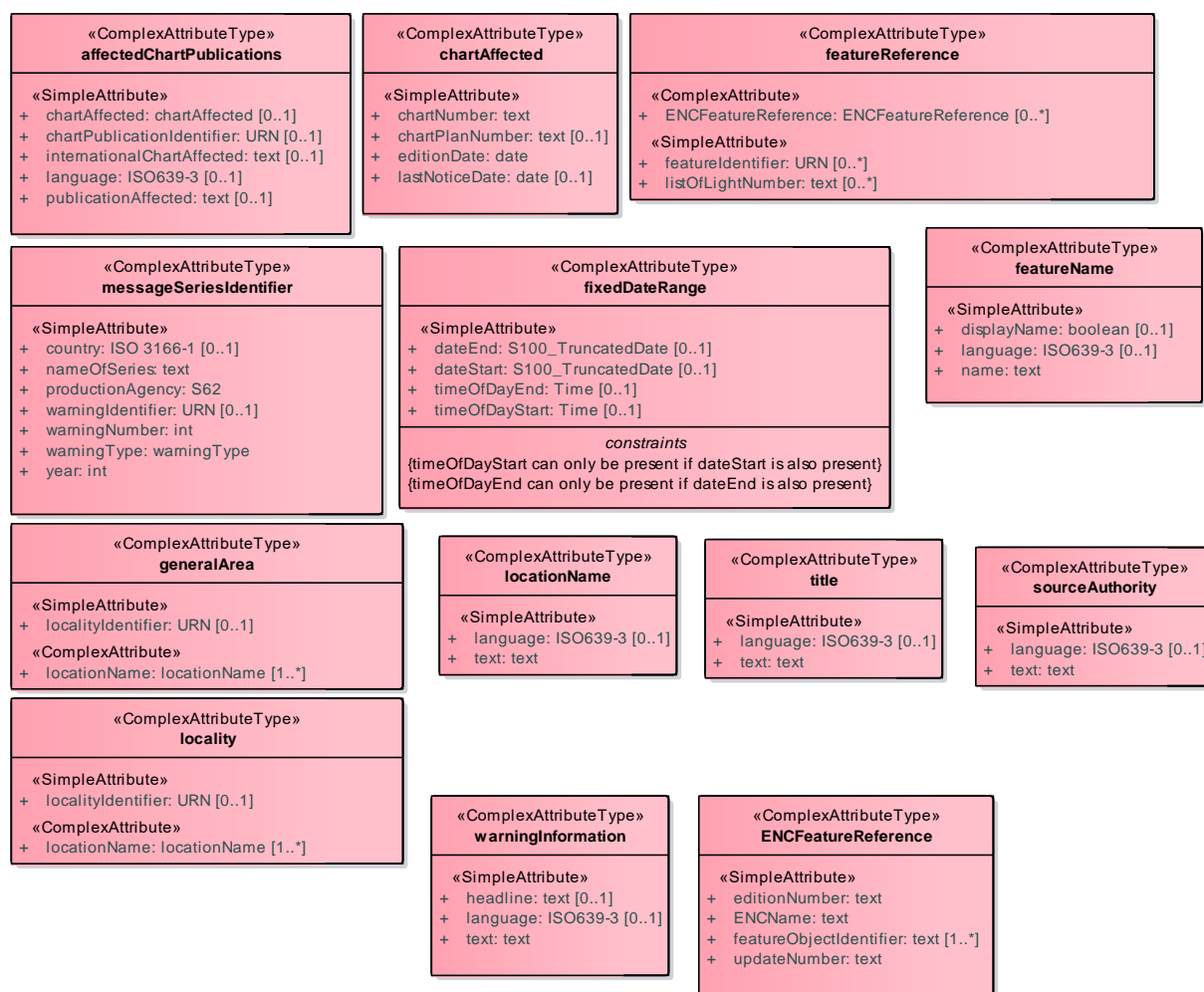


Figure 4: S-124 Complex attributes

chartAffected

Class «ComplexAttributeType» in package 'S-124 Complex attributes'

National paper chart number or ENC name.

chartAffected

Version 1.0 Phase 1.0 Proposed

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ATTRIBUTES	
chartNumber : text Public	
Chart number. Note, can be either paper chart number or ENC file name.	[Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified.]
chartPlanNumber : text Public Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)	
Plan number when a chart has more than one panel.	[Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified.]

ATTRIBUTES
<p>◆ editionDate : date Public</p> <p>Date of publishing for example of a publication, chart, or product.</p> <p>[Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified.]</p>
<p>◆ lastNoticeDate : date Public</p> <p>Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)</p> <p>Date of the last notice to mariner, such as was applied to a chart or publication.</p> <p>[Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified.]</p>

featureReference

Class «ComplexAttributeType» in package 'S-124 Complex attributes'

Reference to an object or feature that is external to the dataset.

featureReference
Version 1.0 Phase 1.0 Proposed
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ATTRIBUTES
<p>◆ ENCFeatureReference : ENCFeatureReference Public</p> <p>Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)</p> <p>[Stereotype is «ComplexAttribute». Is static True. Containment is Not Specified.]</p>
<p>◆ featureIdentifier : URN Public</p> <p>Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)</p> <p>[Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified.]</p>
<p>◆ listOfLightNumber : text Public</p> <p>Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)</p> <p>[Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified.]</p>

generalArea

Class «ComplexAttributeType» in package 'S-124 Complex attributes'

The general area used to identify which broad geographic region the message affects. The geographical name which is selected for the general area should be one that can be found on charts and in nautical publications. (S-53, 6).

generalArea
Version 1.0 Phase 1.0 Proposed
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ATTRIBUTES

ATTRIBUTES
<p>localityIdentifier : URN Public Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False) [Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified.]</p>
<p>locationName : locationName Public Multiplicity: ([1..*], Allow duplicates: 0, Is ordered: False) [Stereotype is «ComplexAttribute». Is static True. Containment is Not Specified.]</p>

locality

Class «ComplexAttributeType» in package 'S-124 Complex attributes'

Name and/or identifier of an area locality.

locality
Version 1.0 Phase 1.0 Proposed
monge created on 14/05/2020. Last modified 14/05/2020

ATTRIBUTES
<p>localityIdentifier : URN Public Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False) Globally unique identifier for the area or locality in the MRN format. [Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified.]</p>
<p>locationName : locationName Public Multiplicity: ([1..*], Allow duplicates: 0, Is ordered: False) name of an area locality as defined by a competent authority. [Stereotype is «ComplexAttribute». Is static True. Containment is Not Specified.]</p>


locationName

Class «ComplexAttributeType» in package 'S-124 Complex attributes'

Name of an area locality as defined by a competent authority.

locationName
Version 1.0 Phase 1.0 Proposed
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ATTRIBUTES
<p>language : ISO639-3 Public Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False) ISO 639-3 code [Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified.]</p>



ATTRIBUTES
<p> text : text Public</p> <p>A non-formatted digital text string.</p> <p>[Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified.]</p>

pictureCaptionOtherLanguage

Class «ComplexAttributeType» in package 'S-124 Complex attributes'

Short description of the purpose of the image in other language than English.

pictureCaptionOtherLanguage
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ATTRIBUTES
<p> language : ISO639-3 Public Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)</p> <p>ISO 639-3 code</p> <p>[Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified.]</p>
<p> text : text Public</p> <p>A non-formatted digital text string.</p> <p>[Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified.]</p>

pictureInformationOtherLanguage

Class «ComplexAttributeType» in package 'S-124 Complex attributes'

A set of information to provide credits to picture creator, copyright owner, etc. in language other than English.

pictureInformationOtherLanguage
Version 1.0 Phase 1.0 Proposed
monge created on 14/05/2020. Last modified 14/05/2020



ATTRIBUTES
<p> language : ISO639-1 Public Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)</p> <p>[Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified.]</p>
<p> text : text Public</p> <p>[Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified.]</p>

sourceAuthority

Class «ComplexAttributeType» in package 'S-124 Complex attributes'

Publication, organization, person or other entity that is the source of information.

sourceAuthority
Version 1.0 Phase 1.0 Proposed
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ATTRIBUTES
<p> language : ISO639-3 Public Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)</p> <p>Name of the language following the ISO 639-3 code [Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified.]</p>
<p> text : text Public [Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified.]</p>



affectedChartPublications

Class «ComplexAttributeType» in package 'S-124 Complex attributes'

Identifies paper charts, ENC's or publications that are affected by the information.

affectedChartPublications
Version 1.0 Phase 1.0 Proposed
eivind.mong created on 14/05/2020. Last modified 14/05/2020

ATTRIBUTES
<p> chartAffected : chartAffected Public Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)</p> <p>national paper chart number or ENC name [Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified.]</p>
<p> chartPublicationIdentifier : URN Public Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)</p> <p>Identifier for the chart or publication (using the MRN format) [Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified.]</p>
<p> internationalChartAffected : text Public Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)</p> <p>international paper chart number. (Not used if chartAffected carry an ENC name) [Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified.]</p>





ATTRIBUTES	
 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 «SimpleAttribute». Is static True. Containment is Not Specified.]	
 publicationAffected : text Public Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)	
name of affected publication [Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified.]	

ENCFeatureReference

Class «ComplexAttributeType» in package 'S-124 Complex attributes'

Reference to feature(s) in an ENC dataset.

ENCFeatureReference
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ATTRIBUTES	
 editionNumber : text Public 	
Edition of the ENC being referenced [Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified.]	
 ENCName : text Public 	
The name of the ENC dataset. This is generally indicated in the dataset metadata (discovery or embedded) and will usually be the same as the name of the dataset file, possibly without the file extension component. [Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified.]	
 featureObjectIdentifier : text Public Multiplicity: ([1..*], Allow duplicates: 0, Is ordered: False)	
FOID of the referenced ENC object [Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified.]	
 updateNumber : text Public 	
Update number of the ENC being referenced [Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified.]	

featureName

Class «ComplexAttributeType» in package 'S-124 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.

Origin: S-101

featureName

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ATTRIBUTES
<p> displayName : boolean Public Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)</p> <p>A statement expressing if a feature name is to be displayed in certain system display settings or not. 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 <i>True</i>). [Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified.]</p>
<p> language : ISO639-3 Public Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)</p> <p>The language is encoded by a character code following ISO 639-3. [Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified.]</p>
<p> name : text Public</p> <p>The individual name of a feature. [Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified.]</p>

fixedDateRange

Class «ComplexAttributeType» in package 'S-124 Complex attributes'



The complex attribute describes single fixed period, as the date range between its sub-attributes.

Origin: S-101, but modified to include the time aspect




fixedDateRange

Version 1.0 Phase 1.0 Proposed

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CONSTRAINTS
<p> Process. timeOfDayStart can only be present if dateStart is also present [Approved, Weight is 0.]</p>
<p> Process. timeOfDayEnd can only be present if dateEnd is also present [Approved, Weight is 1.]</p>

ATTRIBUTES

ATTRIBUTES
<p>  dateEnd : S100_TruncatedDate Public Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False) </p> <p>The attribute date end indicates the latest date of an event or the end of a date range. This attribute is used to indicate the end of a fixed date range, the end of a periodic date range, or the removal or cancellation of a feature at a specific date in the future.</p> <p>[Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified.]</p>
<p>  dateStart : S100_TruncatedDate Public Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False) </p> <p>The attribute date start indicates the earliest date of an event or the start of a date range. This attribute is used to indicate the start of a fixed date range, the start of a periodic date range, or the deployment or implementation of a feature at a specific date in the future.</p> <p>[Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified.]</p>
<p>  timeOfDayEnd : Time Public Alias: TMDYEN Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False) </p> <p>Ending time of day, possibly for a period within the day. Distinction: Time end (TIMEND) (S-101) which has a format YYYYMMDDThhmmss (mandatory) in the baseline S-101 DCEG as of October 2015.</p> <p>[Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified.]</p>
<p>  timeOfDayStart : Time Public Alias: TMDYST Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False) </p> <p>Starting time of day, possibly for a period within the day. Distinction: Time start (TIMSTA) (S-101) which has a format YYYYMMDDThhmmss (mandatory) in the baseline S-101 DCEG as of October 2015.</p> <p>[Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified.]</p>


graphic

Class «ComplexAttributeType» in package 'S-124 Complex attributes'

File name of support file with photograph of other graphic and information about the graphic.

Origin: NPUB

graphic
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raphaelm created on 14/05/2020. Last modified 14/05/2020

ATTRIBUTES
<p>  pictorialRepresentation : text Public Alias: PICREP </p> <p>Indicates whether a pictorial representation of the feature is available. Indication: The string encodes the file name of a single external graphic file (pixel/vector).</p>

ATTRIBUTES	
Remarks:	
The “pictorial representation” could be a drawing or a photo.	[Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified.]
 pictureCaption : title Public Alias: PICCAP Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)	
Short description of the purpose of the image.	[Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified.]
 pictureCaptionOtherLanguage : pictureCaptionOtherLanguage Public Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)	
Short description of the purpose of the image in other language than English.	[Stereotype is «ComplexAttribute». Is static True. Containment is Not Specified.]
 pictureInformation : title Public Alias: PICINF Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)	
A set of information to provide credits to picture creator, copyright owner, etc.	[Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified.]
 pictureInformationOtherLanguage : pictureInformationOtherLanguage Public Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)	
A set of information to provide credits to picture creator, copyright owner, etc. in language other than English	[Stereotype is «ComplexAttribute». Is static True. Containment is Not Specified.]
 sourceDate : Date Public Alias: SORDAT Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)	
	[Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified.]

information

Class «ComplexAttributeType» in package 'S-124 Complex attributes'




Textual information about the feature in a defined language. The information may be provided as a string of text or as a file name of a single external text file that contains the text. (Adapted from S-57 Edition 3.1, Appendix A – Chapter 2, Pages 2.141 and 2.209, November 2000).

information

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ATTRIBUTES	
 fileLocator : text Public	




ATTRIBUTES
<p>Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)</p> <p>The string encodes the location of a fragment of text or other information in a support file.</p> <p>Remarks:</p> <ul style="list-style-type: none"> • 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. <p>[Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified.]</p>
<p> fileReference : text Public</p> <p>Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)</p> <p>The string encodes the file name of a single external text file that contains the text.</p> <p>Remarks:</p> <p>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.</p> <p>[Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified.]</p>
<p> headline : text Public</p> <p>Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)</p> <p>Words set at the head of a passage or page to introduce or categorize.</p> <p>[Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified.]</p>
<p> language : ISO639-3 Public</p> <p>Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)</p> <p>ISO 639-3 value</p> <p>[Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified.]</p>
<p> text : text Public</p> <p>Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)</p> <p>A non-formatted digital text string.</p> <p>Remarks:</p> <p>The attribute should 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.</p> <p>Text may be in English or in a national language defined by the attribute language.</p> <p>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.</p> <p>[Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified.]</p>

warningInformation

Class «ComplexAttributeType» in package 'S-124 Complex attributes'

Textual information about the warning in a defined language. (Adapted from S-57 Edition 3.1, Appendix A – Chapter 2, Pages 2.141 and 2.209, November 2000).

warningInformation





ATTRIBUTES	
 headline : text Public 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 «SimpleAttribute». 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 «SimpleAttribute». Is static True. Containment is Not Specified.]
 text : text Public	
A non-formatted digital text string.	[Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified.]

messageSeriesIdentifier

Class «ComplexAttributeType» in package 'S-124 Complex attributes'

Message series identification of the warning or notice.

messageSeriesIdentifier
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ATTRIBUTES	
 country : ISO 3166-1 Public Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)	
	[Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified.]
 nameOfSeries : text Public The NAVAREA or METAREA. Example: NAVAREA IV Distinction: generalArea , locality	
	[Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified.]
 productionAgency : S62 Public	
Agency that prepared the MSI warning or notice.	[Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified.]
 warningIdentifier : URN Public	

ATTRIBUTES	
<p>Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)</p> <p>Globally unique identifier of a navigational warning in the MRN format. [Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified.]</p>	
<p>warningNumber : int Public</p> <p>The consecutive number re-starts each calendar year at 1 (Leading zeros are not mandatory). [Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified.]</p>	
<p>warningType : warningType Public</p> <p>The scope of the MSI warning - NAVAREA, sub-area, etc. [Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified.]</p>	
<p>year : int Public</p> <p>The year is can be a two-digit value (YY) giving the last two digits of the current year (Gregorian calendar). [Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified.]</p>	

title

Class «ComplexAttributeType» in package 'S-124 Complex attributes'

Title of the MSI collection. Allows for multiple languages.

title
Version 1.0 Phase 1.0 Proposed
raphael.malyankar created on 14/05/2020. Last modified 14/05/2020

ATTRIBUTES	
<p>language : ISO639-3 Public Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)</p> <p>Name of the language following the ISO 639-3 code [Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified.]</p>	
<p>text : text Public</p> <p>A non-formatted digital text string. [Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified.]</p>	

S-124 Enumerations and codelists

Package in package 'S-124 V0.3.1'

S-124 Enumerations and codelists
Version 1.0 Phase 1.0 Proposed
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S-124 Enums and Codelists diagram

Class diagram in package 'S-124 Enumerations and codelists'

Enumerations and codelists for the main domain model.

S-124 Enums and Codelists
Version 1.0
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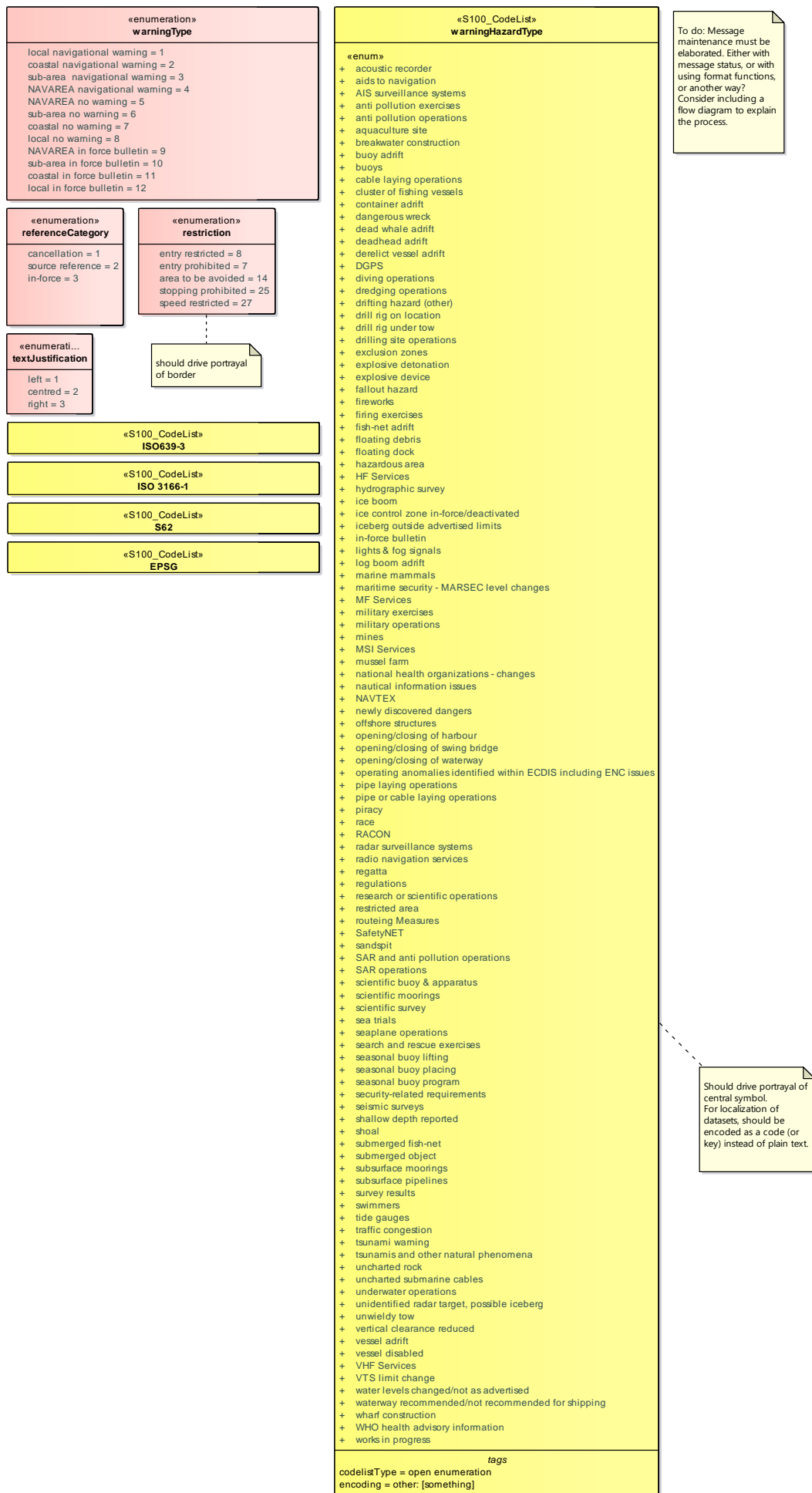


Figure 5: S-124 Enums and Codelists

EPSG

Class «S100_CodeList» in package 'S-124 Enumerations and codelists'

code compliant with the EPSG Dataset found at <http://www.epsg-registry.org/>

EPSG

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ISO 3166-1

Class «S100_CodeList» in package 'S-124 Enumerations and codelists'

Country codelist

ISO 3166-1

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ISO639-3

Class «S100_CodeList» in package 'S-124 Enumerations and codelists'

Language codelist

ISO639-3

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S62

Class «S100_CodeList» in package 'S-124 Enumerations and codelists'

A list of ENC producer agency codes was originally published in November 1996 as Annex A to S-57 Appendix A, under the title "IHO Codes for Producing Agencies". Because the list of producer codes is liable to revision more frequently than the S-57 standard, it was subsequently decided to publish the list of ENC producer codes in a stand-alone IHO publication S-62 - ENC Producer Codes.

After the publication of IHO S-100 and the associated S-100 Geospatial Information Registry, it was decided to manage and maintain all producer codes in data producer code registers within the registry. The data producer code register is divided into a main register for producer codes allocated to States or groups of States for the production of officially authorised nautical products meeting the requirements of marine navigation as laid down in the Convention on the Safety of Life at Sea (SOLAS) Chapter V, and a supplementary register for producer codes allocated to other organisations and entities. Most of the producer codes in the supplementary register were previously maintained on the Open ECDIS Forum.

S62

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warningHazardType

Class «S100_CodeList» in package 'S-124 Enumerations and codelists'

Type of warning or hazard message.















Notes: The categories are based on the list in clause 4.2 of S-52 (2016). Most (but not all) are the same as items in that list (some are divided among different listed values in this codelist while the aids to navigation listed value covers both new aids and casualties to aids).




warningHazardType
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ATTRIBUTES	
 acoustic recorder : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 aids to navigation : Public casualties to lights, fog signals, buoys and other aids to navigation affecting main shipping lanes; establishment of major new aids to navigation or significant changes to existing ones, when such establishment or change might be misleading to shipping	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 AIS surveillance systems : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 anti pollution exercises : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 anti pollution operations : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 aquaculture site : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 breakwater construction : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 buoy adrift : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 buoys : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 cable laying operations : Public	

ATTRIBUTES	
	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 cluster of fishing vessels : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 container adrift : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 dangerous wreck : Public the presence of dangerous wrecks in or near main shipping lanes and, if relevant, their marking	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 dead whale adrift : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 deadhead adrift : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 derelict vessel adrift : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 DGPS : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 diving operations : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 dredging operations : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 drifting hazard (other) : Public drifting hazards (including derelict ships, ice, mines, containers, other large items over 6 metres in length, etc.)	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 drill rig on location : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 drill rig under tow : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 drilling site operations : Public	














ATTRIBUTES	
	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 exclusion zones : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 explosive detonation : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 explosive device : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 fallout hazard : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 fireworks : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 firing exercises : Public information concerning events which might affect the safety of shipping, sometimes over wide areas, e.g. naval exercises, missile firings, space missions, nuclear tests, ordnance dumping zones, etc.	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 fish-net adrift : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 floating debris : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 floating dock : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 hazardous area : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 HF Services : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 hydrographic survey : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 ice boom : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]



ATTRIBUTES	
 ice control zone in-force/deactivated : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 iceberg outside advertised limits : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 in-force bulletin : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 lights & fog signals : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 log boom adrift : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 marine mammals : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 maritime security - MARSEC level changes : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 MF Services : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 military exercises : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 military operations : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 mines : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 MSI Services : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 mussel farm : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 national health organizations - changes : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]


ATTRIBUTES	
 nautical information issues : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 NAVTEX : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 newly discovered dangers : Public the presence of newly discovered rocks, shoals, reefs and wrecks likely to constitute a danger to shipping, and, if relevant, their marking	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 offshore structures : Public the establishment of offshore structures in or near shipping lanes Properties: tags = codelistType = openEnumeration encoding = other: [something]	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 opening/closing of harbour : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 opening/closing of swing bridge : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 opening/closing of waterway : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 operating anomalies identified within ECDIS including ENC issues : Public operating anomalies identified within ECDIS including ENC issues	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 pipe laying operations : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 pipe or cable laying operations : Public cable or pipe-laying activities constituting potential dangers in or near shipping lanes	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 piracy : Public	

ATTRIBUTES	
acts of piracy and armed robbery against ships	[Stereotype is «enum». Is static True. Containment is Not Specified.]
♦ race : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
♦ RACON : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
♦ radar surveillance systems : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
♦ radio navigation services : Public radio navigation services	[Stereotype is «enum». Is static True. Containment is Not Specified.]
♦ regatta : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
♦ regulations : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
♦ research or scientific operations : Public the establishment of research or scientific instruments in or near shipping lanes	[Stereotype is «enum». Is static True. Containment is Not Specified.]
♦ restricted area : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
♦ routeing Measures : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
♦ SafetyNET : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
♦ sandspit : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
♦ SAR and anti pollution operations : Public areas where search and rescue (SAR) and anti-pollution operations are being carried out (for avoidance of such areas)	[Stereotype is «enum». Is static True. Containment is Not Specified.]

ATTRIBUTES	
 SAR operations : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 scientific buoy & apparatus : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 scientific moorings : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 scientific survey : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 sea trials : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 seaplane operations : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 search and rescue exercises : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 seasonal buoy lifting : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 seasonal buoy placing : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 seasonal buoy program : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 security-related requirements : Public security-related requirements	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 seismic surveys : Public seismic surveys	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 shallow depth reported : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]

ATTRIBUTES	
 shoal : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 submerged fish-net : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 submerged object : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 subsurface moorings : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 subsurface pipelines : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 survey results : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 swimmers : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 tide gauges : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 traffic congestion : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 tsunami warning : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 tsunamis and other natural phenomena : Public tsunamis and other natural phenomena, such as abnormal changes to sea level	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 uncharted rock : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 uncharted submarine cables : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]




ATTRIBUTES	
 underwater operations : Public the towing of large submerged objects for research or exploration purposes, the employment of manned or unmanned submersibles, or other underwater operations constituting potential dangers in or near shipping lanes [Stereotype is «enum». Is static True. Containment is Not Specified.]	
 unidentified radar target, possible iceberg : Public [Stereotype is «enum». Is static True. Containment is Not Specified.]	
 unwieldy tow : Public the presence of large unwieldy tows in congested waters [Stereotype is «enum». Is static True. Containment is Not Specified.]	
 vertical clearance reduced : Public [Stereotype is «enum». Is static True. Containment is Not Specified.]	
 vessel adrift : Public [Stereotype is «enum». Is static True. Containment is Not Specified.]	
 vessel disabled : Public [Stereotype is «enum». Is static True. Containment is Not Specified.]	
 VHF Services : Public [Stereotype is «enum». Is static True. Containment is Not Specified.]	
 VTS limit change : Public [Stereotype is «enum». Is static True. Containment is Not Specified.]	
 water levels changed/not as advertised : Public [Stereotype is «enum». Is static True. Containment is Not Specified.]	
 waterway recommended/not recommended for shipping : Public unexpected alteration or suspension of established routes [Stereotype is «enum». Is static True. Containment is Not Specified.]	
 wharf construction : Public [Stereotype is «enum». Is static True. Containment is Not Specified.]	
 WHO health advisory information : Public World Health Organization (WHO) health advisory information [Stereotype is «enum». Is static True. Containment is Not Specified.]	

ATTRIBUTES	
 works in progress : Public	[Stereotype is «enum». Is static True. Containment is Not Specified.]

textJustification

Enumeration in package 'S-124 Enumerations and codelists'

textJustification
Version 1.0 Phase 1.0 Proposed
monge created on 14/05/2020. Last modified 14/05/2020




ATTRIBUTES	
 left : Public = 1	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 centred : Public = 2	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 right : Public = 3	[Stereotype is «enum». Is static True. Containment is Not Specified.]

referenceCategory

Enumeration in package 'S-124 Enumerations and codelists'

Category of reference

referenceCategory
Version 1.0 Phase 1.0 Proposed
monge created on 14/05/2020. Last modified 14/05/2020

ATTRIBUTES	
 cancellation : Public = 1 cancellation of warning which is no longer valid.	[Is static True. Containment is Not Specified.]
 source reference : Public = 2 Reference to relevant publication, notice, or warning.	[Is static True. Containment is Not Specified.]
 in-force : Public = 3 reference to warnings or notices that are considered in-force.	[Is static True. Containment is Not Specified.]

ATTRIBUTES

restriction

Enumeration in package 'S-124 Enumerations and codelists'

The official legal status of each kind of restricted area. (GI Registry)

restriction

Version 1.0 Phase 1.0 Proposed

eivind.mong created on 14/05/2020. Last modified 14/05/2020

ATTRIBUTES
<p> entry restricted : Public = 8</p> <p>A specified area designated by appropriate authority, within which navigation is restricted in accordance with certain specified conditions.</p> <p>[Is static True. Containment is Not Specified.]</p>
<p> entry prohibited : Public = 7</p> <p>An area within which navigation and/or anchoring is prohibited.</p> <p>[Is static True. Containment is Not Specified.]</p>
<p> area to be avoided : Public = 14</p> <p>An IMO declared routeing measure comprising an area within defined limits in which either navigation is particularly hazardous or it is exceptionally important to avoid casualties and which should be avoided by all ships, or certain classes of ships.</p> <p>[Is static True. Containment is Not Specified.]</p>
<p> stopping prohibited : Public = 25</p> <p>An area in which a vessel is prohibited from stopping.</p> <p>[Is static True. Containment is Not Specified.]</p>
<p> speed restricted : Public = 27</p> <p>An area within which speed is restricted.</p> <p>[Is static True. Containment is Not Specified.]</p>

sourceType




Enumeration in package 'S-124 Enumerations and codelists'

Type of source

sourceType

Version 1.0 Phase 1.0 Proposed

ATTRIBUTES
<p> international law : Public</p> <p>treaty, convention, or international agreement; or European Union law</p> <p>[Stereotype is «enum». Is static True. Containment is Not Specified.]</p>
<p> publication issued by international organisation : Public</p> <p>Publication issued by an international administration</p> <p>[Stereotype is «enum». Is static True. Containment is Not Specified.]</p>
<p> national law or regulation : Public</p> <p>legislation by a national government</p> <p>[Stereotype is «enum». Is static True. Containment is Not Specified.]</p>
<p> publication issued by a national administration : Public</p> <p>publication issued by a national administration</p> <p>[Stereotype is «enum». Is static True. Containment is Not Specified.]</p>
<p> local law or regulation : Public</p> <p>law made by a national sub-division such as a state, province, or local government</p> <p>[Stereotype is «enum». Is static True. Containment is Not Specified.]</p>
<p> publication issued by a local administration : Public</p> <p>publication issued by a local administration, such as local government or port authority</p> <p>[Stereotype is «enum». Is static True. Containment is Not Specified.]</p>
<p> mariner report, confirmed : Public</p> <p>Reported by mariner(s) and confirmed by another source</p> <p>[Stereotype is «enum». Is static True. Containment is Not Specified.]</p>
<p> mariner report, not confirmed : Public</p> <p>reported by mariner(s) but not confirmed</p> <p>[Stereotype is «enum». Is static True. Containment is Not Specified.]</p>
<p> industry publication and reports : Public</p> <p>shipping and other industry publication, including graphics, charts and web sites</p> <p>[Stereotype is «enum». Is static True. Containment is Not Specified.]</p>



ATTRIBUTES	
 remotely sensed images : Public information obtained from satellite images <div>[Stereotype is «enum». Is static True. Containment is Not Specified.]</div>	
 photographs : Public information obtained from photographs <div>[Stereotype is «enum». Is static True. Containment is Not Specified.]</div>	
 product issued by HO services : Public information obtained from products issued by Hydrographic Offices <div>[Stereotype is «enum». Is static True. Containment is Not Specified.]</div>	
 news media : Public information obtained from news media <div>[Stereotype is «enum». Is static True. Containment is Not Specified.]</div>	
 traffic data : Public information obtained from the analysis of traffic data <div>[Stereotype is «enum». Is static True. Containment is Not Specified.]</div>	








warningType

Enumeration in package 'S-124 Enumerations and codelists'

The scope of the MSI warning - NAVAREA, sub-area, etc.

warningType
Version 1.0 Phase 1.0 Proposed
monge created on 14/05/2020. Last modified 14/05/2020

ATTRIBUTES	
 local navigational warning : Public = 1 Message containing urgent information relevant to safe navigation broadcast to ships in a local area, accordance with the provisions of the International Convention for the Safety of Life at Sea, 1974, as amended.(Adopted from S-53, 2.2.23) Local warning means a navigational warning which covers inshore waters, often within the limits of jurisdiction of a harbour or port authority. (Adopted from S-53, 2.2.10) <div>[Is static True. Containment is Not Specified.]</div>	
 coastal navigational warning : Public = 2 Message containing urgent information relevant to safe navigation broadcast to ships in a costal area, accordance with the provisions of the International Convention for the Safety of Life at Sea, 1974, as amended.(Adopted from S-53, 2.2.23)	

ATTRIBUTES
<p>Coastal warning means a navigational warning promulgated as part of a numbered series by a National Coordinator. (Adopted from S-53, 2.2.2)</p> <p>[Is static True. Containment is Not Specified.]</p>
<p>  sub-area navigational warning : Public = 3 </p> <p>Message containing urgent information relevant to safe navigation broadcast to ships in a sub-area, accordance with the provisions of the International Convention for the Safety of Life at Sea, 1974, as amended.(Adopted from S-53, 2.2.23)</p> <p>Sub-area warning means a navigational warning or in-force bulletin promulgated as part of a numbered series by a Sub-area Coordinator. (Adopted from S-53, 2.2.28)</p> <p>[Is static True. Containment is Not Specified.]</p>
<p>  NAVAREA navigational warning : Public = 4 </p> <p>Message containing urgent information relevant to safe navigation broadcast to ships in a NAVAREA, accordance with the provisions of the International Convention for the Safety of Life at Sea, 1974, as amended. (Adopted from S-53, 2.2.23)</p> <p>NAVAREA warning means a navigational warning promulgated as part of a numbered series by a NAVAREA Coordinator. (Adopted from S-53, 2.2.22)</p> <p>[Is static True. Containment is Not Specified.]</p>
<p>  NAVAREA no warning : Public = 5 </p> <p>A message that indicate that there are no navigational warnings to be disseminated in the NAVAREA (Adopted from S-53 5.3.1)</p> <p>[Is static True. Containment is Not Specified.]</p>
<p>  sub-area no warning : Public = 6 </p> <p>A message that indicate that there are no navigational warnings to be disseminated in the sub-area (Adopted from S-53 5.3.1)</p> <p>[Is static True. Containment is Not Specified.]</p>
<p>  coastal no warning : Public = 7 </p> <p>A message that indicate that there are no navigational warnings to be disseminated in the coastal area (Adopted from S-53 5.3.1)</p> <p>[Is static True. Containment is Not Specified.]</p>
<p>  local no warning : Public = 8 </p> <p>A message that indicate that there are no navigational warnings to be disseminated in the local area (Adopted from S-53 5.3.1)</p> <p>[Is static True. Containment is Not Specified.]</p>
<p>  NAVAREA in force bulletin : Public = 9 </p> <p>A list of serial numbers of those NAVAREA warnings are remains in effect. (Adopted from S-53, 2.2.6)</p> <p>[Is static True. Containment is Not Specified.]</p>

ATTRIBUTES

🔹 sub-area in force bulletin : Public = 10

A list of serial numbers of those sub-area warnings are remains in effect. (Adopted from S-53, 2.2.6)

[Is static True. Containment is Not Specified.]

🔹 coastal in force bulletin : Public = 11

A list of serial numbers of those coastal warnings are remains in effect. (Adopted from S-53, 2.2.6)

[Is static True. Containment is Not Specified.]

🔹 local in force bulletin : Public = 12

A list of serial numbers of those local warnings are remains in effect. (Adopted from S-53, 2.2.6)



[Is static True. Containment is Not Specified.]

S-124 Domain Model

Package in package 'S-124 V0.3.1'

Container for the features information types, attributes, complex attributes, codelists, and enumerations in the S-124 application schema (UML model).

S-124 Domain Model
Version 1.0 Phase 1.0 Proposed
monge created on 14/05/2020. Last modified 14/05/2020

LINKS TO OTHER PACKAGES	
 Dependency from 'S-124 Domain Model' Package to 'S-124 Abstract Types' Package	Direction: Source -> Destination
 Dependency from 'S-124 Domain Model' Package to 'S-124_Geometry' Package	Direction: Source -> Destination

S-124 Navigational Warning Features and Information types diagram

Class diagram in package 'S-124 Domain Model'

S-124 Navigational Warning Features and Information types
Version 1.0
monge created on 14/05/2020. Last modified 28/05/2020

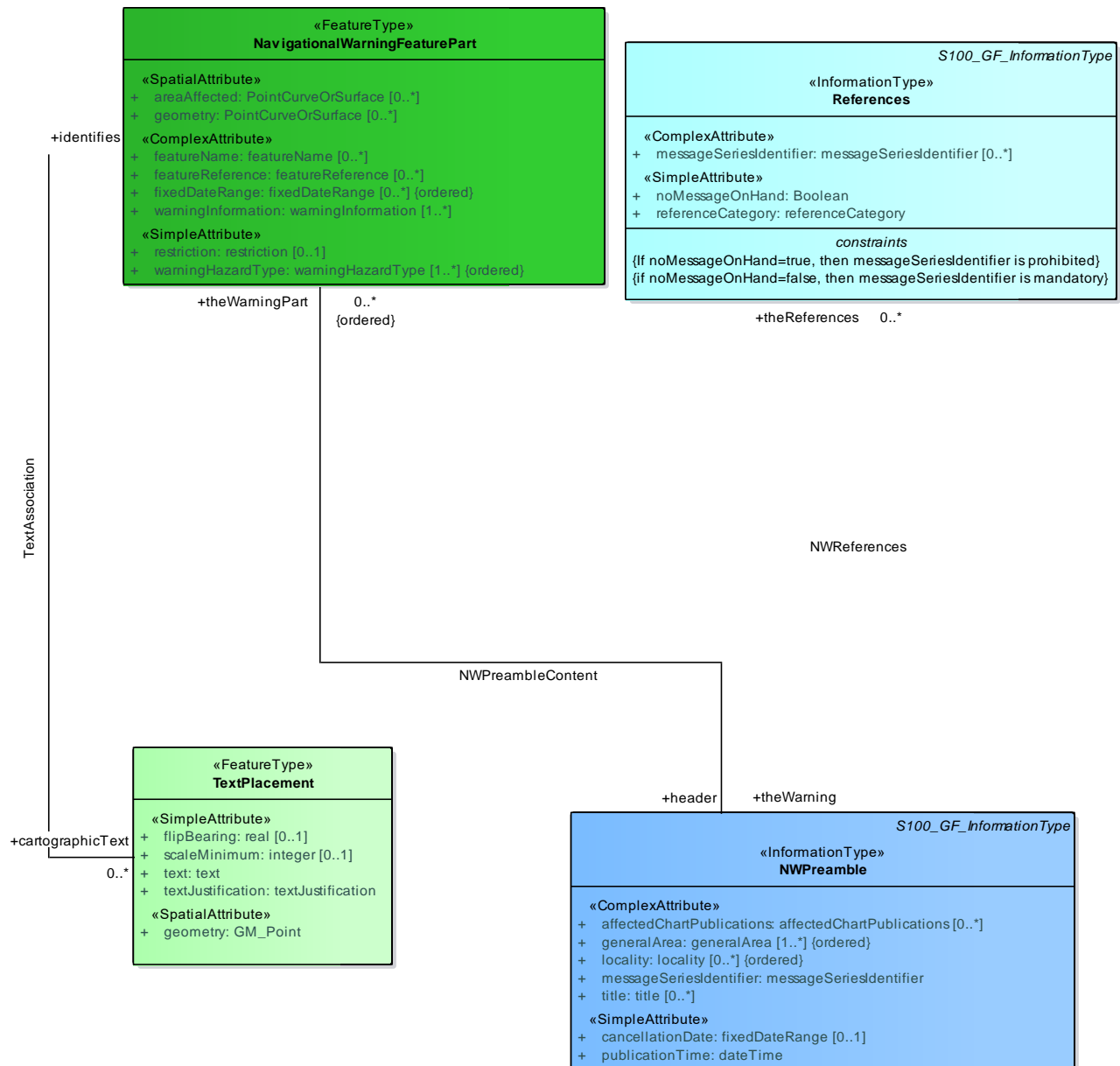


Figure 6: S-124 Navigational Warning Features and Information types

TextPlacement

Class «FeatureType» in package 'S-124 Domain Model'

The Text Placement feature is used in association with the Feature Name attribute or a light description to optimise text positioning in ECDIS. (S-101 DCEG).


TextPlacement
Version 1.0 Phase 1.0 Proposed
monge created on 14/05/2020. Last modified 14/05/2020

OUTGOING STRUCTURAL RELATIONSHIPS

← Realization from «FeatureType» TextPlacement to «metaclass» S100_GF_FeatureType

[Direction is 'Source -> Destination'.]

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 «SimpleAttribute». Is static True. Containment is Not Specified.]	
 geometry : GM_Point Public	[Stereotype is «SpatialAttribute». Is static True. Containment is Not Specified.]
 scaleMinimum : integer Public Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)	
The minimum scale at which the feature may be used for example for ECDIS presentation. [Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified.]	
 text : text Public	
A non-formatted digital text string. [Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified.]	
 textJustification : textJustification Public	
The anchor point of a text string. [Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified.]	


ASSOCIATIONS	
 Association (direction: Unspecified) TextAssociation	
Source: Public cartographicText (Class) TextPlacement «FeatureType» Cardinality: [0..*]	Target: Public identifies (Class) NavigationalWarningFeaturePart «FeatureType»

NavigationalWarningFeaturePart

Class «FeatureType» in package 'S-124 Domain Model'

Abstract super-type for MSI information that is linked to a specific geographic feature in the NAVAREA.

NavigationalWarningFeaturePart
Version 1.0 Phase 1.0 Proposed
monge created on 14/05/2020. Last modified 28/05/2020

CONSTRAINTS	
 Invariant. warningInformation:: At most 1 instance for each distinct language sub-attribute	[Approved, Weight is 0.]

OUTGOING STRUCTURAL RELATIONSHIPS

← Realization from «FeatureType» NavigationalWarningFeaturePart to «metaclass» S100_GF_FeatureType
[Direction is 'Source -> Destination'.]

← Realization from «FeatureType» NavigationalWarningFeaturePart to «metaclass» S100_GF_FeatureType
[Direction is 'Source -> Destination'.]

ATTRIBUTES

◆ areaAffected : PointCurveOrSurface Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

An area affected by some event

[Stereotype is «SpatialAttribute». Is static True. Containment is Not Specified.]

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

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.

Origin: S-101

[Stereotype is «ComplexAttribute». Is static True. Containment is Not Specified.]

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

Reference to an object or feature that is external to the dataset.

[Stereotype is «ComplexAttribute». Is static True. Containment is Not Specified.]

◆ fixedDateRange : fixedDateRange Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: True)

Range of dates/times when the warning or notice is active.

[Stereotype is «ComplexAttribute». Is static True. Containment is Not Specified.]

◆ geometry : PointCurveOrSurface Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)

geographical location of a feature


[Stereotype is «SpatialAttribute». Is static True. Containment is Not Specified.]



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

The official legal status of each kind of restricted area. (GI Registry)

[Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified.]

◆ warningHazardType : warningHazardType Public

ATTRIBUTES
<p>Multiplicity: ([1..*], Allow duplicates: 0, Is ordered: True) [Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified.]</p>
<p> warningInformation : warningInformation Public Multiplicity: ([1..*], Allow duplicates: 0, Is ordered: False) [Stereotype is «ComplexAttribute». Is static True. Containment is Not Specified.]</p>


ASSOCIATIONS
<p> Association (direction: Unspecified) TextAssociation</p> <p>Source: Public cartographicText (Class) TextPlacement «FeatureType» Cardinality: [0..*]</p> <p>Target: Public identifies (Class) NavigationalWarningFeaturePart «FeatureType»</p>
<p> Association (direction: Unspecified) NWPreambleContent</p> <p>Source: Public header (Class) NWPreamble «InformationType»</p> <p>Target: Public theWarningPart (Class) NavigationalWarningFeaturePart «FeatureType» Cardinality: [0..*]</p>



NWPreamble


Class «InformationType» in package 'S-124 Domain Model'



Abstract preamble information for warnings, notices and other types of messages.

NWPreamble
Version 1.0 Phase 1.0 Proposed
monge created on 14/05/2020. Last modified 28/05/2020
Extends S100_GF_InformationType

OUTGOING STRUCTURAL RELATIONSHIPS
<p> Generalization from «InformationType» NWPreamble to «metaclass» S100_GF_InformationType [Direction is 'Source -> Destination'.]</p>

ATTRIBUTES
<p> affectedChartPublications : affectedChartPublications Public Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)</p> <p>Identifies paper charts, ENC's or publications that are affected by the information. [Stereotype is «ComplexAttribute». Is static True. Containment is Not Specified.]</p>
<p> cancellationDate : fixedDateRange Public Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)</p> <p>Date and time of canceling a warning or notice.</p>

ATTRIBUTES	
[Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified.]	
 generalArea : generalArea Public Multiplicity: ([1..*], Allow duplicates: 0, Is ordered: True) [Stereotype is «ComplexAttribute». Is static True. Containment is Not Specified.]	
 locality : locality Public Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: True) Name and/or identifier of an area locality. [Stereotype is «ComplexAttribute». Is static True. Containment is Not Specified.]	
 messageSeriesIdentifier : messageSeriesIdentifier Public Message series identification of the warning or notice. [Stereotype is «ComplexAttribute». Is static True. Containment is Not Specified.]	
 publicationTime : dateTime Public Date and time of publication the notice or warning. [Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified.]	
 title : title Public Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False) Title of the MSI collection. Allows for multiple languages. [Stereotype is «ComplexAttribute». Is static True. Containment is Not Specified.]	

ASSOCIATIONS	
 Association (direction: Unspecified) NWPreambleContent	
Source: Public header (Class) NWPreamble «InformationType»	Target: Public theWarningPart (Class) NavigationalWarningFeaturePart «FeatureType» Cardinality: [0..*]
 Association (direction: Unspecified) NWReferences	
Source: Public theReferences (Class) References «InformationType» Cardinality: [0..*]	Target: Public theWarning (Class) NWPreamble «InformationType»

References

Class «InformationType» in package 'S-124 Domain Model'

A reference to for example a navigational warning, nautical publication or chart.

(Adopted from S-57 Edition 3.1, Appendix A – Chapter 2, Page 2.168, November 2000).



References

Version 1.0 Phase 1.0 Proposed


eivind.mong created on 14/05/2020. Last modified 14/05/2020

Extends S100_GF_InformationType




CONSTRAINTS

-  Invariant. If noMessageOnHand=true, then messageSeriesIdentifier is prohibited [Approved, Weight is 0.]
-  Invariant. if noMessageOnHand=false, then messageSeriesIdentifier is mandatory [Approved, Weight is 1.]


OUTGOING STRUCTURAL RELATIONSHIPS

-  Generalization from «InformationType» References to «metaclass» S100_GF_InformationType [Direction is 'Source -> Destination'.]

ATTRIBUTES

-  messageSeriesIdentifier : messageSeriesIdentifier Public
Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False)
Message series identification of the warning.
[Stereotype is «ComplexAttribute». Is static True. Containment is Not Specified.]
-  noMessageOnHand : Boolean Public
An indication of no active message. When boolean value equal true it means there are no active message.
[Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified.]
-  referenceCategory : referenceCategory Public
Type of reference
[Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified.]

ASSOCIATIONS


-  Association (direction: Unspecified) NWReferences
- Source: Public theReferences (Class) References
«InformationType»
Cardinality: [0..*]
- Target: Public theWarning (Class) NW Preamble
«InformationType»

S-124 Abstract Types

Package in package 'S-124 V0.3.1'

Container for S-124 abstract feature and information types.

S-124 Abstract Types
Version 1.0 Phase 1.0 Proposed
raphaelm created on 14/05/2020. Last modified 14/05/2020






LINKS TO OTHER PACKAGES	
 Dependency from 'S-124 Domain Model' Package to 'S-124 Abstract Types' Package	Direction: Source -> Destination

S 124_Geometry

Package in package 'S-124 V0.3.1'

Package for S-124 spatial model. This is mainly an indication of which S-100 spatial primitives are permitted in S-124, but it also defines a geographic description element.

S 124_Geometry
Version 1.0 Phase 1.0 Proposed
eivind.mong created on 14/05/2020. Last modified 14/05/2020

LINKS TO OTHER PACKAGES	
 Dependency from 'S 124_Geometry' Package to 'GM_CompositeCurve' Class	Direction: Source -> Destination
 Dependency from 'S 124_Geometry' Package to 'GM_Curve' Class	Direction: Source -> Destination
 Dependency from 'S 124_Geometry' Package to 'GM_Point' Class	Direction: Source -> Destination
 Dependency from 'S 124_Geometry' Package to 'GM_Surface' Class	Direction: Source -> Destination
 Dependency from 'S-124 Domain Model' Package to 'S 124_Geometry' Package	Direction: Source -> Destination

S-124 Geometry 0.2.4 diagram

Class diagram in package 'S 124_Geometry'

S-124 Geometry 0.2.4
Version 1.1
monge created on 14/05/2020. Last modified 14/05/2020

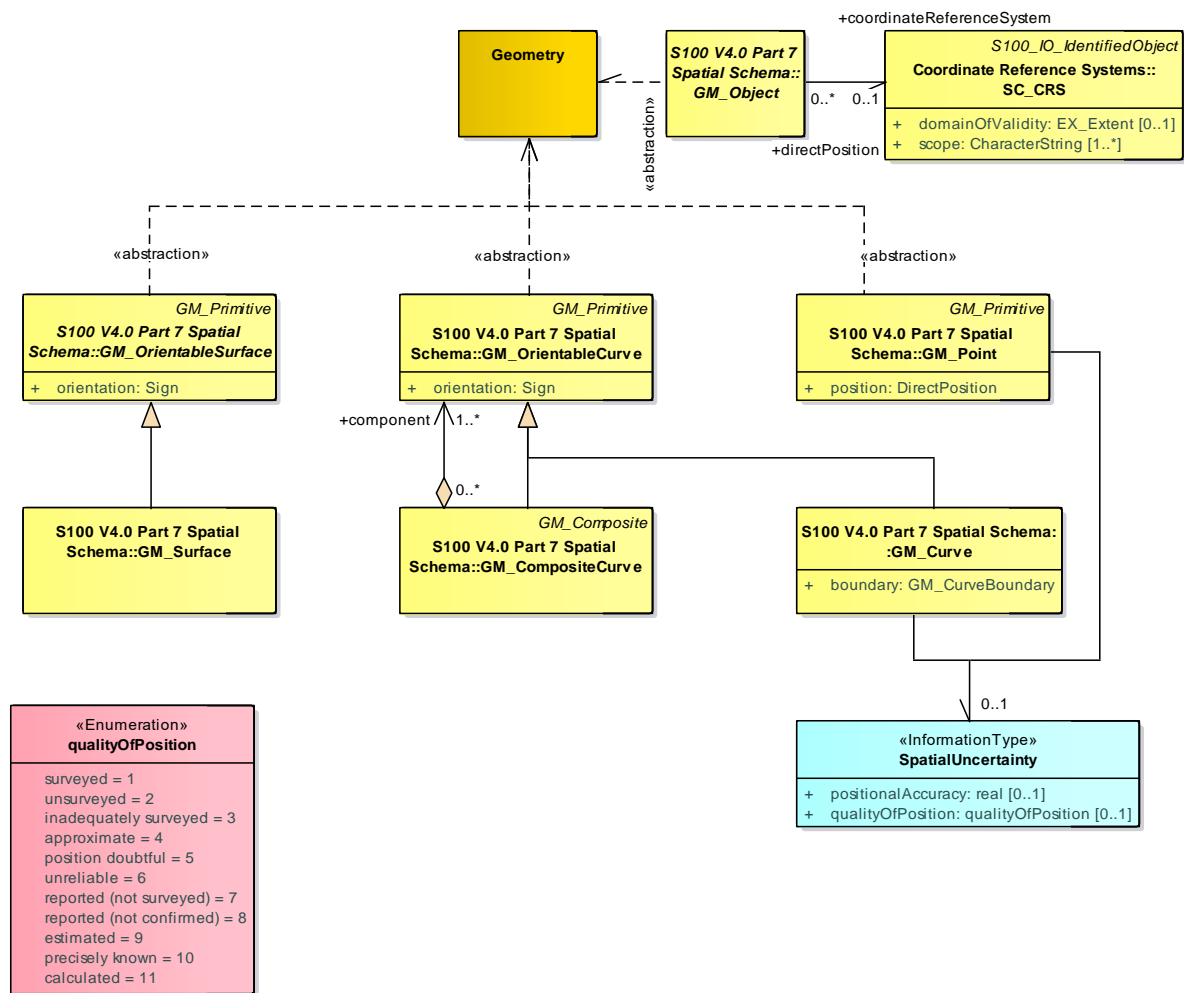


Figure 7: S-124 Geometry 0.2.4

Geometry

Class in package 'S 124_Geometry'

Placeholder representing the spatial primitives permitted in S-124 datasets.


Geometry
Version 1.0 Phase 1.0 Proposed
eivind.mong created on 14/05/2020. Last modified 14/05/2020


CONNECTORS


Abstraction Source -> Destination
From: Geometry : Class, Public
To: GM_Point : Class, Public


Abstraction Source -> Destination
From: Geometry : Class, Public
To: GM_Curve : Class, Public


CONNECTORS


 **Usage** Source -> Destination
 From: Geometry : Class, Public
 To: SC_CRS : Class, Public


 **Abstraction** Destination -> Source
 From: Geometry : Class, Public
 To: GM_OrientableCurve : Class, Public


 **Abstraction** Destination -> Source
 From: Geometry : Class, Public
 To: GM_MultiPoint : Class, Public

 **Abstraction** Source -> Destination
 From: Geometry : Class, Public
 To: GM_Surface : Class, Public

 **Abstraction** Source -> Destination
 From: Geometry : Class, Public
 To: GM_CompositeCurve : Class, Public

 **Abstraction** Destination -> Source
 From: Geometry : Class, Public
 To: GM_OrientableSurface : Class, Public

 **Abstraction** Source -> Destination
 From: GM_Point : Class, Public
 To: Geometry : Class, Public


 **Abstraction** Source -> Destination
 From: GM_Object : Class, Public
 To: Geometry : Class, Public

SpatialUncertainty




Class «InformationType» in package 'S 124_Geometry'

SpatialUncertainty
 Version 1.0 Phase 1.0 Proposed
 eivind.mong created on 14/05/2020. Last modified 14/05/2020

ATTRIBUTES

 **positionalAccuracy** : real Public
 Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

[Is static True. Containment is Not Specified.]




ATTRIBUTES	
 qualityOfPosition : qualityOfPosition Public Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)	[Is static True. Containment is Not Specified.]
ASSOCIATIONS	
 Association (direction: Source -> Destination) Source: Public (Class) GM_Point	Target: Public (Class) SpatialUncertainty «InformationType» Cardinality: [0..1]
 Association (direction: Source -> Destination) Source: Public (Class) GM_Curve providedFor	Target: Public (Class) SpatialUncertainty «InformationType» Cardinality: [0..1] provides





qualityOfPosition

Enumeration «Enumeration» in package 'S 124_Geometry'

The degree of reliability attributed to a position

qualityOfPosition
Version 1.0 Phase 1.0 Proposed
eivind.mong created on 14/05/2020. Last modified 14/05/2020

ATTRIBUTES	
 surveyed : Public = 1 the position(s) was(were) determined by the operation of making measurements for determining the relative position of points on, above or beneath the earth's surface. Survey implies a regular, controlled survey of any date. (adapted from IHO Dictionary, S-32, 5195, & IHO Chart Specifications, M-4, 175.2)	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 unsurveyed : Public = 2 survey data is does not exist or is very poor. (adapted from IHO Dictionary, S-32, 5732)	[Stereotype is «enum». Is static True. Containment is Not Specified.]
 inadequately surveyed : Public = 3 position data is of a very poor quality. (adapted from IHO Dictionary, S-32, 5732)	[Stereotype is «enum». Is static True. Containment is Not Specified.]

ATTRIBUTES	
 approximate : Public = 4	<p>a position that is considered to be less than third-order accuracy, but is generally considered to be within 30.5 metres of its correct geographic location. Also may apply to an object whose position does not remain fixed. (adapted from IHO Dictionary, S-32, 213, 3967, & IHO Specifications, M-4, 424.1)</p> <p>[Stereotype is «enum». Is static True. Containment is Not Specified.]</p>
 position doubtful : Public = 5	<p>an object whose position has been reported but which is considered to be doubtful.</p> <p>[Stereotype is «enum». Is static True. Containment is Not Specified.]</p>
 unreliable : Public = 6	<p>an object's position obtained from questionable or unreliable data.</p> <p>[Stereotype is «enum». Is static True. Containment is Not Specified.]</p>
 reported (not surveyed) : Public = 7	<p>an object whose position has been reported and its position confirmed by some means other than a formal survey such as an independent report of the same object.</p> <p>[Stereotype is «enum». Is static True. Containment is Not Specified.]</p>
 reported (not confirmed) : Public = 8	<p>an object whose position has been reported and its position has not been confirmed.</p> <p>[Stereotype is «enum». Is static True. Containment is Not Specified.]</p>
 estimated : Public = 9	<p>the most probable position of an object determined from incomplete data or data of questionable accuracy. (adapted from IHO Dictionary, S-32, 3960)</p> <p>[Stereotype is «enum». Is static True. Containment is Not Specified.]</p>
 precisely known : Public = 10	<p>a position that is of a known value, such as the position of an anchor berth or other defined object.</p> <p>[Stereotype is «enum». Is static True. Containment is Not Specified.]</p>
 calculated : Public = 11	<p>a position that is computed from data.</p> <p>[Stereotype is «enum». Is static True. Containment is Not Specified.]</p>

Package in package 'S-124 V0.3.1'

S-124 Metadata

Version 1.0 Phase 1.0 Proposed

raphael.malyankar created on 14/05/2020. Last modified 14/05/2020

S-124 Metadata

Version 1.0

monge created on 14/05/2020. Last modified 14/05/2020

Class diagram in package 'S-124 Metadata'

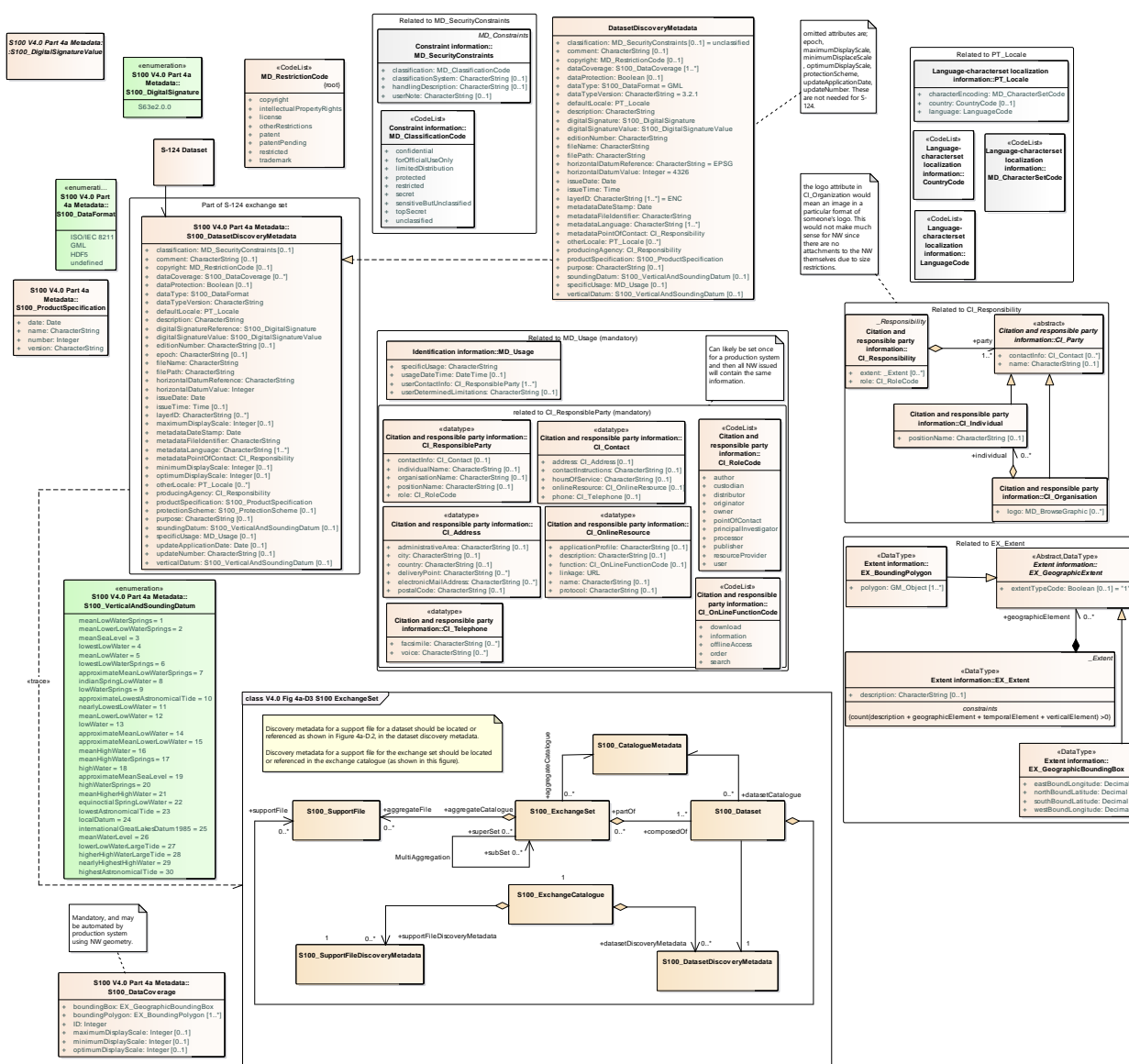


Figure 8: S-124 Metadata

DatasetDiscoveryMetadata




Class in package 'S-124 Metadata'

S-124_DatasetDiscoveryMetadata




Metadata about the individual S-124 datasets in the S-124 exchange catalogue.

DatasetDiscoveryMetadata
Version 1.1 Phase 2.0 Proposed
IHO TSMAD created on 14/05/2020. Last modified 14/05/2020


OUTGOING STRUCTURAL RELATIONSHIPS

-  Aggregation from DatasetDiscoveryMetadata to S100_ExchangeCatalogue
[Direction is 'Destination -> Source'.]
-  Aggregation from DatasetDiscoveryMetadata to S100_CollectionMetadata
[Direction is 'Destination -> Source'.]
-  Realization from DatasetDiscoveryMetadata to S100_DatasetDiscoveryMetadata
[Direction is 'Source -> Destination'.]



INCOMING STRUCTURAL RELATIONSHIPS

-  Aggregation from S100_19115DatasetMetadata to DatasetDiscoveryMetadata
[Direction is 'Source -> Destination'.]
-  Aggregation from S100_SupportFileDiscoveryMetadata to DatasetDiscoveryMetadata
[Direction is 'Destination -> Source'.]
-  Aggregation from S100_AquisitionMetadata to DatasetDiscoveryMetadata
[Direction is 'Source -> Destination'.]

CONNECTORS

-  **Trace** «trace» Source -> Destination
 From: DatasetDiscoveryMetadata : Class, Public
 To: S100_DatasetDiscoveryMetadata : Class, Public


ATTRIBUTES

-  **classification** : MD_SecurityConstraints Public = unclassified
 Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Is static True. Containment is Not Specified.]
-  **comment** : CharacterString Public
 Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
 Any additional information.
[Is static True. Containment is Not Specified.]

ATTRIBUTES	
 copyright : MD_RestrictionCode Public Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)	[Is static True. Containment is Not Specified.]
 dataCoverage : S100_DataCoverage Public Multiplicity: ([1..*], Allow duplicates: 0, Is ordered: False)	[Is static True. Containment is Not Specified.]
 dataProtection : Boolean Public Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False) Indicates if the data is encrypted. 0 indicates an unencrypted dataset 1 indicates an encrypted dataset	[Is static True. Containment is Not Specified.]
 dataType : S100_DataFormat Public = GML The encoding format of the dataset.	[Is static True. Containment is Not Specified.]
 dataTypeVersion : CharacterString Public = 3.2.1 The version number of the dataType.	[Is static True. Containment is Not Specified.]
 defaultLocale : PT_Locale Public	[Is static True. Containment is Not Specified.]
 description : CharacterString Public Short description giving the area or location covered by the dataset. e.g. a harbour or port name, between two named locations etc.	[Is static True. Containment is Not Specified.]
 digitalSignature : S100_DigitalSignature Public	[Is static True. Containment is Not Specified.]
 digitalSignatureValue : S100_DigitalSignatureValue Public	[Is static True. Containment is Not Specified.]
 editionNumber : CharacterString Public The edition number of the dataset. When a data set is initially created, the edition number 1 is assigned to it. The edition number is increased by 1 at each new edition. Edition number remains the same for a re-issue.	

ATTRIBUTES	
	[Is static True. Containment is Not Specified.]
 fileName : CharacterString Public Dataset file name	[Is static True. Containment is Not Specified.]
 filePath : CharacterString Public Full path from the exchange set root directory	[Is static True. Containment is Not Specified.]
 horizontalDatumReference : CharacterString Public = EPSG Reference to the register from which the horizontal datum value is taken. e.g., EPSG	[Is static True. Containment is Not Specified.]
 horizontalDatumValue : Integer Public = 4326 Horizontal Datum of the entire dataset. e.g. EPSG 4326	[Is static True. Containment is Not Specified.]
 issueDate : Date Public Date on which the data was made available by the data producer.	[Is static True. Containment is Not Specified.]
 issueTime : Time Public Time of day at which the data was made available by the data producer	[Is static True. Containment is Not Specified.]
 layerID : CharacterString Public = ENC Multiplicity: ([1..*], Allow duplicates: 0, Is ordered: False) Identifies the relationship to other layers that are required to view the complete data set.	[Is static True. Containment is Not Specified.]
 metadataDateStamp : Date Public	[Is static True. Containment is Not Specified.]
 metadataFileIdentifier : CharacterString Public	[Is static True. Containment is Not Specified.]
 metadataLanguage : CharacterString Public Multiplicity: ([1..*], Allow duplicates: 0, Is ordered: False)	[Is static True. Containment is Not Specified.]

ATTRIBUTES	
 metadataPointOfContact : CI_Responsibility Public <div>[Is static True. Containment is Not Specified.]</div>	
 otherLocale : PT_Locale Public Multiplicity: ([0..*], Allow duplicates: 0, Is ordered: False) <div>[Is static True. Containment is Not Specified.]</div>	
 producingAgency : CI_Responsibility Public Agency responsible for producing the data <div>[Is static True. Containment is Not Specified.]</div>	
 productSpecification : S100_ProductSpecification Public The product specification used to create this dataset. <div>[Is static True. Containment is Not Specified.]</div>	
 purpose : CharacterString Public Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False) The purpose for which the dataset has been issued. e.g. new, re-issue, new edition, update etc. <div>[Is static True. Containment is Not Specified.]</div>	
 soundingDatum : S100_VerticalAndSoundingDatum Public Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False) Sounding Datum of the entire dataset. <div>[Is static True. Containment is Not Specified.]</div>	
 specificUsage : MD_Usage Public Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False) The use for which the dataset is intended. e.g. in the case of ENC's this would be a navigation purpose classification. <div>[Is static True. Containment is Not Specified.]</div>	
 verticalDatum : S100_VerticalAndSoundingDatum Public Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False) Vertical Datum of the entire dataset <div>[Is static True. Containment is Not Specified.]</div>	

ASSOCIATIONS	
 Association (direction: Source -> Destination)	

ASSOCIATIONS

Source: Public (Class) S100_Dataset

Target: Public (Class) DatasetDiscoveryMetadata
Cardinality: [1]



MD_RestrictionCode

Class «CodeList» in package 'S-124 Metadata'

Limitation(s) placed upon the access or use of the data

MD_RestrictionCode
Version 2006 Phase IS Superseded
monge created on 14/05/2020. Last modified 14/05/2020

ATTRIBUTES

 copyright : <undefined> PublicExclusive right to the publication, production, or sale of the rights to a literary, dramatic, musical, or artistic work, or to the used of a commercial print or label, granted by law for a specified period of time to an author, composer, artist, distributor
[Is static True. Containment is .] intellectualPropertyRights : <undefined> Public


Non-tangible property that is a result of creativity.

[Is static True. Containment is .]

 license : <undefined> Public

Formal permission to do something

[Is static True. Containment is .]

 otherRestrictions : <undefined> Public


Other limitations not covered

[Is static True. Containment is .]

 patent : <undefined> Public

Produced or sold as a proprietary product

[Is static True. Containment is .]

 patentPending : <undefined> Public


Produced or sold information awaiting a patent

[Is static True. Containment is .]

 restricted : <undefined> Public

[Is static True. Containment is .]

ATTRIBUTES

 trademark : <undefined> Public

[Is static True. Containment is .]

S-124 Dataset

Class in package 'S-124 Metadata'

S-124 Dataset
Version 1.0 Phase 1.0 Proposed
monge created on 14/05/2020. Last modified 14/05/2020

ASSOCIATIONS

 Association (direction: Source -> Destination)

Source: Public (Class) S-124 Dataset


Target: Public (Class)
S100_DatasetDiscoveryMetadata

V4.0 Fig 4a-D3 S100 ExchangeSet

UMLDiagram in package 'S-124 Metadata'

V4.0 Fig 4a-D3 S100 ExchangeSet
Version 1.0 Phase 1.0 Proposed
monge created on 14/05/2020. Last modified 14/05/2020
Extends

CONNECTORS

 **Trace** «trace» Source -> Destination

From: Part of S-124 exchange set : Boundary, Public

To: V4.0 Fig 4a-D3 S100 ExchangeSet : UMLDiagram, Public

S-124 Dataset Structure

Package in package 'S-124 V0.3.1'

S-124 dataset and exchange set structure are not currently defined.

S-124 Dataset Structure
Version 1.0 Phase 1.0 Proposed
raphael.malyankar created on 14/05/2020. Last modified 14/05/2020