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| --- |
| Model Report  S-128 Model  Version ● Proposed |
| |  | | --- | |  | | Date/Time Generated: | 2016-11-25 10:08:30 a.m. | | Author: | KHOA | |
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# S-128 Model

Package in package 'S128'

S-128 Model

Version Phase 1.0 Proposed

KHOA created on 2016-08-11. Last modified 2016-08-11

## S-128 package diagram

Class diagram in package 'S-128 Model'

S-128 package

Version 1.0

KHOA created on 2016-08-11. Last modified 2016-11-17



1. S-128 package

### S-128 data model diagram

Class diagram in package 'S128'

S-128 data model

Version 1.0

KHOA created on 2016-08-11. Last modified 2016-11-25



1. S128 data model

### GM\_Geometry

Class in package 'S100\_Geometry'

GM\_Geometry

Version 1.0 Phase 1.0 Proposed

eivind.mong created on 2016-08-29. Last modified 2016-08-29

| INCOMING STRUCTURAL RELATIONSHIPS |
| --- |
| Aggregation from GM\_Surface to GM\_Geometry  [ Direction is 'Source -> Destination'. ]  GM\_Geometry class is the container class relationship of GM\_Surface classes. |
| Aggregation from GM\_Point to GM\_Geometry  [ Direction is 'Source -> Destination'. ]  GM\_Geometry class is the container class relationship of GM\_Point classes. |
| Aggregation from GM\_Curve to GM\_Geometry  [ Direction is 'Source -> Destination'. ]  GM\_Geometry class is the container class relationship of GM\_Curve classes. |

| ASSOCIATIONS | |
| --- | --- |
| Association (direction: Unspecified)  Associated relationship between GM\_Geometry class and SC\_CRS class | |
| Source: Public (Class) GM\_Geometry | Target: Public (Class) SC\_CRS |
| Association (direction: Unspecified)  Associated relationship between GM\_Geometry class and S100\_FeatureType class | |
| Source: Public (Class) GM\_Geometry  Cardinality: [1..\*] | Target: Public (Class) S100\_FeatureType «FeatureType» |
| Association (direction: Unspecified)  Associated relationship between GeometryDescription class and GM\_Geometry class | |
| Source: Public (Class) GeometryDescription «InformationType» | Target: Public (Class) GM\_Geometry |

### S100\_Contact (Contact Info.)

Class «ComplexAttributeType» in package 'S100'

S100\_Contact

Version 1.0 Phase 1.0 Proposed

created on 2016-11-15. Last modified 2016-11-25

| ATTRIBUTES |
| --- |
| organization : Public  [ Is static False. Containment is Not Specified. ]  Organization name |
| phone : Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  [ Is static False. Containment is Not Specified. ]  Organization phone number |
| address : Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  [ Is static False. Containment is Not Specified. ]  Organization address |

### S100\_ProducingAgency (Nautical product producing agency info.)

Class «ComplexAttributeType» in package 'S100'

S100\_ProducingAgency

Version 1.0 Phase 1.0 Proposed

created on 2016-11-15. Last modified 2016-11-25

| ATTRIBUTES |
| --- |
| organisationName : Public  [ Is static False. Containment is Not Specified. ]  Nautical product producing agency name |
| contactInfo : Public  [ Is static False. Containment is Not Specified. ]  Nautical product producing agency phone number |
| role : Public  [ Is static False. Containment is Not Specified. ]  Role of Nautical product producing agency |

### S100\_ProductSpecification(Version info. of Nautical product)

Class «ComplexAttributeType» in package 'S100'

S100\_ProductSpecification

Version 1.0 Phase 1.0 Proposed

created on 2016-11-08. Last modified 2016-11-25

| ATTRIBUTES |
| --- |
| name : Public  [ Is static False. Containment is Not Specified. ]  Nautical product name |
| version : Public  [ Is static False. Containment is Not Specified. ]  Version No. of Nautical product |
| date : Public  [ Is static False. Containment is Not Specified. ]  Production date of Nautical product |

### AbstractS100Type

Class «Generic S100 Type» in package 'S100'

AbstractS100Type

Version 1.0 Phase 1.0 Proposed

raphaelm created on 2016-08-29. Last modified 2016-08-29

| INCOMING STRUCTURAL RELATIONSHIPS |
| --- |
| Generalization from «FeatureType» S100\_FeatureType to «Generic S100 Type» AbstractS100Type  [ Direction is 'Source -> Destination'. ]  The common feature of S100\_FeatureType class is generalized into AbstractS100Type class. |
| Generalization from «InformationType» S100\_InformationType to «Generic S100 Type» AbstractS100Type  [ Direction is 'Source -> Destination'. ]  The common feature of S100\_InformationType class is generalized into AbstractS100Type class. |

| ASSOCIATIONS | |
| --- | --- |
| Association (direction: Unspecified)  AbstractS100Type class is the recursive relationship. | |
| Source: Public (Class) AbstractS100Type «Generic S100 Type» | Target: Public (Class) AbstractS100Type «Generic S100 Type»  Cardinality: [0..\*] |
| Association (direction: Unspecified)  AbstractS100Type class is the recursive relationship. | |
| Source: Public (Class) AbstractS100Type «Generic S100 Type» | Target: Public (Class) AbstractS100Type «Generic S100 Type»  Cardinality: [0..\*] |

### S100\_FeatureType

Class «FeatureType» in package 'S100'

S100\_FeatureType

Version 1.0 Phase 1.0 Proposed

raphaelm created on 2016-08-29. Last modified 2016-08-29

Extends AbstractS100Type

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Generalization from «FeatureType» S100\_FeatureType to «Generic S100 Type» AbstractS100Type  [ Direction is 'Source -> Destination'. ]  The common feature of S100\_FeatureType class is generalized into AbstractS100Type class. |

| INCOMING STRUCTURAL RELATIONSHIPS |
| --- |
| Generalization from «FeatureType» AbstractGeoNauticalProduct to «FeatureType» S100\_FeatureType  [ Direction is 'Source -> Destination'. ]  The common feature of AbstractGeoNauticalProduct class is generalized into S100\_FeatureType class. |
| Generalization from «FeatureType» AbstractChartProduct to «FeatureType» S100\_FeatureType  [ Direction is 'Source -> Destination'. ]  The common feature of AbstractChartProduct is generalized into S100\_FeatureType class. |

| ASSOCIATIONS | |
| --- | --- |
| Association (direction: Unspecified)  GM\_Geometry class is the member reference relationship to the S100\_FeatureType class. | |
| Source: Public (Class) GM\_Geometry  Cardinality: [1..\*] | Target: Public (Class) S100\_FeatureType «FeatureType» |

### S100\_InformationType

Class «InformationType» in package 'S100'

S100\_InformationType

Version 1.0 Phase 1.0 Proposed

raphaelm created on 2016-08-29. Last modified 2016-11-14

Extends AbstractS100Type

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Generalization from «InformationType» S100\_InformationType to «Generic S100 Type» AbstractS100Type  [ Direction is 'Source -> Destination'. ]  The common feature of S100\_InformationType class is generalized into AbstractS100Type class. |

| INCOMING STRUCTURAL RELATIONSHIPS |
| --- |
| Generalization from «InformationType» AbstractNauticalProduct to «InformationType» S100\_InformationType  [ Direction is 'Source -> Destination'. ]  The common feature of AbstractNauticalProduct class is generalized into S100\_InformationType class. |
| Generalization from «InformationType» ProducingInformation to «InformationType» S100\_InformationType  [ Direction is 'Source -> Destination'. ]  The common feature of ProducingInformation class is generalized into S100\_InformationType class. |

### S101\_DatasetDiscoveryMetadata

Class in package 'S101'

S101\_DatasetDiscoveryMetadata

Version 1.0 Phase 1.0 Proposed

S101 created on 2016-11-15. Last modified 2016-11-25

| ATTRIBUTES |
| --- |
| fileName : S100XC:fileName Public  [ Is static False. Containment is Not Specified. ]  Data name |
| filePath : S100XC:filePath Public  [ Is static False. Containment is Not Specified. ]  Data storage location |
| description : S100XC:description Public  [ Is static False. Containment is Not Specified. ]  Data description |
| dataProtection : S100XC:dataProtection Public  [ Is static False. Containment is Not Specified. ]  Data recovery point |
| digitalSignature : S100XC:digitalSignature Public  [ Is static False. Containment is Not Specified. ]  Data digital signature |
| copyright : S100XC:copyright Public  [ Is static False. Containment is Not Specified. ]  Data copyright information |
| classification : S100XC:classification Public  [ Is static False. Containment is Not Specified. ]  Data classification |
| purpose : S100XC:purpose Public  [ Is static False. Containment is Not Specified. ]  Purpose of data utilization |
| specificUsage : S100XC:specificUsage Public  [ Is static False. Containment is Not Specified. ]  Data usage |
| editionNumber : S100XC:editionNumber Public  [ Is static False. Containment is Not Specified. ]  Data edition identification number |
| updateNumber : S100XC:updateNumber Public  [ Is static False. Containment is Not Specified. ]  Data update identification number |
| updateApplicationDate : S100XC:updateApplicationDate Public  [ Is static False. Containment is Not Specified. ]  S/W update date |
| issueDate : S100XC:issueDate Public  [ Is static False. Containment is Not Specified. ]  Data issue date |
| productSpecification : S100XC:productSpecification Public  [ Stereotype is «complexAttribute». Is static False. Containment is Not Specified. ]  Data version information |
| producingAgency : S100XC:producingAgency Public  [ Stereotype is «complexAttribute». Is static False. Containment is Not Specified. ]  Product producing agency information |
| maximumDisplayScale : S100XC:maximumDisplayScale Public  [ Is static False. Containment is Not Specified. ]  Data display scale |
| horizontalDatumReference : S100XC:horizontalDatumReference Public  [ Is static False. Containment is Not Specified. ]  Horizontal standard coordinate system |
| horizontalDatumValue : S100XC:horizontalDatumValue Public  [ Is static False. Containment is Not Specified. ]  Horizontal standard coordinate |
| verticalDatum : S100XC:verticalDatum Public  [ Is static False. Containment is Not Specified. ]  Vertical datum |
| soundingDatum : S100XC:soundingDatum Public  [ Is static False. Containment is Not Specified. ]  Sounding datum (DL : Datum Level) |
| dataType : S100XC:dataType Public  [ Is static False. Containment is Not Specified. ]  Data type information |
| dataTypeVersion : S100XC:dataTypeVersion Public  [ Is static False. Containment is Not Specified. ]  Data type version information |
| dataCoverage : S100XC:dataCoverage Public  Multiplicity: ( [1..\*], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «complexAttribute». Is static False. Containment is Not Specified. ]  Data measurement scope |
| comment : S100XC:comment Public  [ Is static False. Containment is Not Specified. ]  Data comment information |
| S100\_19115DatasetMetadata : S100XC:S100\_19115DatasetMetadata Public  [ Stereotype is «complexAttribute». Is static False. Containment is Not Specified. ]  S100\_19115 meta data set information |

### AbstractChartProduct(Chart)

Class «FeatureType» in package 'S128'

AbstractChartProduct

Version 1.0 Phase 1.0 Proposed

KHOA created on 2016-08-27. Last modified 2016-11-15

Extends S100\_FeatureType

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Generalization from «FeatureType» AbstractChartProduct to «FeatureType» S100\_FeatureType  [ Direction is 'Source -> Destination'. ]  The common feature of AbstractChartProduct class is generalized into S100\_FeatureType class. |

| INCOMING STRUCTURAL RELATIONSHIPS |
| --- |
| Generalization from «FeatureType» S128\_ENCProduct to «FeatureType» AbstractChartProduct  [ Direction is 'Source -> Destination'. ]  The common feature of S128\_ENCProduct class is generalized into AbstractChartProduct class. |
| Generalization from «FeatureType» S128\_PaperChartProduct to «FeatureType» AbstractChartProduct  [ Direction is 'Source -> Destination'. ]  The common feature of S128\_PaperChartProduct class is generalized into AbstractChartProduct class. |

| ATTRIBUTES |
| --- |
| chartNumber : ProductName Public  Multiplicity: ( [1..\*], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ]  Chart number : Product name |
| productType : ProductTypeCode Public  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ]  Product reference information (Chart type) |
| productFormat : ProducingType Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ]  Chart structure code (Data type : Paper chart - Raster, Vector / ENC - Vector (APP, e-book, etc.)) |
| information : ProducingInformation Public  [ Stereotype is «complexAttribute». Is static False. Containment is Not Specified. ]  Chart production information |
| notice : CharacterString Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ]  Chart caution article |
| status : DistributeStatus Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ]  Chart distributor information (Supply : ex. Chart Production, Withdrawn, ENC Production, ENC Withdrawn) |

| ASSOCIATIONS | |
| --- | --- |
| Association (direction: Unspecified)  ProducingInformation class is the member reference relationship to AbstractChartProduct class. | |
| Source: Public (Class) ProducingInformation «InformationType»  Cardinality: [1] | Target: Public (Class) AbstractChartProduct «FeatureType» |

### AbstractGeoNauticalProduct(Location-based Nautical product)

Class «FeatureType» in package 'S128'

AbstractGeoNauticalProduct

Version 1.0 Phase 1.0 Proposed

KHOA created on 2016-11-25. Last modified 2016-11-25

Extends S100\_FeatureType

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Generalization from «FeatureType» AbstractGeoNauticalProduct to «FeatureType» S100\_FeatureType  [ Direction is 'Source -> Destination'. ]  The common feature of AbstractGeoNauticalProduct class is generalized into S100\_FeatureType class. |

| INCOMING STRUCTURAL RELATIONSHIPS |
| --- |
| Generalization from «FeatureType» S128\_NonStdGeoNauticalProduct to «FeatureType» AbstractGeoNauticalProduct  [ Direction is 'Source -> Destination'. ]  The common feature of S128\_NonStdGeoNauticalProduct class is generalized into AbstractGeoNauticalProduct class. |
| Generalization from «FeatureType» S128\_StdGeoNauticalProduct to «FeatureType» AbstractGeoNauticalProduct  [ Direction is 'Source -> Destination'. ]  The common feature of S128\_StdGeoNauticalProduct class is generalized into AbstractGeoNauticalProduct class. |

| ATTRIBUTES |
| --- |
| productName : ProductName Public  Multiplicity: ( [1..\*], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ]  Nautical production name (Product name) |
| productType : ProductTypeCode Public  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ]  Nautical product reference information (Product type) |
| contact : S100\_Contact Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «complexAttribute». Is static False. Containment is Not Specified. ]  Nautical product producing agency contact information |
| information : ProducingInformation Public  [ Stereotype is «complexAttribute». Is static False. Containment is Not Specified. ]  Nautical product producing information |

| ASSOCIATIONS | |
| --- | --- |
| Association (direction: Unspecified)  ProducingInformation class is the member reference relationship to AbstractGeoNauticalProduct class. | |
| Source: Public (Class) ProducingInformation «InformationType»  Cardinality: [1] | Target: Public (Class) AbstractGeoNauticalProduct «FeatureType» |

### AbstractNauticalProduct(Information-based Nautical product)

Class «InformationType» in package 'S128'

AbstractNauticalProduct

Version 1.0 Phase 1.0 Proposed

KHOA created on 2016-08-27. Last modified 2016-11-25

Extends S100\_InformationType

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Generalization from «InformationType» AbstractNauticalProduct to «InformationType» S100\_InformationType  [ Direction is 'Source -> Destination'. ]  The common feature of AbstractNauticalProduct class is generalized into S100\_InformationType class. |

| INCOMING STRUCTURAL RELATIONSHIPS |
| --- |
| Generalization from «InformationType» S128\_NonStdNauticalProduct to «InformationType» AbstractNauticalProduct  [ Direction is 'Source -> Destination'. ]  The common feature of S128\_NonStdNauticalProduct class is generalized into AbstractNauticalProduct class. |
| Generalization from «InformationType» S128\_StdNauticalProduct to «InformationType» AbstractNauticalProduct  [ Direction is 'Source -> Destination'. ]  The common feature of S128\_StdNauticalProduct class is generalized into AbstractNauticalProduct class. |

| ATTRIBUTES |
| --- |
| productName : ProductName Public  Multiplicity: ( [1..\*], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ]  Nautical product name (Product name) |
| productType : ProductTypeCode Public  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ]  Nautical product reference information (Product type) |
| contact : S100\_Contact Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «complexAttribute». Is static False. Containment is Not Specified. ]  Nautical product producing agency contact information |
| information : ProducingInformation Public  [ Stereotype is «complexAttribute». Is static False. Containment is Not Specified. ]  Nautical product producing information |

| ASSOCIATIONS | |
| --- | --- |
| Association (direction: Unspecified)  ProducingInformation class is the member reference relationship to AbstractNauticalProduct class. | |
| Source: Public (Class) ProducingInformation «InformationType»  Cardinality: [1] | Target: Public (Class) AbstractNauticalProduct «InformationType» |

### Distributor(Distributor information)

Class «ComplexAttributeType» in package 'S128'

Distributor

Version 1.0 Phase 1.0 Proposed

KHOA created on 2016-09-22. Last modified 2016-11-25

| ATTRIBUTES |
| --- |
| region : CharacterString Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ]  Distribution region (Product distributor per region) |
| distributorName : CharacterString Public  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ]  Distributor name (Provider name) |
| contactInfo : S100\_Contact Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ]  Distributor phone number (Product) |
| price : CharacterString Private  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ]  Price (Product) |

### PrintInformation(Printing information)

Class «ComplexAttributeType» in package 'S128'

PrintInformation

Version 1.0 Phase 1.0 Proposed

KHOA created on 2016-08-28. Last modified 2016-11-25

| ATTRIBUTES |
| --- |
| printNation : CharacterString Public  Printing nation  Printing nation : Name of country printing the product (ex. REPUBLIC OF KOREA)  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ] |
| printAgency : CharacterString Public  Printing agency  Name of printing agency (ex. Local name : 국립해양조사원 / English name: Hydrographic and Oceanographic Administration)  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ] |
| printYear : CharacterString Public  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ]  Printing date (Year)  Printing year : Year of printing (ex. 2014) |
| printWeek : int Public  Printing date (Weekly)  Printing week (Weekly) (ex. 1~52 Weeks)  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ] |
| rePrintNation : CharacterString Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )    Reprinting nation  Reprinting nation (ex. 대한민국 / REPUBLIC OF KOREA)  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ] |
| rePrintEdition : CharacterString Public  Reprinting status  Printing (Reprinting) status (ex. 2010년 3월 제2인쇄 / 영문 : 2nd Reprinted, Mar. 2010)  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ] |
| printSize : PrintSize Public  Printing paper size : Full Size(109.2 x 78.8m), 1/2(A Half of the full size), 1/4(A Quarter of the full size)  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ] |

### ProducingInformation(Producing information)

Class «InformationType» in package 'S128'

ProducingInformation

Version 1.0 Phase 1.0 Proposed

KHOA created on 2016-08-11. Last modified 2016-11-25

Extends S100\_InformationType

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Generalization from «InformationType» ProducingInformation to «InformationType» S100\_InformationType  [ Direction is 'Source -> Destination'. ]  The common feature of ProducingInformation class is generalized into S100\_InformationType class. |

| ATTRIBUTES |
| --- |
| description : S100:description Public  Multiplicity: ( [1..\*], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ]  Data description |
| dataProtection : S100:dataProtection Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ]  Data recovery point |
| copyright : S100:copyright Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ]  Data copyright information |
| editionNumber : S100:editionNumber Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ]  Data edition identification number |
| updateNumber : S100:updateNumber Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ]  Data update identification number |
| updateApplicationDate : S100:updateApplicationDate Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ]  S/W update date |
| issueDate : S100:issueDate Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ]  Data issue date |
| producingAgency : S100\_ProducingAgency Public  Multiplicity: ( [1..\*], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ]  Data version information |
| producerNation : CharacterString Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ]  Data producing nation |
| producerCode : CharacterString Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ]  Data producing code : National code for ENC (ex. 대한민국-KR) |
| producingType : ProducingType Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ]  Data structure code |

| ASSOCIATIONS | |
| --- | --- |
| Association (direction: Unspecified)  Member reference relationship between ProducingInformation class and AbstractChartProduct class | |
| Source: Public (Class) ProducingInformation «InformationType»  Cardinality: [1] | Target: Public (Class) AbstractChartProduct «FeatureType» |
| Association (direction: Unspecified)  Member reference relationship between ProducingInformation class and AbstractGeoNauticalProduct class | |
| Source: Public (Class) ProducingInformation «InformationType»  Cardinality: [1] | Target: Public (Class) AbstractGeoNauticalProduct «FeatureType» |
| Association (direction: Unspecified)  Member reference relationship between ProducingInformation class and AbstractNauticalProduct class | |
| Source: Public (Class) ProducingInformation «InformationType»  Cardinality: [1] | Target: Public (Class) AbstractNauticalProduct «InformationType» |

### ProductName(Product name information)

Class «ComplexAttributeType» in package 'S128'

ProductName

Version 1.0 Phase 1.0 Proposed

KHOA created on 2016-09-21. Last modified 2016-11-25

| ATTRIBUTES |
| --- |
| name : CharacterString Public  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ]  Product name |
| language : ISO839-3 Public  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ]  Product producing language |

### ProductTypeCode(Product type code information)

Class «codeList» in package 'S128'

ProductTypeCode

Version 1.0 Phase 1.0 Proposed

KHOA created on 2016-09-21. Last modified 2016-11-25

| ATTRIBUTES |
| --- |
| Paper Chart : Public  [ Is static False. Containment is Not Specified. ]  Paper chart referenced |
| Electronic Nauticalal Chart : Public  [ Is static False. Containment is Not Specified. ]  ENC referenced |
| Bathymetry Attributed Grid : Public  [ Is static False. Containment is Not Specified. ]  Sounding grid referenced |
| Coast Guard Light List : Public  [ Is static False. Containment is Not Specified. ]  Coast guard light list referenced |
| Practical Navigator : Public  [ Is static False. Containment is Not Specified. ]  Nautical chart referenced |
| Coast Pilots : Public  [ Is static False. Containment is Not Specified. ]  Coast pilots referenced |
| List of Lights : Public  [ Is static False. Containment is Not Specified. ]  List of lights referenced |
| Sailing Directions : Public  [ Is static False. Containment is Not Specified. ]  Sailing directions referenced |
| World Port Index : Public  [ Is static False. Containment is Not Specified. ]  World port index referenced |
| Distances Between Ports : Public  [ Is static False. Containment is Not Specified. ]  Port distance table |
| ECDIS and ENC Reference : Public  [ Is static False. Containment is Not Specified. ]  ECDIS / ENC referenced |

### S128\_ENCProduct(ENC)

Class «FeatureType» in package 'S128'

S128\_ENCProduct

Version 1.0 Phase 1.0 Proposed

KHOA created on 2016-08-23. Last modified 2016-11-25

Extends AbstractChartProduct

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Generalization from «FeatureType» S128\_ENCProduct to «FeatureType» AbstractChartProduct  [ Direction is 'Source -> Destination'. ]  The common feature of S128\_ENCProduct class is generalized into AbstractChartProduct class. |

| ATTRIBUTES |
| --- |
| identifier : S100:identifier Public  [ Stereotype is «complexAttribute». Is static False. Containment is Not Specified. ]  ENC identification number |
| metadataLanguage : S100\_Contact Public  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ]  Meta data written language |
| exchangeCatalogueName : S100:exchangeCatalogueName Public  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ]  Modified catalogue name |
| exchangeCatalogueDescription : S100:exchangeCatalogueDescription Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ]  Modified catalogue description |
| productSpecification : S100\_ProductSpecification Public  [ Stereotype is «complexAttribute». Is static False. Containment is Not Specified. ]  ENC version information |
| exchangeCatalogueComment : S100:exchangeCatalogueComment Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ]  Modified catalogue comment |
| publicKeys : S100:publicKeys Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ]  ENC open identification code |
| sourceMedia : S100:sourceMedia Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ]  Data source |
| replacedData : S100:replacedData Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ]  Data modification information |
| usageBand : CharacterString Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ]  Stage per scale |
| S101\_DatasetDiscoveryMetadata : S101\_DatasetDiscoveryMetadata Public  Multiplicity: ( [1..\*], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «complexAttribute». Is static False. Containment is Not Specified. ]  ENC meta data information |

### S128\_NonStdGeoNauticalProduct(Location-based Non-standard nautical product)

Class «FeatureType» in package 'S128'

S128\_NonStdGeoNauticalProduct

Version 1.0 Phase 1.0 Proposed

KHOA created on 2016-11-25. Last modified 2016-11-25

Extends AbstractGeoNauticalProduct

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Generalization from «FeatureType» S128\_NonStdGeoNauticalProduct to «FeatureType» AbstractGeoNauticalProduct  [ Direction is 'Source -> Destination'. ]  The common feature of S128\_NonStdGeoNauticalProduct class is generalized into AbstractGeoNauticalProduct class. |

| ATTRIBUTES |
| --- |
| productNumber : CharacterString Public  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ]  Nautical product identification number (Product number) |
| dataType : S100:dataType Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ]  Nautical product type information |
| printSize : PrintSize Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ]  Paper size code |
| target : CharacterString Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ]  Purpose of Nautical product utilization |
| thematicMapType : ThematicMapType Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ]  Nautical product theme code |
| distributor : Distributor Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «complexAttribute». Is static False. Containment is Not Specified. ]  Nautical product distribution information (Provider information) |

### S128\_NonStdNauticalProduct(Non-standard nautical product)

Class «InformationType» in package 'S128'

S128\_NonStdNauticalProduct

Version 1.0 Phase 1.0 Proposed

KHOA created on 2016-08-27. Last modified 2016-11-25

Extends AbstractNauticalProduct

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Generalization from «InformationType» S128\_NonStdNauticalProduct to «InformationType» AbstractNauticalProduct  [ Direction is 'Source -> Destination'. ]  The common feature of S128\_NonStdNauticalProduct class is generalized into AbstractNauticalProduct class. |

| ATTRIBUTES |
| --- |
| productNumber : CharacterString Public  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ]  Nautical product identification number (Product number) |
| dataType : S100:dataType Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ]  Nautical product type information |
| printSize : PrintSize Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ]  Paper size code |
| target : CharacterString Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ]  Purpose of nautical product utilization |
| thematicMapType : ThematicMapType Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ]  Nautical product theme code |
| distributor : Distributor Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «complexAttribute». Is static False. Containment is Not Specified. ]  Nautical product distributor information (Provider information) |

### S128\_PaperChartProduct(Paper chart)

Class «FeatureType» in package 'S128'

S128\_PaperChartProduct

Version 1.0 Phase 1.0 Proposed

KHOA created on 2016-11-10. Last modified 2016-11-25

Extends AbstractChartProduct

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Generalization from «FeatureType» S128\_PaperChartProduct to «FeatureType» AbstractChartProduct  [ Direction is 'Source -> Destination'. ]  The common feature of S128\_PaperChartProduct class is generalized into AbstractChartProduct class. |

| ATTRIBUTES |
| --- |
| intChartUsage : boolean Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ]  International chart usage (International chart scale) |
| frameDimensions : CharacterString Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ]  Paper chart dimensions (Length \* Width) |
| publication\_Month : CharacterString Public  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ]  Paper chart printing date (Month) |
| chartType : ChartType Public  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ]  Paper chart usage code |
| compilationScale : CharacterString Public  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ]  Paper chart standard scale |
| distributor : Distributor Public  Multiplicity: ( [0..\*], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «complexAttribute». Is static False. Containment is Not Specified. ]  Paper chart distributor information |
| printInformation : PrintInformation Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «complexAttribute». Is static False. Containment is Not Specified. ]  Chart printing information |

### S128\_StdGeoNauticalProduct(Location-based Standard compliance of S-100 standard nautical product)

Class «FeatureType» in package 'S128'

S128\_StdGeoNauticalProduct

Version 1.0 Phase 1.0 Proposed

KHOA created on 2016-11-25. Last modified 2016-11-25

Extends AbstractGeoNauticalProduct

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Generalization from «FeatureType» S128\_StdGeoNauticalProduct to «FeatureType» AbstractGeoNauticalProduct  [ Direction is 'Source -> Destination'. ]  The common feature of S128\_StdGeoNauticalProduct class is generalized into AbstractGeoNauticalProduct class. |

| ATTRIBUTES |
| --- |
| identifier : S100:identifier Public  [ Stereotype is «complexAttribute». Is static False. Containment is Not Specified. ]  Nautical product identification number |
| productSpecification : S100\_ProductSpecification Public  [ Stereotype is «complexAttribute». Is static False. Containment is Not Specified. ]  Nautical product version information |
| metadataLanguage : S100:metadataLanguage Public  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ]  Meta data written language |
| exchangeCatalogueName : S100:exchangeCatalogueName Public  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ]  Modified catalogue name |
| exchangeCatalogueDescription : S100:exchangeCatalogueDescription Public  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ]  Modified catalogue description |
| exchangeCatalogueComment : S100:exchangeCatalogueComment Public  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ]  Modified catalogue comment |
| publicKeys : S100:publicKeys Public  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ]  Nautical product open identification code |
| sourceMedia : S100:sourceMedia Public  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ]  Data source |
| replacedData : S100:replacedData Public  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ]  Data modification information |

### S128\_StdNauticalProduct(Standard compliance of S-100 standard nautical product)

Class «InformationType» in package 'S128'

S128\_StdNauticalProduct

Version 1.0 Phase 1.0 Proposed

KHOA created on 2016-11-15. Last modified 2016-11-25

Extends AbstractNauticalProduct

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Generalization from «InformationType» S128\_StdNauticalProduct to «InformationType» AbstractNauticalProduct  [ Direction is 'Source -> Destination'. ]  The common feature of S128\_StdNauticalProduct class is generalized into AbstractNauticalProduct class. |

| ATTRIBUTES |
| --- |
| identifier : S100:identifier Public  [ Stereotype is «complexAttribute». Is static False. Containment is Not Specified. ]  Nautical product identification number |
| productSpecification : S100\_ProductSpecification Public  [ Stereotype is «complexAttribute». Is static False. Containment is Not Specified. ]  Nautical product version information |
| metadataLanguage : S100:metadataLanguage Public  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ]  Meta data written language |
| exchangeCatalogueName : S100:exchangeCatalogueName Public  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ]  Modified catalogue name |
| exchangeCatalogueDescription : S100:exchangeCatalogueDescription Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ]  Modified catalogue description |
| exchangeCatalogueComment : S100:exchangeCatalogueComment Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ]  Modified catalogue comment |
| publicKeys : S100:publicKeys Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ]  Nautical product open identification code |
| sourceMedia : S100:sourceMedia Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ]  Data source |
| replacedData : S100:replacedData Public  [ Stereotype is «simpleAttribute». Is static False. Containment is Not Specified. ]  Data modification information |

### ThematicMapType(Nautical product thematic map code)

Enumeration «enumeration» in package 'S128'

ThematicMapType

Version 1.0 Phase 1.0 Proposed

KHOA created on 2016-09-22. Last modified 2016-11-25

| ATTRIBUTES |
| --- |
| forNautical : Public  [ Stereotype is «enum». Is static False. Containment is Not Specified. ]  For nautical purpose |
| notNauticalal : Public  [ Stereotype is «enum». Is static False. Containment is Not Specified. ]  For non-nautical purpose |

### ChartType(Chart-purpose code)

Enumeration «enumeration» in package 'S128'

ChartType

Version 1.0 Phase 1.0 Proposed

KHOA created on 2016-08-28. Last modified 2016-11-15

| ATTRIBUTES |
| --- |
| INT\_CHART : Public = 1  International chart  [ Stereotype is «enum». Is static False. Containment is Not Specified. ] |
| FISHERY\_CHART : Public = 2  Fishery chart  [ Stereotype is «enum». Is static False. Containment is Not Specified. ] |
| SPECIAL\_CHART : Public = 3  Special chart  [ Stereotype is «enum». Is static False. Containment is Not Specified. ] |
| PROVISION\_CHART : Public = 4  Provision chart  [ Stereotype is «enum». Is static False. Containment is Not Specified. ] |

### DistributeStatus(Distribution type code)

Enumeration «enumeration» in package 'S128'

DistributeStatus

Version 1.0 Phase 1.0 Proposed

KHOA created on 2016-08-28. Last modified 2016-11-15

| ATTRIBUTES |
| --- |
| production : Public = 1  [ Stereotype is «enum». Is static False. Containment is Not Specified. ]  Revision |
| withdrawn : Public = 2  [ Stereotype is «enum». Is static False. Containment is Not Specified. ]  Discontinuation |

### PrintSize(Paper size code)

Enumeration «enumeration» in package 'S128'

PrintSize

Version 1.0 Phase 1.0 Proposed

KHOA created on 2016-08-28. Last modified 2016-11-15

| ATTRIBUTES |
| --- |
| PRINTSIZE\_FULL : Public = 1  Paper size(full size paper)  Full size(1092 x 78.8m)  [ Stereotype is «enum». Is static False. Containment is Not Specified. ] |
| PRINTSIZE\_HALF : Public = 2  Paper size(1/2 of full size paper)  1/2 (A Half of the full size)  [ Stereotype is «enum». Is static False. Containment is Not Specified. ] |
| PRINTSIZE\_QUARTER : Public = 3  Paper size(1/4 of full size paper)  1/4(A quarter of the full size)  [ Stereotype is «enum». Is static False. Containment is Not Specified. ] |

### ProducingType(Production structure code)

Enumeration «enumeration» in package 'S128'

ProducingType

Version 1.0 Phase 1.0 Proposed

KHOA created on 2016-08-28. Last modified 2016-11-15

| ATTRIBUTES |
| --- |
| Raster Data : Public = 1  [ Stereotype is «enum». Is static False. Containment is Not Specified. ]  Raster Data |
| Vector Data : Public = 2  [ Stereotype is «enum». Is static False. Containment is Not Specified. ]  Vector Data |
| Paper : Public = 3  [ Stereotype is «enum». Is static False. Containment is Not Specified. ]  Paper |
| Book : Public = 4  [ Stereotype is «enum». Is static False. Containment is Not Specified. ]  Book |
| E-Book : Public = 5  [ Stereotype is «enum». Is static False. Containment is Not Specified. ]  E-Book |
| APP : Public = 6  [ Stereotype is «enum». Is static False. Containment is Not Specified. ]  Software |