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# **Starter Class Diagram**

*Package in package 'Model'*

Starter Class Diagram

Version 1.0 Phase 1.0 Proposed

MongE created on 2024-01-30. Last modified 2019-01-23

## **Starter Class Diagram diagram**

*Class diagram in package 'Starter Class Diagram'*

Starter Class Diagram

Version 1.0

MongE created on 2024-01-30. Last modified 2024-01-30



Starter Class Diagram

## **Note**

*Note in package 'Starter Class Diagram'*

Consider the need for capturing uncertainty of position

Note

Version 1.0 Phase 1.0 Proposed

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Extends

## **Note**

*Note in package 'Starter Class Diagram'*

unCode need further discussion on if and how to implement

Note

Version 1.0 Phase 1.0 Proposed

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Extends

## **Note**

*Note in package 'Starter Class Diagram'*

Definitions needed

Note

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Extends

## **Note**

*Note in package 'Starter Class Diagram'*

need to verify usefulness or can be deleted?

Note

Version 1.0 Phase 1.0 Proposed

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Extends

## **Note**

*Note in package 'Starter Class Diagram'*

Id, SourceID and SourceName have been replaced by featureIdentifier to leverage the URN/MRN concept for persistent unique identification

Note

Version 1.0 Phase 1.0 Proposed

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Extends

## **Note**

*Note in package 'Starter Class Diagram'*

Definitions needed

Note

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Extends

## **Note**

*Note in package 'Starter Class Diagram'*

SpecialAttention need further discussion as to how it is used. For example, could there be sensitive information that should not be shared with all. Maybe should change to en open enumeration.

Note

Version 1.0 Phase 1.0 Proposed

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Extends

## **COGValue**

*Class «ComplexAttribute» in package 'Starter Class Diagram'*

Course over ground value and accuracy

COGValue

Version 1.0 Phase 1.0 Proposed

MongE created on 2024-01-30. Last modified 2024-01-30

| **ATTRIBUTES** |
| --- |
| courseOverGround : real Public  The direction of the path over the ground actually followed by a vessel. It is normally a somewhat irregular line. This is a misnomer in that courses are directions steered or intended to be steered through the water with respect to a reference meridian. Also called track over ground. (2020-08-13)  IVEF: Course over ground in degrees. (0-360)  [ Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified. ] |

|  |
| --- |
| EstAccCOG : real Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  Estimated accuracy  standard deviation of the calculated value  expressed in degrees  [ Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified. ] |

## **Construction**

*Class «ComplexAttribute» in package 'Starter Class Diagram'*

attributes of the object regarding the physical construction

Construction

Version 1.0 Phase 1.0 Proposed

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## **Identifier**

*Class «ComplexAttribute» in package 'Starter Class Diagram'*

(local) Identification of vessel

Identifier

Version 1.0 Phase 1.0 Proposed

MongE created on 2024-01-30. Last modified 2024-01-30

## **ObjectData**

*Class «FeatureType» in package 'Starter Class Diagram'*

DATA regarding an object in the supliers domain, contains at least 1 one of the sub elements (TrackData, VesselData, VoyageData)

ObjectData

Version 1.0 Phase 1.0 Proposed

MongE created on 2024-01-30. Last modified 2024-01-30

| **OUTGOING STRUCTURAL RELATIONSHIPS** |
| --- |
| Aggregation from «FeatureType» ObjectData to «FeatureType» TrackData  [ Name is Content. Direction is 'Source -> Destination'. ] |

## **SOGValue**

*Class «ComplexAttribute» in package 'Starter Class Diagram'*

SOGValue

Version 1.0 Phase 1.0 Proposed

MongE created on 2024-01-30. Last modified 2024-01-30

| **ATTRIBUTES** |
| --- |
| EstAccSOG : real Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  Estimated accuracy  standard deviation of the calculated value  expressed in m/s  [ Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified. ] |

|  |
| --- |
| speedOverGround : real Public  The vessel's actual speed, determined by dividing the distance between successive fixes by the time between the fixes. (2020-05-08)  IVEF: Speed over ground in meters per second  [ Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified. ] |

|  |
| --- |
| speedUnits : speedUnits Public  [ Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified. ] |

## **TargetData**

*Class «FeatureType» in package 'Starter Class Diagram'*

DATA regarding static elements of a target.

IVEF: DATA regarding static elements of an object

TargetData

Version 1.0 Phase 1.0 Proposed

MongE created on 2024-01-30. Last modified 2024-01-30

| **ATTRIBUTES** |
| --- |
| BlackListed : boolean Public  Vessel is blacklisted by a NCA  0=false, 1=true  [ Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified. ] |

|  |
| --- |
| Construction : Construction Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  attributes of the object regarding the physical construction  [ Stereotype is «ComplexAttribute». Is static True. Containment is Not Specified. ] |

|  |
| --- |
| featureIdentifier : URN Public  An identifier referencing an object or feature that is external to the dataset, expressed in Uniform Resource Name (URN) format. (2020-06-08)  [ Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified. ] |

|  |
| --- |
| Identifier : Identifier Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  (local) Identification of vessel  [ Stereotype is «ComplexAttribute». Is static True. Containment is Not Specified. ] |

|  |
| --- |
| SpecialAttention : text Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  Vessel is under special attention of the NCA or fairway authorities  [ Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified. ] |

|  |
| --- |
| targetOrigin : TargetOrigin Public  Source/originator type: 0 = Unknown, 1 = Transponder, 2 = Database (VTS Plan Server), 3 = Manual (VTS Officer), 4 = Fused, 5 = External Source  [ Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified. ] |

|  |
| --- |
| targetType : targetType Public  0 = Unknown  1 = Vessel  2 = Aids to Navigate  [ Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified. ] |

|  |
| --- |
| UpdateTime : dateTime Public  Date and time in UTC format (YYYY-MM-DDThh:mm:ss.sssZ) (subset of ISO 8601) this data was compiled  [ Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified. ] |

| **ASSOCIATIONS** | |
| --- | --- |
| Association (direction: Source -> Destination) TargetPositioning | |
| Source: Public positions (Class) TrackData «FeatureType»  Cardinality: [0..\*] | Target: Public object (Class) TargetData «FeatureType»  Cardinality: [1] |

## **TrackData**

*Class «FeatureType» in package 'Starter Class Diagram'*

DATA describing a position report of an object

TrackData

Version 1.0 Phase 1.0 Proposed

MongE created on 2024-01-30. Last modified 2024-01-30

| **INCOMING STRUCTURAL RELATIONSHIPS** |
| --- |
| Aggregation from «FeatureType» ObjectData to «FeatureType» TrackData  [ Name is Content. Direction is 'Source -> Destination'. ] |

| **ATTRIBUTES** |
| --- |
| COGValue : COGValue Public  The direction of the path over the ground actually followed by a vessel. It is normally a somewhat irregular line. This is a misnomer in that courses are directions steered or intended to be steered through the water with respect to a reference meridian. Also called track over ground. (2020-08-13)  IVEF: Course over ground in degrees. (0-360)  [ Stereotype is «ComplexAttribute». Is static True. Containment is Not Specified. ] |

|  |
| --- |
| featureIdentifier : URN Public  An identifier referencing an object or feature that is external to the dataset, expressed in Uniform Resource Name (URN) format. (2020-06-08)  [ Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified. ] |

|  |
| --- |
| geometry : point Public  [ Stereotype is «SpatialAttribute». Is static True. Containment is Not Specified. ] |

|  |
| --- |
| Heading : real Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  Heading of the target in degrees  [ Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified. ] |

|  |
| --- |
| Length : real Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  Measured length of the target in meter  [ Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified. ] |

|  |
| --- |
| NavStatus : NavStatus Public  Navigation status of the target  [ Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified. ] |

|  |
| --- |
| ROT : real Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  Rate of turn in degrees per minute  [ Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified. ] |

|  |
| --- |
| SOGValue : SOGValue Public  Speed over ground in meters per second  [ Stereotype is «ComplexAttribute». Is static True. Containment is Not Specified. ] |

|  |
| --- |
| trackValidity : trackValidity Public  [ Stereotype is «ComplexAttribute». Is static True. Containment is Not Specified. ] |

|  |
| --- |
| Width : real Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  Measured Width of the target in meter  [ Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified. ] |

| **ASSOCIATIONS** | |
| --- | --- |
| Association (direction: Source -> Destination) TargetPositioning | |
| Source: Public positions (Class) TrackData «FeatureType»  Cardinality: [0..\*] | Target: Public object (Class) TargetData «FeatureType»  Cardinality: [1] |

## **trackValidity**

*Class «ComplexAttribute» in package 'Starter Class Diagram'*

Validity of a measured track.

trackValidity

Version 1.0 Phase 1.0 Proposed

MongE created on 2024-01-30. Last modified 2024-01-30

| **ATTRIBUTES** |
| --- |
| TrackStatus : TrackStatus Public  Validity of the track  [ Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified. ] |

|  |
| --- |
| UpdateTime : dateTime Public  Date and time in UTC format (YYYY-MM-DDThh:mm:ss.sssZ) (subset of ISO 8601) this position was measured.  [ Stereotype is «SimpleAttribute». Is static True. Containment is Not Specified. ] |

## **NavStatus**

*Enumeration in package 'Starter Class Diagram'*

Navigation status of the target

NavStatus

Version 1.0 Phase 1.0 Proposed

MongE created on 2024-01-30. Last modified 2024-01-30

| **ATTRIBUTES** |
| --- |
| under way using engine : Public = 0  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |

|  |
| --- |
| at anchor : Public = 1  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |

|  |
| --- |
| not under command : Public = 2  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |

|  |
| --- |
| restricted manoeuvrability : Public = 3  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |

|  |
| --- |
| constrained by her draught : Public = 4  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |

|  |
| --- |
| moored : Public = 5  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |

|  |
| --- |
| aground : Public = 6  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |

|  |
| --- |
| engaged in fishing : Public = 7  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |

|  |
| --- |
| under way sailing : Public = 8  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |

|  |
| --- |
| engaged in fishing other than trawling : Public = 9  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |

|  |
| --- |
| air-cushion vessel in non displacement mode or WIG craft taking off, landing or in flight : Public = 10  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |

|  |
| --- |
| power driven vessel towing astern : Public = 11  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |

|  |
| --- |
| power driven vessel pushing ahead or towing alongside : Public = 12  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |

|  |
| --- |
| in distress or requiring assistance : Public = 13  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |

|  |
| --- |
| AIS SART, seeking to attract attention : Public = 14  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |

|  |
| --- |
| undefined default : Public = 15  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |

## **speedUnits**

*Enumeration in package 'Starter Class Diagram'*

The units for description of speed. (2020-07-03)

speedUnits

Version 1.0 Phase 1.0 Proposed

MongE created on 2024-01-30. Last modified 2024-01-30

| **ATTRIBUTES** |
| --- |
| Metres Per Second : Public = 1  An SI derived unit of both speed (scalar) and velocity (vector quantity which specifies both magnitude and a specific direction), defined by distance in metres divided by time in seconds. (2020-07-03)  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |

|  |
| --- |
| Kilometres Per Hour : Public = 2  A unit of speed, expressing the number of kilometres travelled in one hour. (2020-07-03)  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |

|  |
| --- |
| Miles Per Hour : Public = 3  An imperial and United States customary unit of speed expressing the number of statute miles covered in one hour. (2020-07-03)  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |

|  |
| --- |
| Knots : Public = 4  A nautical unit of speed. One knot is one nautical mile per hour. The name is derived from the knots in the log line. (2020-07-03)  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |

## **TargetOrigin**

*Enumeration in package 'Starter Class Diagram'*

IVEF: was SourceType

TargetOrigin

Version 1.0 Phase 1.0 Proposed

MongE created on 2024-01-30. Last modified 2024-01-30

| **ATTRIBUTES** |
| --- |
| Unknown : Public = 0  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |

|  |
| --- |
| Transponder : Public = 1  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |

|  |
| --- |
| Database (VTS Plan Server) : Public = 2  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |

|  |
| --- |
| Manual (VTS Officer) : Public = 3  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |

|  |
| --- |
| Fused : Public = 4  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |

|  |
| --- |
| External Source : Public = 5  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |

## **targetType**

*Enumeration in package 'Starter Class Diagram'*

targetType

Version 1.0 Phase 1.0 Proposed

MongE created on 2024-01-30. Last modified 2024-01-30

| **ATTRIBUTES** |
| --- |
| Unknown : Public = 0  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |

|  |
| --- |
| Vessel : Public = 1  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |

|  |
| --- |
| Aids to Navigate : Public = 2  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |

## **TrackStatus**

*Enumeration in package 'Starter Class Diagram'*

Validity of the track

TrackStatus

Version 1.0 Phase 1.0 Proposed

MongE created on 2024-01-30. Last modified 2024-01-30

| **ATTRIBUTES** |
| --- |
| Updated, (sensors are updating the track) : Public = 1  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |

|  |
| --- |
| Coasted, (no sensor is updating the track) : Public = 2  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |

|  |
| --- |
| Dropped : Public = 3  [ Stereotype is «enum». Is static True. Containment is Not Specified. ] |