

**VTS Digital Information Service**

**Product Specification**

**Draft 0.6.3 – November 2020**

VTS Digital Information Service Product Specification

Annex D

Feature Catalogue

This page intentionally left blank

Table of Contents

[1 Catalogue header information 4](#_Toc55157619)

[2 Definition Sources 5](#_Toc55157620)

[3 Simple Attributes 6](#_Toc55157621)

[3.1 Source MRN of Vessel 6](#_Toc55157622)

[3.2 MMSI Code 6](#_Toc55157623)

[3.3 Message Identifier 6](#_Toc55157624)

[3.4 Message Markers 6](#_Toc55157625)

[3.5 Assignment 7](#_Toc55157626)

[3.6 Waiting Time 7](#_Toc55157627)

[3.7 Assignment Comment 7](#_Toc55157628)

[3.8 Acknowledgement Code 7](#_Toc55157629)

[3.9 Reported At 8](#_Toc55157630)

[3.10 Reported By 8](#_Toc55157631)

[3.11 Request Reply Information 8](#_Toc55157632)

[3.12 Reference Object 9](#_Toc55157633)

[3.13 Time Type 9](#_Toc55157634)

[3.14 Window After 10](#_Toc55157635)

[3.15 Window Before 10](#_Toc55157636)

[3.16 Location Maritime Resource Name 10](#_Toc55157637)

[3.17 Terminal 10](#_Toc55157638)

[3.18 Effective Time 11](#_Toc55157639)

[3.19 Performing Actor 11](#_Toc55157640)

[3.20 Service Object 11](#_Toc55157641)

[3.21 Time Sequence 12](#_Toc55157642)

[3.22 Display Name 13](#_Toc55157643)

[3.23 Language 13](#_Toc55157644)

[3.24 Name 13](#_Toc55157645)

[3.25 IMO No 13](#_Toc55157646)

[3.26 Callsign 14](#_Toc55157647)

[3.27 Vessels Characteristics 14](#_Toc55157648)

[3.28 Vessels Characteristics Value 15](#_Toc55157649)

[3.29 Vessels Characteristics Units 15](#_Toc55157650)

[3.30 Category of Vessel 17](#_Toc55157651)

[3.31 Flag State 17](#_Toc55157652)

[3.32 The Number of Crew 17](#_Toc55157653)

[3.33 Captain Telephone Number 17](#_Toc55157654)

[3.34 Crew Name 17](#_Toc55157655)

[3.35 Crew Rank 18](#_Toc55157656)

[3.36 Crew Telephone Number 18](#_Toc55157657)

[3.37 Category of Cargo 18](#_Toc55157658)

[3.38 Category of Dangerous or Hazardous Cargo 18](#_Toc55157659)

[3.39 Load Weight 20](#_Toc55157660)

[3.40 Number of passenger 20](#_Toc55157661)

[3.41 ISPS Level 20](#_Toc55157662)

[3.42 Port State Control 21](#_Toc55157663)

[3.43 Speed Reference 21](#_Toc55157664)

[3.44 Speed Value 21](#_Toc55157665)

[3.45 Speed Units 22](#_Toc55157666)

[3.46 Heading 22](#_Toc55157667)

[3.47 Route Name 22](#_Toc55157668)

[3.48 Route Version 22](#_Toc55157669)

[3.49 Message identifier for Route 23](#_Toc55157670)

[3.50 Bunker Type 23](#_Toc55157671)

[3.51 Quantity 24](#_Toc55157672)

[3.52 Comment 24](#_Toc55157673)

[3.53 Vessel Statement 24](#_Toc55157674)

[3.54 Movement Purpose 24](#_Toc55157675)

[3.55 Whistles 25](#_Toc55157676)

[3.56 Radar Type 25](#_Toc55157677)

[3.57 Abnormal Radar 25](#_Toc55157678)

[3.58 Radar ARPA 26](#_Toc55157679)

[3.59 Speed log 26](#_Toc55157680)

[3.60 Electronic position-fixing 27](#_Toc55157681)

[3.61 Compass system 27](#_Toc55157682)

[3.62 Number of power units in use 27](#_Toc55157683)

[3.63 Engine Telegraph 28](#_Toc55157684)

[3.64 Steering Gear 28](#_Toc55157685)

[3.65 Rudder Indicator 28](#_Toc55157686)

[3.66 RPMPitch Indicator 29](#_Toc55157687)

[3.67 Rate of Turn Indicator 29](#_Toc55157688)

[3.68 VHFEquipment 29](#_Toc55157689)

[3.69 Mooring winches and lines 30](#_Toc55157690)

[3.70 Available Electronic Navigation Aids 30](#_Toc55157691)

[3.71 Accident Alarm Type 30](#_Toc55157692)

[3.72 Accident shipMRN 31](#_Toc55157693)

[3.73 Accident ship MMSI Code 31](#_Toc55157694)

[3.74 Accident Detail 31](#_Toc55157695)

[3.75 Occurred time 31](#_Toc55157696)

[3.76 Abandon Vessel or Not 32](#_Toc55157697)

[3.77 Number of injured person 32](#_Toc55157698)

[3.78 Rescue Equipment 32](#_Toc55157699)

[3.79 Number of lifeboat 32](#_Toc55157700)

[3.80 Number of lifecraft 33](#_Toc55157701)

[3.81 Kind of medical assistance 33](#_Toc55157702)

[3.82 Doctor in vessel 33](#_Toc55157703)

[3.83 Health Condition 33](#_Toc55157704)

[3.84 Time for a meeting 33](#_Toc55157705)

[3.85 Not Under Command situation 34](#_Toc55157706)

[3.86 Tug Request 34](#_Toc55157707)

[3.87 Assistance Detail 34](#_Toc55157708)

[3.88 Medical Assistance among Types of Accidents 34](#_Toc55157709)

[3.89 SAR among Types of Accidents 35](#_Toc55157710)

[3.90 NUC among Types of Accidents 35](#_Toc55157711)

[3.91 Proximity to Danger 35](#_Toc55157712)

[3.92 Navigation in danger 35](#_Toc55157713)

[3.93 Advice Message 35](#_Toc55157714)

[3.94 Warning Message 35](#_Toc55157715)

[3.95 Instruction Message 36](#_Toc55157716)

[3.96 Message identifier for Navigational Warning 36](#_Toc55157717)

[3.97 Valid Date Time 36](#_Toc55157718)

[3.98 Message identifier for Environmental Warning 36](#_Toc55157719)

[3.99 Message identifier for Environmental Conditions 36](#_Toc55157720)

[3.100 Message identifier for Navigational Conditions 37](#_Toc55157721)

[3.101 Significant Feature Reference 37](#_Toc55157722)

[3.102 Communication Channel 37](#_Toc55157723)

[3.103 Telecommunication Identifier 37](#_Toc55157724)

[3.104 Telecommunication Carrier 37](#_Toc55157725)

[3.105 Contact Instructions 37](#_Toc55157726)

[3.106 Telecommunication Service 38](#_Toc55157727)

[4 Complex Attributes 39](#_Toc55157728)

[4.1 VTS Operator Assignment 39](#_Toc55157729)

[4.2 Location State 39](#_Toc55157730)

[4.3 From Location 40](#_Toc55157731)

[4.4 To Location 40](#_Toc55157732)

[4.5 At Location 40](#_Toc55157733)

[4.6 Administration State 40](#_Toc55157734)

[4.7 Vessel name 41](#_Toc55157735)

[4.8 vessel's measurements 41](#_Toc55157736)

[4.9 Ship Crew 42](#_Toc55157737)

[4.10 on board crews 42](#_Toc55157738)

[4.11 Cargo Information 42](#_Toc55157739)

[4.12 ShipSpeed 43](#_Toc55157740)

[4.13 Bunker information 44](#_Toc55157741)

[4.14 Radar Equipment 44](#_Toc55157742)

[4.15 Accident Ship Information 44](#_Toc55157743)

[4.16 Accident Ship Name 45](#_Toc55157744)

[4.17 Accident Ship Cargo Information 45](#_Toc55157745)

[4.18 SAR Detail 46](#_Toc55157746)

[4.19 Medical Assistance Detail 46](#_Toc55157747)

[4.20 Not Under Command(NUC) Detail 47](#_Toc55157748)

[4.21 Navigational Information 47](#_Toc55157749)

[4.22 Navigational Warning Area Name 47](#_Toc55157750)

[4.23 Navigational Condition Area Name 48](#_Toc55157751)

[4.24 Telecommunications 48](#_Toc55157752)

[5 Roles 49](#_Toc55157753)

[5.1 The Contact Provider 49](#_Toc55157754)

[5.2 The Contact Details 49](#_Toc55157755)

[5.3 Information Provided For 49](#_Toc55157756)

[5.4 Provide Information 49](#_Toc55157757)

[5.5 Refers 49](#_Toc55157758)

[5.6 Referred 49](#_Toc55157759)

[6 Information Associations 50](#_Toc55157760)

[6.1 Ship Contact 50](#_Toc55157761)

[Attribute Bindings 50](#_Toc55157762)

[7 Feature Associations 51](#_Toc55157763)

[7.1 relatedShip 51](#_Toc55157764)

[Attribute Bindings 51](#_Toc55157765)

[7.2 related VTS Area 51](#_Toc55157766)

[7.3 reference 51](#_Toc55157767)

[8 Information Types 52](#_Toc55157768)

[8.1 Contact Details 52](#_Toc55157769)

[9 Feature Types 53](#_Toc55157770)

[9.1 VTS Information Service Message 53](#_Toc55157771)

[9.2 Ship Information 54](#_Toc55157772)

[9.3 Ship Dynamic 55](#_Toc55157773)

[9.4 Accident 56](#_Toc55157774)

[9.5 Navigational Equipment Condition 57](#_Toc55157775)

[9.6 Navigational Assistance 58](#_Toc55157776)

[9.7 VTS Area Information 58](#_Toc55157777)

[9.8 Warning 59](#_Toc55157778)

[9.9 Conditions 59](#_Toc55157779)

[9.10 Warning Detail 60](#_Toc55157780)

[9.11 Sending Accident Information In VTS Area 60](#_Toc55157781)

[9.12 Environmental Warning 61](#_Toc55157782)

[9.13 Navigational Warning 62](#_Toc55157783)

[9.14 Environmental Conditions 62](#_Toc55157784)

[9.15 Navigational Conditions 63](#_Toc55157785)

# 1 Catalogue header information

Name: Feature Catalogue for VTS Digital Information Service

Scope: SMART-Navigation Project.  
Field of Application: VTS  
Version Number: 0.6.2  
Version date: 2020-09-01

Producer information:  
Individual name:   
Organisation name: SMART-Navigation Project Team  
Phone:

| **Number** | **Number type** |
| --- | --- |
| +82 042 866 3192 | voice |
| +82 042 866 3699 | fax |

Address:

| **Delivery point** | **City** | **Administrative area** | **Postal code** | **Country** | **Email address** |
| --- | --- | --- | --- | --- | --- |
| 32, Yuseong-daero 1312beon-gil, Yuseong-gu | Daejeon |  | 34103 | Republic of Korea |  |

Online resource information:   
Hours of Service:   
Contact Instructions:   
Position Name:   
Role: owner  
Classification: unclassified

# 2 Definition Sources

No definition sources in catalogue

# 3 Simple Attributes

## 3.1 Source MRN of Vessel

Name: Source MRN of Vessel

Definition: MRN is a naming scheme that can uniquely identify any maritime resource on a global scale. shipMRN is the unique value given to the ship.

Code:’shipMRN’

Remarks:   
Aliases: (none)  
Value Type: URN

## 3.2 MMSI Code

Name: MMSI Code

Definition: The Maritime Mobile Service Identity (MMSI) Code is formed of a series of ninedigits which are transmitted over the radio path in order to uniquely identify ship stations, ship earth stations,coast stations, coast earth stations, and group calls. These identities are formed in such a way that theidentity or part thereof can be used by telephone and telex subscribers connected to the generaltelecommunications network principally to call ships automatically. (Adapted from Appendix 43 of theInternational Telecommunications Union Radio Regulations).

Code:’MMSICode’

Remarks:   
Aliases: (none)  
Value Type: text

## 3.3 Message Identifier

Name: Message Identifier

Definition: A unique identifier distinguishing one message from another

Code:’messageIdentifier’

Remarks:   
Aliases: (none)  
Value Type: text

## 3.4 Message Markers

Name: Message Markers

Definition: The purpose of a message used to facilitate communication between ships.

Code:’messageMarkers’

Remarks:   
Aliases: (none)  
Value Type: enumeration

Listed Values

| **Label** | **Definition** | **Code** | **Remarks** |
| --- | --- | --- | --- |
| ‘Instruction’ Aliases: (none) | This indicates that the following message implies the intention of the sender to influence others by a Regulation | 1 |  |
| ‘Advice’  Aliases: (none) | This indicates that the following message implies the intention of the sender to influence others by a Recommendation | 2 |  |
| ‘Warning’  Aliases: (none) | This indicates that the following message implies the intention of the sender to inform others about danger | 3 |  |
| ‘Information’  Aliases: (none) | This indicates that the following message is restricted to observed facts, situations, etc | 4 |  |
| ‘Question’  Aliases: (none) | This indicates that the following message is of an interrogative character | 5 |  |
| ‘Answer’  Aliases: (none) | This indicates that the following message is the reply to a previous question | 6 |  |
| ‘Request’  Aliases: (none) | This indicates that the following message is asking for action from others with respect to the vessel | 7 |  |
| ‘Intention’  Aliases: (none) | This indicates that the following message informs others about immediate navigational action intended to be taken | 8 |  |

## 3.5 Assignment

Name: Assignment

Definition: Approval result for items requested by vessel to VTS Operator true: approval/false: deny

Code:’assignment’

Remarks:   
Aliases: (none)  
Value Type: boolean

## 3.6 Waiting Time

Name: Waiting Time

Definition: Time the vessel can perform the requested item to the VTS Operator

Code:’waitingTime’

Remarks:   
Aliases: (none)  
Value Type: dateTime

## 3.7 Assignment Comment

Name: Assignment Comment

Definition: FreeText for the approval result of the item requested by the vessel to the VTS Operator

Code:’assignmentComment’

Remarks:   
Aliases: (none)  
Value Type: text

## 3.8 Acknowledgement Code

Name: Acknowledgement Code

Definition: Identifier to verify normal reception for each message sent.

Code:’acknowledgementCode’

Remarks:   
Aliases: (none)  
Value Type: enumeration

Listed Values

| **Label** | **Definition** | **Code** | **Remarks** |
| --- | --- | --- | --- |
| 'ACK' Aliases: (none) | Positive Acknowledge | 1 |  |
| ‘NACK'  Aliases: (none) | Negative Acknowledge | 2 |  |

## 3.9 Reported At

Name: Reported At  
Definition: Time when a time stamp was reported  
Code: 'reportedAt'  
Remarks:   
Aliases: (none)  
Value Type: dateTime

## 3.10 Reported By

Name: Reported By  
Definition: Entity that reported a time stamp  
Code: 'reportedBy'  
Remarks:   
Aliases: (none)  
Value Type: text

## 3.11 Request Reply Information

Name: Request Reply Information

Definition: Category of information requested by ships within VTS Area Or a category of information provided to a ship at the request of a ship or at the discretion of the VTS.

Code:’requestReplyInformtion’

Remarks:   
Aliases: (none)  
Value Type: enumeration

Listed Values

| **Label** | **Definition** | **Code** | **Remarks** |
| --- | --- | --- | --- |
| ‘Environmental conditions(meteo)’ Aliases: (none) | Environmental conditions(meteo) | 1 |  |
| ‘Environmental conditions(hydrographical)’  Aliases: (none) | Environmental conditions(hydrographical) | 2 |  |
| ‘Environmental conditions(warnings)’  Aliases: (none) | Environmental conditions(warnings) | 3 |  |
| ‘Navigational conditions(warnings)’  Aliases: (none) | Navigational conditions(warnings) | 4 |  |
| ‘Navigational conditions(limitations)’  Aliases: (none) | Navigational conditions(limitations) | 5 |  |
| ‘Navigational conditions(status)’  Aliases: (none) | Navigational conditions(status) | 6 |  |
| ‘Navigational conditions(geographical information)’  Aliases: (none) | Navigational conditions(geographical information) | 7 |  |
| ‘Navigational assistance’  Aliases: (none) | A Navigational Assistance is a service that provides essential and timely navigational information to assist in the on board navigational decision‐making process and to monitor its effects | 8 |  |
| ‘Ship information for navigational assistance’  Aliases: (none) | VTS has received information on the status of ships required to assist in navigation of ships | 9 |  |

## 3.12 Reference Object

Name: Reference Object  
Definition: The entity that the time stamp concerns that changes location upon a timestamp of a location state  
Code: 'referenceObject'  
Remarks: codeListType=open enumeration; encoding=other: [something]  
Aliases: (none)  
Value Type: S100\_CodeList

Listed Values

| **Label** | **Definition** | **Code** | **Remarks** |
| --- | --- | --- | --- |
| 'ESCORT\_TUG' Aliases: (none) | The reference object of the escort tug boat (as the conductor of escort tug operations) as arriving to or departing from a particular location | 3 |  |
| 'PILOT\_BOAT' Aliases: (none) | The reference object of the pilot boat (as the transport boat for pilots being brought to/from ships before / after pilotage) as being arrived and/or departed | 10 |  |
| 'TUG' Aliases: (none) | The reference object of the tug boat (as the conductor of towage) as arriving to or departing from a particular location | 16 |  |
| 'VESSEL' Aliases: (none) | The reference object of the vessel itself (as the conductor of the port visit to realize the purpose of call) as arriving to or departing from a particular location | 17 |  |

## 3.13 Time Type

Name: Time Type  
Definition: The time dimension of a time stamp combined with the state expressing intentions, recommendations or outcomes   
Code: 'timeType'  
Remarks:   
Aliases: (none)  
Value Type: enumeration

Listed Values

| **Label** | **Definition** | **Code** | **Remarks** |
| --- | --- | --- | --- |
| 'ESTIMATED' Aliases: (none) | The time type for expressing assessed time of occurrence | 1 |  |
| 'ACTUAL' Aliases: (none) | The timetype for expressing the actual time of occurrence | 2 |  |
| 'PLANNED' Aliases: (none) | The timetype for expressing planned time of occurrence | 3 |  |
| 'RECOMMENDED' Aliases: (none) | The timetype for expressing recommended time of occurrence | 4 |  |
| 'REQUIRED' Aliases: (none) | Use of facility, waterway, or service is required. | 5 |  |

## 3.14 Window After

Name: Window After  
Definition: Time offset, after a given time.   
Code: 'windowAfter'  
Remarks: Format of (positive) hours and minutes (HH:MM)  
Aliases: (none)  
Value Type: text

## 3.15 Window Before

Name: Window Before  
Definition: Time offset, before a given time.   
Code: 'windowBefore'  
Remarks: Format of (positive) hours and minutes (HH:MM)  
Aliases: (none)  
Value Type: text

## 3.16 Location Maritime Resource Name

Name: Location Maritime Resource Name  
Definition: Location identifier, based on MRN. This can be either a specific identifier for an identified physical location or a type-only identifier for a logical location, such as BERTH  
Code: 'locationMRN'  
Remarks:   
Aliases: (none)  
Value Type: URN

## 3.17 Terminal

Name: Terminal  
Definition: TBD  
Code: 'terminal'  
Remarks:   
Aliases: (none)  
Value Type: URN

## 3.18 Effective Time

Name: Effective Time  
Definition: The instant at which the information or condition becomes effective.  
Code: 'effectiveTime'  
Remarks:   
Aliases: (none)  
Value Type: dateTime

## 3.19 Performing Actor

Name: Performing Actor  
Definition: The actor performing action related to the service referenced in service object   
Code: 'performingActor'  
Remarks:   
Aliases: (none)  
Value Type: URN

## 3.20 Service Object

Name: Service Object  
Definition: The reference to a particular service in service state and administration state messages  
Code: 'serviceObject'  
Remarks: codeListType=open enumeration; encoding=other: [something]  
Aliases: (none)  
Value Type: S100\_CodeList

Listed Values

| **Label** | **Definition** | **Code** | **Remarks** |
| --- | --- | --- | --- |
| 'ANCHORING' Aliases: (none) | The service object of anchoring (from when the vessel has dropped anchor, until anchor away) as being commenced and/or completed | 1 |  |
| 'ARRIVAL\_BERTH' Aliases: (none) | The service object of arrival berth (preparing and tying the vessel until it is all fast) as being commenced and/or completed | 3 |  |
| 'ARRIVAL\_PORTAREA' Aliases: (none) | The service object of arrival port area (passing the port area limit when arriving to the port) as being commenced and/or completed | 4 |  |
| 'ARRIVAL\_VTSAREA' Aliases: (none) | The service object of arrival VTS area (passing the VTS area limit when arriving to the VTS area) as being commenced and/or completed | 5 |  |
| 'BERTH\_SHIFTING' Aliases: (none) | The service object of berth shifting (initiating and conducting a berth shift) as being commenced and/or completed | 6 |  |
| 'BERTH\_VISIT' Aliases: (none) | The service object of berth visit (initiating and conducting a berth visit) as being commenced and/or completed | 7 |  |
| 'DEPARTURE\_BERTH' Aliases: (none) | The service object of departure berth (preparing and releasing the vessel until it is all loose) as being commenced and/or completed | 12 |  |
| 'DEPARTURE\_PORTAREA' Aliases: (none) | The service object of departure port area (passing the port area limit when leaving the port) as being commenced and/or completed | 13 |  |
| 'ESCORT\_TOWAGE' Aliases: (none) | The service object of escort towage (initiating and conducting escort towage) as being commenced and/or completed | 16 |  |
| 'PILOTAGE' Aliases: (none) | The service object of pilotage (initiating and conducting pilot operations) as being commenced and/or completed | 26 |  |
| 'PORT\_VISIT' Aliases: (none) | The service object of port visit (initiating and conducting the port visit according to the purpose of call) as being commenced and/or completed | 28 |  |
| 'TOWAGE' Aliases: (none) | The service object of towage (initiating and conducting tug operations) as being commenced and/or completed | 37 |  |

## 3.21 Time Sequence

Name: Time Sequence  
Definition: The component of a state (as location, service, administrative state) regulating the communicative intent of the state (such as arrived, departed, commenced, completed, requested, request received, confirmed, denied, cancelled)  
Code: 'timeSequence'  
Remarks:   
Aliases: (none)  
Value Type: enumeration

Listed Values

| **Label** | **Definition** | **Code** | **Remarks** |
| --- | --- | --- | --- |
| 'CANCELLED' Aliases: (none) | The time sequence (of an administrative state) to cancel a service [service object] by performing actor | 1 |  |
| 'CONFIRMED' Aliases: (none) | The time sequence (of an administrative state) to confirm a service [service object] by performing actor | 2 |  |
| 'DENIED' Aliases: (none) | The time sequence (of an administrative state) to deny a service [service object] by performing actor | 3 |  |
| 'REQUESTED' Aliases: (none) | The time sequence (of an administrative state) to request a service [service object] by the client | 4 |  |
| 'REQUEST\_RECEIVED' Aliases: (none) | The time sequence (of an administrative state) to tell that the request of a service [service object] has been received by performing actor | 5 |  |
| 'ARRIVAL\_TO' Aliases: (none) | The time sequence (of a location state) to tell that a reference object is planned to / has arrived to a particular location | 8 |  |
| 'DEPARTURE\_FROM' Aliases: (none) | The time sequence (of a location state) to tell that a reference object is planned to / has departed from a particular location | 9 |  |

## 3.22 Display Name

Name: Display Name

Definition: A statement expressing if a feature name is to be displayed in certain system display settings or not.

Code:’displayName’

Remarks:   
Aliases: (none)  
Value Type: boolean

## 3.23 Language

Name: Language

Definition: The method of human communication, either spoken or written, consisting of the use of words in a structured and conventional way.

Code:’language’

Remarks:   
Aliases: (none)  
Value Type: text

## 3.24 Name

Name: Name

Definition: IHO Transfer Standard for Digital Hydrographic Data, Appendix A: Object Catalogue - Description of the Feature Coding Schema to be Used for Hydrographic Requirements

Code:’name’

Remarks:   
Aliases: (none)  
Value Type: text

## 3.25 IMO No

Name: IMO No

Definition: The International Maritime Organization (IMO) number is a unique reference for ships, registered ship owners and management companies. IMO numbers were introduced to improve maritime safety and security and to reduce maritime fraud. They consist of the three letters "IMO" followed by unique seven-digit numbers, assigned under the International Convention for the Safety of Life at Sea (SOLAS).

Code:’IMONo’

Remarks:   
Aliases: (none)  
Value Type: text

## 3.26 Callsign

Name: Call Sign

Definition: The designated call-sign of a radio station, pilot, ....

Code:’callSign’

Remarks:   
Aliases: (none)  
Value Type: text

## 3.27 Vessels Characteristics

Name: Vessels Characteristics

Definition: Characteristics of vessels

Code:’vesselsCharacteristics’

Remarks:   
Aliases: (none)  
Value Type: enumeration

Listed Values

| **Label** | **Definition** | **Code** | **Remarks** |
| --- | --- | --- | --- |
| ' length overall' Aliases: (none) | The maximum length of the ship (L.O.A.) | 1 |  |
| ' length at waterline’ Aliases: (none) | The ship's length measured at the waterline (L.W.L.) | 2 |  |
| 'breadth' Aliases: (none) | The width or beam of the vessel. | 3 |  |
| ‘draught ' Aliases: (none) | The depth of water necessary to float a vessel fully loaded. | 4 |  |
| 'displacement tonnage ' Aliases: (none) | A measurement of the weight of the vessel, usually used for warships. (Merchant ships are usually measured based on the volume of cargo space; see tonnage). Displacement is expressed either in long tons of 2,240 pounds or metric tonnes of 1,000 kg. Since the two units are very close in size (2,240 pounds = 1,016 kg and 1,000 kg = 2,205 pounds), it is common not to distinguish between them. To preserve secrecy, nations sometimes misstate a warship's displacement. | 6 |  |
| ' displacement tonnage, light' Aliases: (none) | The weight of the ship excluding cargo, fuel, ballast, stores, passengers, and crew, but with water in the boilers to steaming level. | 7 |  |
| 'displacement tonnage, loaded' Aliases: (none) | The weight of the ship including cargo, passengers, fuel, water, stores, dunnage and such other items necessary for use on a voyage, which brings the vessel down to her load draft. | 8 |  |
| 'deadweight tonnage' Aliases: (none) | The difference between displacement, light and displacement, loaded. A measure of the ship's total carrying capacity. | 9 |  |
| 'gross tonnage' Aliases: (none) | The entire internal cubic capacity of the ship expressed in tons of 100 cubic feet to the ton, except certain spaces with are exempted such as: peak and other tanks for water ballast, open forecastle bridge and poop, access of hatchways, certain light and air spaces, domes of skylights, condenser, anchor gear, steering gear, wheel house, galley and cabin for passengers. | 10 |  |
| 'net tonnage' Aliases: (none) | Obtained from the gross tonnage by deducting crew and navigating spaces and allowances for propulsion machinery. | 11 |  |
| 'panama canal/universal measurement system net tonnage' Aliases: (none) | the Panama Canal/Universal Measurement System (PC/UMS) is based on net tonnage, modified for Panama Canal purposes. PC/UMS is based on a mathematical formula to calculate a vessel's total volume; a PC/UMS net ton is equivalent to 100 cubic feet of capacity. | 12 |  |
| 'suez canal net tonnage' Aliases: (none) | the Suez Canal Net Tonnage (SCNT) is derived with a number of modifications from the former net register tonnage of the Moorsom System and was established by the International Commission of Constantinople in its Protocol of 18 December 1873. It is still in use, as amended by the Rules of Navigation of the Suez Canal Authority, and is registered in the Suez Canal Tonnage Certificate. | 13 |  |

## 3.28 Vessels Characteristics Value

Name: Vessels Characteristics Value

Definition: The value of a particular characteristic such as a dimension or tonnage of a vessel.

Code:’vesselsCharacteristicsValue’

Remarks:   
Aliases: (none)  
Value Type: real

## 3.29 Vessels Characteristics Units

Name: Vessels Characteristics Units

Definition: the unit used for vessel characteristics attribute

Code:’vesselsCharacteristicsUnit’

Remarks:   
Aliases: (none)  
Value Type: enumeration

Listed Values

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

## 3.30 Category of Vessel

Name: Category of Vessel

Definition: Classification of vessels by function or use.

Code:’categoryOfVessel’

Remarks:   
Aliases: (none)  
Value Type: S100\_CodeList

## 3.31 Flag State

Name: Flag State

Definition: a country in which a ship belongs the right to be raised

Code:’flagState’

Remarks:   
Aliases: (none)  
Value Type: text

## 3.32 The Number of Crew

Name: The Number of Crew

Definition: the number of sailors aboard a ship.

Code:’numberOfCrew’

Remarks:   
Aliases: (none)  
Value Type: integer

## 3.33 Captain Telephone Number

Name: Captain Telephone Number

Definition: the captain's telephone number

Code:’captainTelephoneNumber’

Remarks:   
Aliases: (none)  
Value Type: text

## 3.34 Crew Name

Name: Crew Name

Definition: Name of the crew aboard the ship.

Code:’crewName’

Remarks:   
Aliases: (none)  
Value Type: text

## 3.35 Crew Rank

Name: Crew Rank

Definition: Rank of the crew aboard the ship.

Code:’crewRank’

Remarks:   
Aliases: (none)  
Value Type: text

## 3.36 Crew Telephone Number

Name: Crew Telephone Number

Definition: the telephone number of the crew on board the ship

Code:’crewTelephoneNumber’

Remarks:   
Aliases: (none)  
Value Type: text

## 3.37 Category of Cargo

Name: Category of Cargo

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

Code:’categoryOfCargo’

Remarks:   
Aliases: (none)  
Value Type: enumeration

Listed Values

| **Label** | **Definition** | **Code** | **Remarks** |
| --- | --- | --- | --- |
| 'bulk' Aliases: (none) | Normally dry cargo which is transported to and from the vessel on conveyors or grabs. | 1 |  |
| 'container' Aliases: (none) | One of a number of standard sized cargo carrying units, secured using standard corner attachments and bar. | 2 |  |
| 'general' Aliases: (none) | Break bulk cargo normally loaded by crane. | 3 |  |
| 'liquid' Aliases: (none) | Any cargo loaded by pipeline | 4 |  |
| 'passenger' Aliases: (none) | A fee paying traveller | 5 |  |
| 'livestock'  Aliases: (none) | Live animals carried in bulk | 6 |  |
| 'dangerous or hazardous'  Aliases: (none) | Dangerous or hazardous cargo as described by the IMO International Maritime Dangerous Goods code. | 7 |  |

## 3.38 Category of Dangerous or Hazardous Cargo

Name: Category of Dangerous or Hazardous Cargo

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

Code:’categoryOfDangerousOrHazardousCargo’

Remarks:   
Aliases: (none)  
Value Type: enumeration

| **Label** | **Definition** | **Code** | **Remarks** |
| --- | --- | --- | --- |
| 'IMDG Code Class 1 Div. 1.1' Aliases: (none) | Explosives, Division 1: substances and articles which have a mass explosion hazard | 1 |  |
| 'IMDG Code Class 1 Div. 1.2' Aliases: (none) | Explosives, Division 2: substances and articles which have a projection hazard but not a mass explosion hazard | 2 |  |
| 'IMDG Code Class 1 Div. 1.3' Aliases: (none) | Explosives, Division 3: substances and articles which have a fire hazard and either a minor blast hazard or a minor projection hazard or both, but not a mass explosion hazard | 3 |  |
| 'IMDG Code Class 1 Div. 1.4' Aliases: (none) | Explosives, Division 4: substances and articles which present no significant hazard | 4 |  |
| 'IMDG Code Class 1 Div. 1.5' Aliases: (none) | Explosives, Division 5: very insensitive substances which have a mass explosion hazard | 5 |  |
| 'IMDG Code Class 1 Div. 1.6'  Aliases: (none) | Explosives, Division 6: extremely insensitive articles which do not have a mass explosion hazard | 6 |  |
| 'IMDG Code Class 2 Div. 2.1’  Aliases: (none) | Gases, flammable gases | 7 |  |
| 'IMDG Code Class 2 Div. 2.2’  Aliases: (none) | Gases, non-flammable, non-toxic gases | 8 |  |
| 'IMDG Code Class 2 Div. 2.3’  Aliases: (none) | Gases, toxic gases | 9 |  |
| ‘IMDG Code Class 3’  Aliases: (none) | flammable liquids | 10 |  |
| ‘IMDG Code Class 4 Div. 4.1’  Aliases: (none) | flammable solids, self-reactive substances and desensitized explosives | 11 |  |
| ‘IMDG Code Class 4 Div. 4.2’  Aliases: (none) | substances liable to spontaneous combustion | 12 |  |
| ‘IMDG Code Class 4 Div. 4.3’  Aliases: (none) | substances which, in contact with water, emit flammable gases | 13 |  |
| ‘IMDG Code Class 5 Div. 5.1’  Aliases: (none) | oxidizing substances | 14 |  |
| ‘IMDG Code Class 5 Div. 5.2’  Aliases: (none) | organic peroxides | 15 |  |
| ‘IMDG Code Class 6 Div. 6.1’  Aliases: (none) | toxic substances | 16 |  |
| ‘IMDG Code Class 6 Div. 6.2’  Aliases: (none) | infectious substances | 17 |  |
| ‘IMDG Code Class 7’  Aliases: (none) | Radioactive material | 18 |  |
| ‘IMDG Code Class 8’  Aliases: (none) | Corrosive substances | 19 |  |
| ‘IMDG Code Class 9’  Aliases: (none) | Miscellaneous dangerous substances and articles | 20 |  |
| ‘Harmful Substances in packaged form’  Aliases: (none) | Harmful substances are those substances which are identified as marine pollutants in the International Maritime Dangerous Goods Code (IMDG Code). Packaged form is defined as the forms of containment specified for harmful substances in the IMDG Code. | 21 |  |

## 3.39 Load Weight

Name: Load Weight

Definition: the weight of a cargo, etc. loaded on a vehicle or cargo

Code:’loadWeight’

Remarks:   
Aliases: (none)  
Value Type: real

## 3.40 Number of passenger

Name: Number of passenger

Definition: the number of passengers on board the ship

Code:’numberOfPassenger’

Remarks:   
Aliases: (none)  
Value Type: integer

## 3.41 ISPS Level

Name: ISPS Level

Definition: Classification of ISPS security levels according to the ISPS Code.

Code:’ISPSLevel’

Remarks:   
Aliases: (none)  
Value Type: enumeration

Listed Values

| **Label** | **Definition** | **Code** | **Remarks** |
| --- | --- | --- | --- |
| 'ISPS Level 1' Aliases: (none) | The level for which minimum appropriate protective security measures shall be maintained at all times. | 1 |  |
| 'ISPS Level 2' Aliases: (none) | The level for which appropriate additional protective security measures shall be maintained for a period of time as a result of heightened risk of a security incident. | 2 |  |
| 'ISPS Level 3' Aliases: (none) | The level for which further specific protective security measures shall be maintained for a limited period of time when a security incident is probable or imminent, although it may not be possible to identify the specific target. | 3 |  |

## 3.42 Port State Control

Name: Port State Control

Definition: Port State Control (PSC) is the inspection of foreign ships in other national ports by PSC officers (inspectors) for the purpose of verifying that the competency of the master and officers on board, and the condition of the ship and its equipment comply with the requirements of international conventions (e.g. SOLAS, MARPOL, STCW, etc.) and that the vessel is manned and operated in compliance with applicable international law.

Code:’portStateControl’

Remarks:   
Aliases: (none)  
Value Type: text

## 3.43 Speed Reference

Name: Speed Reference

Definition: Indicates the type of speed measurement

Code:’speedReference’

Remarks: '  
Aliases: (none)  
Value Type: enumeration

Listed Values

| **Label** | **Definition** | **Code** | **Remarks** |
| --- | --- | --- | --- |
| 'other' Aliases: (none) | other | 1 |  |
| 'speed over ground' Aliases: (none) | The vessel's actual speed, determined by dividing the distance between successive fixes by the time between the fixes | 2 |  |
| 'speed through water' Aliases: (none) | The vessel's actual speed, determined by substracting the speed over ground by the current speed | 3 |  |

## 3.44 Speed Value

Name: Speed Value

Definition: ship speed value

Code:’speedValue’

Remarks:   
Aliases: (none)  
Value Type: real

## 3.45 Speed Units

Name: Speed Units

Definition: The units for description of speed.

Code:’speedUnits’

Remarks:   
Aliases: (none)  
Value Type: enumeration

Listed Values

| **Label** | **Definition** | **Code** | **Remarks** |
| --- | --- | --- | --- |
| 'metres per second' Aliases: (none) | metres per second | 1 |  |
| 'Kilometres per hour' Aliases: (none) | Kilometres per hour | 2 |  |
| 'Miles Per Hour' Aliases: (none) | Miles Per Hour | 3 |  |
| ‘Nautical Miles Per Hour (Knots)’  Aliases: (none) | Nautical Miles Per Hour (Knots) | 4 |  |

## 3.46 Heading

Name: Heading

Definition: Heading of the target in degrees.

Code:’heading’

Remarks:   
Aliases: (none)  
Value Type: real

## 3.47 Route Name

Name: Route Name

Definition: Identification of the route used as a source for obtain navigation information from S-421

Code:’routeName’

Remarks:   
Aliases: (none)  
Value Type: text

## 3.48 Route Version

Name: Route Version

Definition: Identification of the route used as a source for obtain navigation information from S-421

Code:’routeVersion’

Remarks:   
Aliases: (none)  
Value Type: integer

## 3.49 Message identifier for Route

Name: Message Identifier for Route

Definition: Attribute for include of S-421 IEC Route Plan Exchange Format.

Code:’messageIdentifierForRoute’

Remarks:   
Aliases: (none)  
Value Type: text

## 3.50 Bunker Type

Name: Bunker Type

Definition: Ship Fuel Oil Type

Code:’bunkerType’

Remarks:   
Aliases: (none)  
Value Type: enumeration

Listed Values

| **Label** | **Definition** | **Code** | **Remarks** |
| --- | --- | --- | --- |
| 'Fuel Oil' Aliases: (none) | Fuel oil (also known as heavy oil, marine fuel or furnace oil) is a fraction obtained from petroleum distillation, either as a distillate or a residue. In general terms, fuel oil is any liquid fuel that is burned in a furnace or boiler for the generation of heat or used in an engine for the generation of power, except oils having a flash point of approximately 42 °C (108 °F) and oils burned in cotton or wool-wick burners. Fuel oil is made of long hydrocarbon chains, particularly alkanes, cycloalkanes, and aromatics. The term fuel oil is also used in a stricter sense to refer only to the heaviest commercial fuel that can be obtained from crude oil, i.e., heavier than gasoline and naphtha. | 1 |  |
| 'Marine Diesel Oil' Aliases: (none) | Marine Diesel Oil (MDO) is a type of fuel oil and is a blend of gasoil and heavy fuel oil, with less gasoil than intermediate fuel oil used in the maritime field. Marine Diesel Oil is also called "Distillate Marine Diesel".[1] MDO is widely used by medium speed and medium/high speed marine diesel engines. It is also used in the larger low speed and medium speed propulsion engine which normally burn residual fuel. | 2 |  |
| 'Marine Gas Oil' Aliases: (none) | Marine gasoil (MGO) describes marine fuels that consist exclusively of distillates. Distillates are all those components of crude oil that evaporate in fractional distillation and are then condensed from the gas phase into liquid fractions. Marine gasoil usually consists of a blend of various distillates. Marine gasoil is similar to diesel fuel, but has a higher density. Unlike heavy fuel oil (HFO), marine gasoil does not have to be heated during storage. | 3 |  |
| ‘Other’  Aliases: (none) | Other | 4 |  |

## 3.51 Quantity

Name: Quantity

Definition: Ship Fuel Oil Remaining

Code:’quantity’

Remarks:   
Aliases: (none)  
Value Type: real

## 3.52 Comment

Name: Comment

Definition: Comment regarding an entity obvious from context

Code:’comment’

Remarks:   
Aliases: (none)  
Value Type: text

## 3.53 Vessel Statement

Name: Vessel Statement

Definition: the current state of operation of a ship

Code:’categoryOfStatement’

Remarks:   
Aliases: (none)  
Value Type: enumeration

Listed Values

| **Label** | **Definition** | **Code** | **Remarks** |
| --- | --- | --- | --- |
| 'sailing ' Aliases: (none) | the normal state of sailing of a ship | 1 |  |
| 'anchorage' Aliases: (none) | To anchor(a vessel)in a buoyant place so that it can be safely anchored. | 2 |  |
| 'berthing' Aliases: (none) | Attaching a vessel to a wharf or jetty | 3 |  |

## 3.54 Movement Purpose

Name: Movement Purpose

Definition: Purpose for which ship movements have occurred of the ship

Code:’movementPurpose’

Remarks:   
Aliases: (none)  
Value Type: enumeration

Listed Values

| **Label** | **Definition** | **Code** | **Remarks** |
| --- | --- | --- | --- |
| 'sailing ' Aliases: (none) | the normal state of sailing of a ship | 1 |  |
| 'anchorage' Aliases: (none) | To anchor(a vessel)in a buoyant place so that it can be safely anchored. | 2 |  |
| 'berthing' Aliases: (none) | Attaching a vessel to a wharf or jetty | 3 |  |
| 'passing' Aliases: (none) | Passing the VTS area without berthing/anchorage at this port | 4 |  |

## 3.55 Whistles

Name: Whistles

Definition: A sound-making device equipped to the vessel. The mariners uses the horn to warn others of the vessel's approach or presence, or to communicate his intentions.

Code:’whistles’

Remarks:   
Aliases: (none)  
Value Type: boolean

## 3.56 Radar Type

Name: Radar Type

Definition: The type of radar frequency used in ship navigation.

Code:’radarType’

Remarks:   
Aliases: (none)  
Value Type: enumeration

Listed Values

| **Label** | **Definition** | **Code** | **Remarks** |
| --- | --- | --- | --- |
| 'x-Band' Aliases: (none) | The x-band radar can detect close-range objects clearly because of its short wavelength and high frequency, with a 3cm wavelength of radio waves and a range of 9300-9500MHz. | 1 |  |
| 's-band' Aliases: (none) | The s-band radar has a wavelength of 10cm and a range of 2900-3100MHz of frequency, and is used for distance detection because it recognizes two objects on the base as one object and makes the objects come together and appear as one on the radar screen. | 2 |  |

## 3.57 Abnormal Radar

Name: Abnormal Radar

Definition: A status indicates that RADAR is not available.

Code:’abnormalRadar’

Remarks:   
Aliases: (none)  
Value Type: text

## 3.58 Radar ARPA

Name: Radar ARPA

Definition: The system that can calculate the tracked object's course, speed and closest point of approach (CPA), thereby knowing if there is a danger of collision with the other ship or landmass. ( Automatic Radar Plotting Aid )

Code:’radarARPA’

Remarks:   
Aliases: (none)  
Value Type: enumeration

Listed Values

| **Label** | **Definition** | **Code** | **Remarks** |
| --- | --- | --- | --- |
| 'NOT INSTALLED' Aliases: (none) | Device not installed | 1 |  |
| 'NORMAL' Aliases: (none) | The device is installed, and the condition of the device operates normally. | 2 |  |
| 'ABNORMAL' Aliases: (none) | The device is installed but does not operate normally | 3 |  |

## 3.59 Speed log

Name: Speed Log

Definition: A navigation tool mariners use to estimate the speed of a vessel through water.

Code:’speedLog’

Remarks:   
Aliases: (none)  
Value Type: enumeration

Listed Values

| **Label** | **Definition** | **Code** | **Remarks** |
| --- | --- | --- | --- |
| 'NOT INSTALLED' Aliases: (none) | Device not installed | 1 |  |
| 'NORMAL' Aliases: (none) | The device is installed, and the condition of the device operates normally. | 2 |  |
| 'ABNORMAL' Aliases: (none) | The device is installed but does not operate normally | 3 |  |

## 3.60 Electronic position-fixing

Name: Electronic position-fixing

Definition: A system for detecting and determining the position of vessel, where electronic transceiver units communicate with at least two fixed transceiver stations to perform a constant position determination of movable objects within a delimited area.

Code:’electronicPositionFixing’

Remarks:   
Aliases: (none)  
Value Type: enumeration

Listed Values

| **Label** | **Definition** | **Code** | **Remarks** |
| --- | --- | --- | --- |
| 'NOT INSTALLED' Aliases: (none) | Device not installed | 1 |  |
| 'NORMAL' Aliases: (none) | The device is installed, and the condition of the device operates normally. | 2 |  |
| 'ABNORMAL' Aliases: (none) | The device is installed but does not operate normally | 3 |  |

## 3.61 Compass system

Name: Compass system

Definition: Indicates abnormal condition of compasses, the operating sensor of the vessel

Code:’compassSystem’

Remarks:   
Aliases: (none)  
Value Type: enumeration

Listed Values

| **Label** | **Definition** | **Code** | **Remarks** |
| --- | --- | --- | --- |
| 'NOT INSTALLED' Aliases: (none) | Device not installed | 1 |  |
| 'NORMAL' Aliases: (none) | The device is installed, and the condition of the device operates normally. | 2 |  |
| 'ABNORMAL' Aliases: (none) | The device is installed but does not operate normally | 3 |  |

## 3.62 Number of power units in use

Name: Number of power units in use

Definition: The number of the Power unit you are using.

Code:’numberOfPowerUnitsInUse’

Remarks:   
Aliases: (none)  
Value Type: text

## 3.63 Engine Telegraph

Name: Engine Telegraph

Definition: A communications device used on a vessel for the mariner on the bridge to order engineers in the engine room to power the vessel at a certain desired speed.

Code:’engineTelegraph’

Remarks:   
Aliases: (none)  
Value Type: enumeration

Listed Values

| **Label** | **Definition** | **Code** | **Remarks** |
| --- | --- | --- | --- |
| 'NOT INSTALLED' Aliases: (none) | Device not installed | 1 |  |
| 'NORMAL' Aliases: (none) | The device is installed, and the condition of the device operates normally. | 2 |  |
| 'ABNORMAL' Aliases: (none) | The device is installed but does not operate normally | 3 |  |

## 3.64 Steering Gear

Name: Steering Gear

Definition: The mechanism by which the steering controls of a vehicle are connected to a part, such as a pair of wheels or a rudder, that causes the vessel to turn

Code:’steeringGear’

Remarks:   
Aliases: (none)  
Value Type: enumeration

Listed Values

| **Label** | **Definition** | **Code** | **Remarks** |
| --- | --- | --- | --- |
| 'NOT INSTALLED' Aliases: (none) | Device not installed | 1 |  |
| 'NORMAL' Aliases: (none) | The device is installed, and the condition of the device operates normally. | 2 |  |
| 'ABNORMAL' Aliases: (none) | The device is installed but does not operate normally | 3 |  |

## 3.65 Rudder Indicator

Name: Rudder Indicator

Definition: An indicating device that shows angle of the rudder installed on the vessel

Code:’rudderIndicator’

Remarks:   
Aliases: (none)  
Value Type: enumeration

Listed Values

| **Label** | **Definition** | **Code** | **Remarks** |
| --- | --- | --- | --- |
| 'NOT INSTALLED' Aliases: (none) | Device not installed | 1 |  |
| 'NORMAL' Aliases: (none) | The device is installed, and the condition of the device operates normally. | 2 |  |
| 'ABNORMAL' Aliases: (none) | The device is installed but does not operate normally | 3 |  |

## 3.66 RPMPitch Indicator

Name: RPMPitch Indicator

Definition: An indicating device that shows RPM pitch of the vessel using variable RPM pitch system.

Code:’RPMPitchIndicator’

Remarks:   
Aliases: (none)  
Value Type: enumeration

Listed Values

| **Label** | **Definition** | **Code** | **Remarks** |
| --- | --- | --- | --- |
| 'NOT INSTALLED' Aliases: (none) | Device not installed | 1 |  |
| 'NORMAL' Aliases: (none) | The device is installed, and the condition of the device operates normally. | 2 |  |
| 'ABNORMAL' Aliases: (none) | The device is installed but does not operate normally | 3 |  |

## 3.67 Rate of Turn Indicator

Name: Rate of Turn Indicator

Definition: An indicating device that show Rate of turn for the vessel heading.

Code:’rateOfTurnIndicator’

Remarks:   
Aliases: (none)  
Value Type: integer

## 3.68 VHFEquipment

Name: VHFEquipment

Definition: Marine VHF radio equipment installed on all large ships and most seagoing small craft. It is used for a wide variety of purposes, including summoning rescue services and communicating with harbours, locks, bridges and marinas.

Code:’VHFEquipment’

Remarks:   
Aliases: (none)  
Value Type: enumeration

Listed Values

| **Label** | **Definition** | **Code** | **Remarks** |
| --- | --- | --- | --- |
| 'NOT INSTALLED' Aliases: (none) | Device not installed | 1 |  |
| 'NORMAL' Aliases: (none) | The device is installed, and the condition of the device operates normally. | 2 |  |
| 'ABNORMAL' Aliases: (none) | The device is installed but does not operate normally | 3 |  |

## 3.69 Mooring winches and lines

Name: Mooring winches and lines

Definition: A mooring system prevents the ship from drifting away from a berth and holds the ship in position in relation to the shore loading / discharging equipments, which may have limited freedom of movement. Mooring lines may also assist in heaving the ship alongside a berth or another ship and can be used to assist in unberthing. A mooring winch is an integral part of the mooring system.

Code:’mooringWinchesAndLines’

Remarks:   
Aliases: (none)  
Value Type: enumeration

Listed Values

| **Label** | **Definition** | **Code** | **Remarks** |
| --- | --- | --- | --- |
| 'NOT INSTALLED' Aliases: (none) | Device not installed | 1 |  |
| 'NORMAL' Aliases: (none) | The device is installed, and the condition of the device operates normally. | 2 |  |
| 'ABNORMAL' Aliases: (none) | The device is installed but does not operate normally | 3 |  |

## 3.70 Available Electronic Navigation Aids

Name: Avaliable Electronic Navigation Aids

Definition: Lists available electronic navigation aids such as GNSS, Loran, LRIT, DGPS, AIS, RACON.

Code:’availableElectronicNavigationAids’

Remarks:   
Aliases: (none)  
Value Type: text

## 3.71 Accident Alarm Type

Name: Accident Alarm Type

Definition: Type of alarm that occurs in connection with a ship accident

Code:’accidentAlarmType’

Remarks:   
Aliases: (none)  
Value Type: enumeration

Listed Values

| **Label** | **Definition** | **Code** | **Remarks** |  |
| --- | --- | --- | --- | --- |
| 'SAR' Aliases: (none) | Search and rescue | 1 |  |  |
| 'NUC' Aliases: (none) | Not Under Command | 2 |  |  |
| 'traffic accident' Aliases: (none) | An accident on more than one ship | 3 |  |  |

## 3.72 Accident shipMRN

Name: Accident shipMRN

Definition: Identifier of the ship in the accident(MRN)

Code:’accidentShipMRN’

Remarks:   
Aliases: (none)  
Value Type: URN

## 3.73 Accident ship MMSI Code

Name: Accident ship MMSI Code

Definition: Identifier of the ship in the accident(MMSI Code)

Code:’accidentShipMMSICode’

Remarks:   
Aliases: (none)  
Value Type: text

## 3.74 Accident Detail

Name: Accident Detail

Definition: Brief description of accidents with FreeText

Code:’accidentDetail’

Remarks:   
Aliases: (none)  
Value Type: text

## 3.75 Occurred time

Name: Occurred time

Definition: the time of the accident

Code:’occurredTime’

Remarks:   
Aliases: (none)  
Value Type: dateTime

## 3.76 Abandon Vessel or Not

Name: Abandon Vessel or Not

Definition: To leave a vessel in a situation in which one must give up in the face of an unavoidable situation.

Code:’abandonVesselOrNot’

Remarks:   
Aliases: (none)  
Value Type: boolean

## 3.77 Number of injured person

Name: Number of injured person

Definition: the number of people injured in an accident

Code:’numberOfInjuredPerson’

Remarks:   
Aliases: (none)  
Value Type: integer

## 3.78 Rescue Equipment

Name: Rescue Equipment

Definition: Types of rescue equipment installed on ships

Code:’rescueEquipment’

Remarks:   
Aliases: (none)  
Value Type: enumeration

Listed Values

| **Label** | **Definition** | **Code** | **Remarks** |
| --- | --- | --- | --- |
| 'SART' Aliases: (none) | Search And Rescue Radar Transponder | 1 |  |
| 'EPIRB' Aliases: (none) | Emergency Position Indicating Radio Beacon | 2 |  |
| 'DSC' Aliases: (none) | Digital Selective Calling | 3 |  |

## 3.79 Number of lifeboat

Name: Number of lifeboat

Definition: The number of lifeboats installed on a vessel

Code:’numberOfLifeboat’

Remarks:   
Aliases: (none)  
Value Type: integer

## 3.80 Number of lifecraft

Name: Number of lifecraft

Definition: The number of lifecrafts installed on a vessel

Code:’numberOfLifecraft’

Remarks:   
Aliases: (none)  
Value Type: integer

## 3.81 Kind of medical assistance

Name: kind of medical assistance

Definition: Medical Support Request Type

Code:’kindOfMedicalAssistance’

Remarks:   
Aliases: (none)  
Value Type: enumeration

Listed Values

| **Label** | **Definition** | **Code** | **Remarks** |
| --- | --- | --- | --- |
| 'boat for hospital transfer' Aliases: (none) | Transport a patient to a hospital by boat | 1 |  |
| 'radio medical advice' Aliases: (none) | Get medical assistance through voice support from a doctor. | 2 |  |
| 'helicopter with doctor' Aliases: (none) | Transfer of the patient to a hospital via a helicopter accompanied by the doctor. | 3 |  |

## 3.82 Doctor in vessel

Name: Doctor in vessel

Definition: Whether or not there are doctors in the ship

Code:’doctorInVessel’

Remarks:   
Aliases: (none)  
Value Type: boolean

## 3.83 Health Condition

Name: Health Condition

Definition: Briefly write the health status of the person requesting medical assistance

Code:’healthCondition’

Remarks:   
Aliases: (none)  
Value Type: text

## 3.84 Time for a meeting

Name: Time for a meeting

Definition: Time to meet a doctor or boat/helicopter

Code:’timeForMeeting’

Remarks:   
Aliases: (none)  
Value Type: dateTime

## 3.85 Not Under Command situation

Name: Not Under Command situation

Definition: the cause of a vessel not under command

Code:’notUnderCommandCause’

Remarks:   
Aliases: (none)  
Value Type: enumeration

Listed Values

| **Label** | **Definition** | **Code** | **Remarks** |
| --- | --- | --- | --- |
| 'engine  Aliases: (none) | Ship's engine abnormality | 1 |  |
| 'steering gear' Aliases: (none) | Ship's steering gear abnormality | 2 |  |
| 'propeller' Aliases: (none) | Ship's propeller abnormality | 3 |  |

## 3.86 Tug Request

Name: Tug Request

Definition: Whether a tugboat is requested to tow a vessel.

Code:’tugRequest’

Remarks:   
Aliases: (none)  
Value Type: boolean

## 3.87 Assistance Detail

Name: Assistance Detail

Definition: To describe how to respond to an accident

Code:’assistanceDetail’

Remarks:   
Aliases: (none)  
Value Type: text

## 3.88 Medical Assistance among Types of Accidents

Name: Medical Assistance among Types of Accidents

Definition: When requesting medical assistance among the types of accidents (true=request)

Code:’medicalAssistanceAmongTypesOfAccidents’

Remarks:   
Aliases: (none)  
Value Type: boolean

## 3.89 SAR among Types of Accidents

Name: SAR among Types of Accidents

Definition: When requesting SAR(search and rescue) of the type of accident (true=requested)

Code:’sARAmongTypesOfAccidents’

Remarks:   
Aliases: (none)  
Value Type: boolean

## 3.90 NUC among Types of Accidents

Name: NUC among Types of Accidents

Definition: When vessel control is difficult (true=request)

Code:’nUCAmongTypesOfAccidents’

Remarks:   
Aliases: (none)  
Value Type: boolean

## 3.91 Proximity to Danger

Name: Proximity to Danger

Definition: range and bearing from fixed objects, fairway/channel or way-points; proximity to navigational hazards.

Code:’proximityToDanger’

Remarks:   
Aliases: (none)  
Value Type: text

## 3.92 Navigation in danger

Name: Navigation in danger

Definition: provide information related to navigating into a channel/fairway/lane

Code:’navigationInDanger’

Remarks:   
Aliases: (none)  
Value Type: text

## 3.93 Advice Message

Name: Advice Message

Definition: Recommendations to ships.

Code:’adviceMessage’

Remarks:   
Aliases: (none)  
Value Type: text

## 3.94 Warning Message

Name: Warning Messgae

Definition: Warnings that require attention on the ship.

Code:’warningMessage’

Remarks:   
Aliases: (none)  
Value Type: text

## 3.95 Instruction Message

Name: Instruction Message

Definition: Instructions to be followed by the ship

Code:’instructionMessage’

Remarks:   
Aliases: (none)  
Value Type: text

## 3.96 Message identifier for Navigational Warning

Name: Message identifier for Navigational warning

Definition: Attribute for include of S-124 Navigational Warning.

Code:’messageIdentifierForNavigationalWarning’

Remarks:   
Aliases: (none)  
Value Type: text

## 3.97 Valid Date Time

Name: Valid Date Time

Definition: The time, expressed in Universal Time Coordinated (UTC) for which an object and its attributes are valid or for which an observation was recorded.

Code:’validDateTime’

Remarks:   
Aliases: (none)  
Value Type: dateTime

## 3.98 Message identifier for Environmental Warning

Name: Message identifier for Environmental Warning

Definition: Attribute for include environmental warning information of S-412 Weather Overlay.

Code:’messageIdentifierForEnvironmentalWarning’

Remarks:   
Aliases: (none)  
Value Type: text

## 3.99 Message identifier for Environmental Conditions

Name: Message identifier for Environmentaln Conditions

Definition: Attribute for include environmental conditions of S-412 Weather Overlay.

Code:’messageIdentifierForEnvironmentalConditions’

Remarks:   
Aliases: (none)  
Value Type: text

## 3.100 Message identifier for Navigational Conditions

Name: Name: Message identifier for Navigational Conditions

Definition: Attribute for include navigational conditions of S-127 Marine Traffic Management.

Code:’messageIdentifierForNavigationalCondition’

Remarks:   
Aliases: (none)  
Value Type: text

## 3.101 Significant Feature Reference

Name: Significant Feature Regerence

Definition: reference of the MRN identifier of the significant feature(s)

Code:’significantFeatureReference’

Remarks:   
Aliases: (none)  
Value Type: text

## 3.102 Communication Channel

Name: Communication Channel

Definition: A channel number assigned to a specific radio frequency, frequencies or frequency band.

Code:’communicationChannel’

Remarks:   
Aliases: (none)  
Value Type: text

## 3.103 Telecommunication Identifier

Name: Telecommunication Identifier

Definition: An identifier, such as words, numbers, letters, symbols, or any combination of those used to establish a contact to a particular person, organisation or service.

Code:’telecommunicationIdentifier’

Remarks:   
Aliases: (none)  
Value Type: text

## 3.104 Telecommunication Carrier

Name: Telecommunication Carrier

Definition: The name of a provider or type of carrier for a telecommunication service. This service may include land line based, shore based or satellite based radio connections.

Code:’telcomCarrier’

Remarks:   
Aliases: (none)  
Value Type: text

## 3.105 Contact Instructions

Name: Contact Instructions

Definition: Instructions provided on how to contact a particular person, organisation or service.

Code:’contactInstructions’

Remarks:   
Aliases: (none)  
Value Type: text

## 3.106 Telecommunication Service

Name: Telecommunication Service

Definition: Methods to communicate between involved parties over a distance.

Code:’telecommunicationService’

Remarks:   
Aliases: (none)  
Value Type: S100\_CodeList

# 4 Complex Attributes

## 4.1 VTS Operator Assignment

Name: VTS Operator Assignment

Definition: Results of items requested by vessel to VTS Operator

Code: ‘VTSOperatorAssignment’

Remarks:

Aliases: (none)

Sub-Attributes

| **Sub-attribute** | **Type** | **Mult.** | **Permitted Values** | **sequential** |
| --- | --- | --- | --- | --- |
| assignment | boolean | 1..1 |  | false |
| waitingTime | dateTime | 1..1 |  | false |
| assignmentComment | text | 0..1 |  | false |

## 4.2 Location State

Name: Location State  
Definition: Describes a time related data point for an arrival to or departure from a specified location.   
Code: 'locationState'  
Remarks:   
Aliases: (none)

Sub-Attributes

| **Sub-attribute** | **Type** | **Mult.** | **Permitted Values** | **sequential** |
| --- | --- | --- | --- | --- |
| locationReferenceObject | S100\_CodeList | 1..1 | 1: AGENT 2: BUNKER\_VESSEL 3: ESCORT\_TUG 4: FRESH\_WATER\_VESSEL 5: GANGWAY 6: ICEBREAKER 7: MOORER 8: PASSENGER 9: PILOT 10: PILOT\_BOAT 11: PONTOONS\_AND\_FENDERS 12: SECURITY 13: SLOP\_VESSEL 14: SLUDGE\_VESSEL 15: SURVEYOR 16: TUG 17: VESSEL | false |
| effectiveTime | dateTime | 1..1 |  | false |
| timeSequence | enumeration | 1..1 | 8: ARRIVAL\_TO 9: DEPARTURE\_FROM | false |
| timeType | enumeration | 1..1 | 1: ESTIMATED 2: ACTUAL 3: PLANNED 4: RECOMMENDED 5: REQUIRED | false |
| windowAfter | text | 0..1 |  | false |
| windowBefore | text | 0..1 |  | false |
| fromLocation | complex | 0..1 |  | false |
| toLocation | complex | 0..1 |  | false |

## 4.3 From Location

Name: From location  
Definition: The departure location  
Code: 'fromLocation'  
Remarks:   
Aliases: (none)

Sub-Attributes

| **Sub-attribute** | **Type** | **Mult.** | **Permitted Values** | **sequential** |
| --- | --- | --- | --- | --- |
| locationMRN | URN | 1..1 |  | false |
| terminal | URN | 0..1 |  | false |

## 4.4 To Location

Name: To location  
Definition: The arrival location  
Code: 'toLocation'  
Remarks:   
Aliases: (none)

Sub-Attributes

| **Sub-attribute** | **Type** | **Mult.** | **Permitted Values** | **sequential** |
| --- | --- | --- | --- | --- |
| locationMRN | URN | 1..1 |  | false |
| terminal | URN | 0..1 |  | false |

## 4.5 At Location

Name: At Location  
Definition: The location where a stationary service is performed  
Code: 'atLocation'  
Remarks:   
Aliases: (none)

Sub-Attributes

| **Sub-attribute** | **Type** | **Mult.** | **Permitted Values** | **sequential** |
| --- | --- | --- | --- | --- |
| locationMRN | URN | 1..1 |  | false |
| terminal | URN | 0..1 |  | false |

## 4.6 Administration State

Name: Administration State  
Definition: Describes a time related data point for a service administration event, such as a request made, received, confirmed or denied.  
Code: 'administrationState'  
Remarks:   
Aliases: (none)

Sub-Attributes

| **Sub-attribute** | **Type** | **Mult.** | **Permitted Values** | **sequential** |
| --- | --- | --- | --- | --- |
| performingActor | URN | 0..1 |  | false |
| effectiveTime | dateTime | 1..1 |  | false |
| timeSequence | enumeration | 1..1 | 1: CANCELLED 2: CONFIRMED 3: DENIED 4: REQUESTED 5: REQUEST\_RECEIVED | false |
| windowAfter | text | 0..1 |  | false |
| windowBefore | text | 0..1 |  | false |
| betweenLocations | complex | 0..1 |  | false |
| atLocation | complex | 0..1 |  | false |

## 4.7 Vessel name

Name: Vessel name

Definition: The name of the ship can be expressed in various languages.

Code: ‘vesselName’

Remarks:

Aliases: (none)

Sub-Attributes

| **Sub-attribute** | **Type** | **Mult.** | **Permitted Values** | **sequential** |
| --- | --- | --- | --- | --- |
| displayName | boolean | 0..1 |  | false |
| language | ISO639-3 | 0..1 |  | false |
| name | text | 1..1 |  | false |

## 4.8 vessel's measurements

Name: vessel's measurements

Definition: Values, discovered by measuring, that correpond to vessel's characteristics.

Code: ‘vesselsMeasurements’

Remarks:

Aliases: (none)

Sub-Attributes

| **Sub-attribute** | **Type** | **Mult.** | **Permitted Values** | **sequential** |
| --- | --- | --- | --- | --- |
| vesselsCharacteristics | enumeration | 1..1 | 1: length overall  2: length at waterline  3: breadth  4: draught  6: displacement tonnage  7: displacement tonnage, light  8: displacement tonnage, loaded  9: deadweight tonnage  10: gross tonnage  11: net tonnage  12: panama canal/universal measurement system net tonnage  13: suez canal net tonnage | false |
| vesselsCharacteristicsValue | real | 1..1 |  | false |
| vesselsCharacteristicsUnit | enumeration | 1..1 | 3: metric ton  4: ton  5: short ton  6: gross ton  7: net ton  9: suez canal net tonnage | false |

## 4.9 Ship Crew

Name: Ship Crew

Definition: Information of the crew aboard the ship

Code: ‘shipCrew’

Remarks:

Aliases: (none)

Sub-Attributes

| **Sub-attribute** | **Type** | **Mult.** | **Permitted Values** | **sequential** |
| --- | --- | --- | --- | --- |
| numberOfCrew | text | 1..1 |  | false |
| captainTelephoneNumber | integer | 1..1 |  | false |
| onBoardCrews | complex | 1..\* |  | false |

## 4.10 on board crews

Name: on board crews

Definition: Detailed information of the crew on board the ship (excluding the captain)

Code: ‘onBoardCrews’

Remarks:

Aliases: (none)

Sub-Attributes

| **Sub-attribute** | **Type** | **Mult.** | **Permitted Values** | **sequential** |
| --- | --- | --- | --- | --- |
| crewName | text | 1..1 |  | false |
| crewRank | text | 0..1 |  | false |
| crewTelephoneNumber | text | 0..1 |  | false |

## 4.11 Cargo Information

Name: Cargo Information

Definition: Details of cargo loaded on a ship

Code: ‘cargoInformation’

Remarks:

Aliases: (none)

Sub-Attributes

| **Sub-attribute** | **Type** | **Mult.** | **Permitted Values** | **sequential** |
| --- | --- | --- | --- | --- |
| categoryOfCargo | enumeration | 1..1 | 1: bulk  2 : container  3 : general  4 : liquid  5 : passenger  6 : livestock  7 : dangerous or hazardous | false |
| categoryOfDangerousOrHazardousCargo | enumeration | 0..1 | 1 : IMDG Code Class 1 Div. 1.1  2 : IMDG Code Class 1 Div. 1.2  3 : IMDG Code Class 1 Div. 1.3  4 : IMDG Code Class 1 Div. 1.4  5 : IMDG Code Class 1 Div. 1.5  6 : IMDG Code Class 1 Div. 1.6  7 : IMDG Code Class 2 Div. 2.1  8 : IMDG Code Class 2 Div. 2.2  9 : IMDG Code Class 2 Div. 2.3  10 : IMDG Code Class 3  11 : IMDG Code Class 4 Div. 4.1  12 : IMDG Code Class 4 Div. 4.2  13 : IMDG Code Class 4 Div. 4.3  14 : IMDG Code Class 5 Div. 5.1  15 : IMDG Code Class 5 Div. 5.2  16 : IMDG Code Class 6 Div. 6.1  17 : IMDG Code Class 6 Div. 6.2  18 : IMDG Code Class 7  19 : IMDG Code Class 8  20 : IMDG Code Class 9  21 : Harmful Substances in packaged form | false |
| loadWeight | real | 1..1 |  | false |

## 4.12 ShipSpeed

Name: ShipSpeed

Definition: Ship's speed information

Code: ‘shipSpeed’

Remarks:

Aliases: (none)

Sub-Attributes

| **Sub-attribute** | **Type** | **Mult.** | **Permitted Values** | **sequential** |
| --- | --- | --- | --- | --- |
| speedReference | enumeration | 1..1 | 1: other  2: speed over ground  3: speed through water | false |
| speedValue | real | 1..1 |  | false |
| speedUnits | enumeration | 0..1 | 1: metres per second  2: Kilometres per hour  3: Miles Per Hour  4: Nautical Miles Per Hour (Knots) | false |

## 4.13 Bunker information

Name: Bunker information

Definition: Ship Fuel Oil Remaining Information

Code: ‘bunkerInformation’

Remarks:

Aliases: (none)

Sub-Attributes

| **Sub-attribute** | **Type** | **Mult.** | **Permitted Values** | **sequential** |
| --- | --- | --- | --- | --- |
| bunkerType | enumeration | 1..1 | 1: Fuel Oil  2: Marine Diesel Oil  3: Marine Gas Oil  4: Other | false |
| quantity | real | 1..1 |  | false |
| comment | text | 0..\* |  | false |

## 4.14 Radar Equipment

Name: Radar Equipment

Definition: A detection system that uses radio waves to determine the range, angle, or velocity of objects. Radio waves (pulsed or continuous) from the transmitter reflect off the object and return to the receiver, giving information about the object's location and speed.

Code: ‘radarEquipment’

Remarks:

Aliases: (none)

Sub-Attributes

| **Sub-attribute** | **Type** | **Mult.** | **Permitted Values** | **sequential** |
| --- | --- | --- | --- | --- |
| radarType | enumeration | 1..1 | 1: x-Band  2: s-band | false |
| abnormalRadar | text | 0..1 |  | false |
| radarARPA | enumeration | 1..1 | 1: not installed  2: normal  3: abnormal | false |

## 4.15 Accident Ship Information

Name: Accident Ship Information

Definition: Identification information of the vessel requested for rescue or in an accident and information related to the vessel

Code: ‘accidentShipInformation’

Remarks:

Aliases: (none)

Sub-Attributes

| **Sub-attribute** | **Type** | **Mult.** | **Permitted Values** | **sequential** |
| --- | --- | --- | --- | --- |
| accidentShipMRN | URN | 1..1 |  | false |
| accidentShipMMSICode | text | 0..1 |  | false |
| accidentShipName | complex | 1..1 |  | false |
| accidentShipCargoInformation | complex | 1..\* |  | false |
| accidentDetail | text | 1..\* |  | false |

## 4.16 Accident Ship Name

Name: Accident Ship Name

Definition: The name of the ship can be expressed in various languages.

Code: ‘accidentShipName’

Remarks:

Aliases: (none)

Sub-Attributes

| **Sub-attribute** | **Type** | **Mult.** | **Permitted Values** | **sequential** |
| --- | --- | --- | --- | --- |
| displayName | boolean | 0..1 |  | false |
| language | ISO639-3 | 0..1 |  | false |
| name | text | 1..1 |  | false |

## 4.17 Accident Ship Cargo Information

Name: Accident Ship Cargo Information

Definition: Details of cargo loaded on a accident ship

Code: ‘accidentShipCargoInformation’

Remarks:

Aliases: (none)

Sub-Attributes

| **Sub-attribute** | **Type** | **Mult.** | **Permitted Values** | **sequential** |
| --- | --- | --- | --- | --- |
| categoryOfCargo | enumeration | 1..1 | 1: bulk  2 : container  3 : general  4 : liquid  5 : passenger  6 : livestock  7 : dangerous or hazardous | false |
| categoryOfDangerousOrHazardousCargo | enumeration | 0..1 | 1 : IMDG Code Class 1 Div. 1.1  2 : IMDG Code Class 1 Div. 1.2  3 : IMDG Code Class 1 Div. 1.3  4 : IMDG Code Class 1 Div. 1.4  5 : IMDG Code Class 1 Div. 1.5  6 : IMDG Code Class 1 Div. 1.6  7 : IMDG Code Class 2 Div. 2.1  8 : IMDG Code Class 2 Div. 2.2  9 : IMDG Code Class 2 Div. 2.3  10 : IMDG Code Class 3  11 : IMDG Code Class 4 Div. 4.1  12 : IMDG Code Class 4 Div. 4.2  13 : IMDG Code Class 4 Div. 4.3  14 : IMDG Code Class 5 Div. 5.1  15 : IMDG Code Class 5 Div. 5.2  16 : IMDG Code Class 6 Div. 6.1  17 : IMDG Code Class 6 Div. 6.2  18 : IMDG Code Class 7  19 : IMDG Code Class 8  20 : IMDG Code Class 9  21 : Harmful Substances in packaged form | false |
| loadWeight | real | 1..1 |  | false |

## 4.18 SAR Detail

Name: SAR Detail

Definition: Explanation of situations in which search and rescue is required

Code: ‘SARDetail’

Remarks:

Aliases: (none)

Sub-Attributes

| **Sub-attribute** | **Type** | **Mult.** | **Permitted Values** | **sequential** |
| --- | --- | --- | --- | --- |
| occurredTime | dateTime | 1..1 |  | false |
| abandonVesselOrNot | boolean | 0..1 |  | false |
| numberOfInjuredPerson | integer | 1..1 |  | false |
| rescueEquipment | enumeration | 1..\* | 1: SART  2: EPIRB  3: DSC |  |
| numberOfLifeboat | integer | 1..1 |  |  |
| numberOfLifecraft | integer | 1..1 |  |  |

## 4.19 Medical Assistance Detail

Name: Medical Assistance Detail

Definition: Details of Medical Support Requests

Code: ‘medicalAssistanceDetail’

Remarks:

Aliases: (none)

Sub-Attributes

| **Sub-attribute** | **Type** | **Mult.** | **Permitted Values** | **sequential** |
| --- | --- | --- | --- | --- |
| kindOfMedicalAssistance | enumeration | 1..1 | 1: boat for hospital transfer  2: radio medical advice  3: helicopter with doctor | false |
| doctorInVessel | boolean | 0..1 |  | false |
| timeForMeeting | dateTime | 0..1 |  | false |
| healthCondition | text | 0..1 |  |  |

## 4.20 Not Under Command(NUC) Detail

Name: Not Under Command(NUC) Detail

Definition: Explain what is required in the vessel not under command

Code: ‘notUnderCommandDetail’

Remarks:

Aliases: (none)

Sub-Attributes

| **Sub-attribute** | **Type** | **Mult.** | **Permitted Values** | **sequential** |
| --- | --- | --- | --- | --- |
| notUnderCommandCause | enumeration | 1..1 | 1: engine  2: steering gear  3: propeller | false |
| tugRequest | boolean | 1..1 |  | false |

## 4.21 Navigational Information

Name: Navigational Information

Definition: Navigation information of individual ships in danger, including ship's course and position information.

Code: ‘navigationalInformation’

Remarks:

Aliases: (none)

Sub-Attributes

| **Sub-attribute** | **Type** | **Mult.** | **Permitted Values** | **sequential** |
| --- | --- | --- | --- | --- |
| proximityToDanger | text | 0..\* |  | false |
| navigationInDanger | text | 0..\* |  | false |

## 4.22 Navigational Warning Area Name

Name: Navigational Warning Area Name

Definition: Identification of the location name used as a source for obtain navigational Warning from S-124

Code: ‘navigationalWarningAreaName’

Remarks:

Aliases: (none)

Sub-Attributes

| **Sub-attribute** | **Type** | **Mult.** | **Permitted Values** | **sequential** |
| --- | --- | --- | --- | --- |
| displayName | boolean | 0..1 |  | false |
| language | ISO639-3 | 0..1 |  | false |
| name | text | 1..1 |  | false |

## 4.23 Navigational Condition Area Name

Name: Navigational Condition Area Name

Definition: Identification of the location name used as a source for obtain navigational Warning from S-127

Code: ‘navigationalConditionAreaName’

Remarks:

Aliases: (none)

Sub-Attributes

| **Sub-attribute** | **Type** | **Mult.** | **Permitted Values** | **sequential** |
| --- | --- | --- | --- | --- |
| displayName | boolean | 0..1 |  | false |
| language | ISO639-3 | 0..1 |  | false |
| name | text | 1..1 |  | false |

## 4.24 Telecommunications

Name: Telecommunications

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

Code: ‘telecommunications’

Remarks:

Aliases: (none)

Sub-Attributes

| **Sub-attribute** | **Type** | **Mult.** | **Permitted Values** | **sequential** |
| --- | --- | --- | --- | --- |
| telecommunicationIdentifier | text | 1..1 |  | false |
| telcomCarrier | text | 0..1 |  | false |
| contactInstructions | text | 0..1 |  | false |
| telecommunicationService | S100\_Codelist | 0..\* | 1: Voice  2: Facsimile  3: SMS  4: Data  5: Streamed Data  6: Telex  7: Telegraph  8: Email | false |

# 5 Roles

## 5.1 The Contact Provider

Name: The Contact Provider

Definition:

Code: ‘theContactProvider’

Remarks:

Aliases: (none)

## 5.2 The Contact Details

Name: The Contact Details

Definition:

Code: ‘theContactDetails’

Remarks:

Aliases: (none)

## 5.3 Information Provided For

Name: Information Provided For

Definition: someone who uses information

Code: ‘informationProvidedFor’

Remarks:

Aliases: (none)

## 5.4 Provide Information

Name: Provide Information

Definition: A person who provides information.

Code: ‘provideInformation’

Remarks:

Aliases: (none)

## 5.5 Refers

Name: Refers

Definition:

Code: ‘refers’

Remarks:

Aliases: (none)

refers

## 5.6 Referred

Name: Referred

Definition:

Code: ‘referred’

Remarks:

Aliases: (none)

# 6 Information Associations

## 6.1 Ship Contact

Name: Ship Contact

Definition: Contact Information Related to Ships

Code: ‘shipContact’

Aliases: (none)

Attribute Bindings

(No local bindings, but will inherit bindings from super-types if any)

Role: theContactProvider, theContactDetails

# 7 Feature Associations

## 7.1 relatedShip

Name: relatedShip

Definition: Ship related information

Code: ‘relatedShip’

Remarks:   
Aliases: (none)

Attribute Bindings

(No local bindings, but will inherit bindings from super-types if any)

Role(s): informationProvidedFor, provideInformation

## 7.2 related VTS Area

Name: relatedVTSArea

Definition: VTS Area related information

Code: ‘relatedVTSArea’

Remarks:

Aliases: (none)

Attribute Bindings

(No local bindings, but will inherit bindings from super-types if any)

Role(s): informationProvidedFor, provideInformation

## 7.3 reference

reference

Name: reference

Definition: Ship related information

Code: ‘reference’

Remarks:

Aliases: (none)

Attribute Bindings

(No local bindings, but will inherit bindings from super-types if any)

Role(s): refers, referred

# 8 Information Types

## 8.1 Contact Details

Name: Contact Details

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

Code: ‘ContactDetails’

Remarks:   
Aliases: (none)

Attribute Bindings

| Attribute | Type | Mult. | Permitted Values | Sequential |
| --- | --- | --- | --- | --- |
| communicationChannel | text | 0..\* |  | false |
| telecommunications | complex | 0..\* |  | false |

Information bindings

(Bindings are also inherited from super-types, if any.)

(No local bindings, but may inherit bindings from super-types, if any)

# 9 Feature Types

## 9.1 VTS Information Service Message

Name: VTS Information Service Message

Definition: Classes for distinguishing information that is sent. Manage requests, responses to requests, and results of service requests, or distinguish which information is transmitted from Broadcasting information. Ships can be reported to VTS in this class and transmitted with requested information, while VTS can transmit with answer information in this class.

Code: ‘VTSDigitalInformationServiceMessage’

Remarks:

Aliases: (none)

Feature use type: geographic

Permitted primitives: noGeometry

‘

Attribute Bindings

| **Attribute** | **Type** | **Mult.** | **Permitted Values** | **Sequential** |
| --- | --- | --- | --- | --- |
| shipMRN | URN | 0..1 |  | false |
| MMSICode | text | 0..1 |  | false |
| messageIdentifer | text | 1..1 |  | false |
| messageMarkers | enumeration | 1..1 | 1: Instruction  2: Advice  3: Warning  4: Information  5: Question  6: Answer  7: Request  8: Intention | false |
| VTSOperatorAssignment | complex | 0..1 |  | false |
| acknowledgementCode | enumeration | 0..1 | 1: ACK  2: NACK | false |
| reportedAt | dateTime | 0..1 |  | false |
| reportedBy | text | 0..1 |  | false |
| requestReplyInformtion | enumeration | 0..\* | 1: Environmental conditions(meteo)  2: Environmental conditions(hydrographical)  3: Environmental conditions(warnings)  4: Navigational conditions(warnings)  5: Navigational conditions(limitations)  6: Navigational conditions(status)  7: Navigational conditions(geographical information)  8: Navigational assistance  9. Ship information for navigational assistance | false |
| locationState | complex |  |  | false |
| administrationState | complex |  |  | false |

Information bindings

(Bindings are also inherited from super-types, if any.)

(No local bindings, but may inherit bindings from super-types, if any)

| Assoc. type | Mult. | Name of association | Role of assoc. target | Name of target class |
| --- | --- | --- | --- | --- |
| association | 1..1 | shipContact | theContactDetails | ContactDetails |

Feature bindings

(Bindings are also inherited from super-types, if any.)

(No local bindings, but will inherit super-type bindings if any)

| Assoc. type | Mult. | Name of association | Role of assoc. target | Name of target class |
| --- | --- | --- | --- | --- |
| association | 1..1 | relatedShip | informationProvidedFor | ShipInformation |
| association | 1..1 | relatedShip | informationProvidedFor | ShipDynamic |
| association | 1..1 | relatedShip | informationProvidedFor | Accident |
| association | 1..1 | relatedShip | informationProvidedFor | NavigationalEquipmentCondition |
| association | 1..1 | relatedShip | informationProvidedFor | NavigationalAssistance |
| association | 1..1 | relatedVTSArea | informationProvidedFor | VTSAreaInformation |

## 9.2 Ship Information

Name: Ship Information

Definition: Static information/information that does not change when a ship is operated in one voyage

Code: ‘ShipInformation’

Remarks:

Aliases: (none)

Feature use type: geographic

Permitted primitives: noGeometry

Attribute Bindings

| **Attribute** | **Type** | **Mult.** | **Permitted Values** | **Sequential** |
| --- | --- | --- | --- | --- |
| vesselName | complex | 1..1 |  | false |
| IMONo | text | 0..1 |  | false |
| MMSICode | text | 1..1 |  | false |
| callSign | text | 0..1 |  | false |
| vesselsMeasurements | complex | 0..\* |  | false |
| categoryOfVessel | S100\_Codelist | 0..1 | 1: general cargo vessel  2: container carrier  3: tanker  4: bulk carrier  5: passenger vessel  6: roll-on roll-off  7: refrigerated cargo vessel  8: fishing vessel  9: service  10: warship  11: towed or pushed composite unit  12: tug and tow  13: light recreational  14: semi-submersible offshore installation  15: jack-up exploration or project installation  16: livestock carrier  17: sport fishing | false |
| flagState | ISO3166-2 | 0..1 |  | false |
| cargoInformation | complex | 0..\* |  | false |
| ISPSLevel | enumeration | 0..1 | 1: ISPS Level 1  2: ISPS Level 2  3: ISPS Level 3 | false |
| portStateControl | text | 0..1 |  | false |
| shipCrew | complex | 0..1 |  | false |
| numberOfPassenger | integer | 0..1 |  | false |

Information bindings

(Bindings are also inherited from super-types, if any.)

(No local bindings, but may inherit bindings from super-types, if any)

Feature bindings

(Bindings are also inherited from super-types, if any.)

(No local bindings, but will inherit super-type bindings if any)

| Assoc. type | Mult. | Name of association | Role of assoc. target | Name of target class |
| --- | --- | --- | --- | --- |
| association | 0..1 | relatedShip | provideInformation | VTSDigitalInformationServiceMessage |

## 9.3 Ship Dynamic

Name: Ship Dynamic

Definition: dynamic information/information that may change or change when a ship is operated in one voyage

Code: ‘ShipDynamic’

Remarks:

Aliases: (none)

Feature use type: geographic

Permitted primitives: point

Attribute Bindings

| **Attribute** | **Type** | **Mult.** | **Permitted Values** | **Sequential** |
| --- | --- | --- | --- | --- |
| shipSpeed | complex | 0..1 |  | false |
| heading | real | 0..1 |  | false |
| routeName | text | 0..1 |  | false |
| routeVersion | integer | 0..1 |  | false |
| messageIdentifierForRoute | text | 0..1 |  | false |
| bunkerInformation | complex | 0..\* |  | false |
| categoryOfStatement | enumeration | 0..1 | 1: sailing  2: anchorage  3: berthing | false |
| movementPurpose | enumeration | 0..1 | 1: sailing  2: anchorage  3: berthing  4: passing | false |

Information bindings

(Bindings are also inherited from super-types, if any.)

(No local bindings, but may inherit bindings from super-types, if any)

Feature bindings

(Bindings are also inherited from super-types, if any.)

(No local bindings, but will inherit super-type bindings if any)

| Assoc. type | Mult. | Name of association | Role of assoc. target | Name of target class |
| --- | --- | --- | --- | --- |
| association | 0..1 | relatedShip | provideInformation | VTSDigitalInformationServiceMessage |

## 9.4 Accident

Name: Accident

Class to communicate own vessel accident information. The purpose of this class is to provide emergency information about ship accidents prior to VTS communication.

Code: ‘Accident’

Remarks:

Aliases: (none)

Feature use type: geographic

Permitted primitives: point

Attribute Bindings

| **Attribute** | **Type** | **Mult.** | **Permitted Values** | **Sequential** |
| --- | --- | --- | --- | --- |
| SARDetail | complex | 0..1 |  | false |
| medicalAssistanceDetail | complex | 0..1 |  | false |
| notUnderCommandDetail | complex | 0..1 |  | false |
| medicalAssistanceAmongTypesOfAccidents | boolean | 0..1 |  | false |
| sARAmongTypesOfAccidents | boolean | 0..1 |  | false |
| nUCAmongTypesOfAccidents | boolean | 0..1 |  | false |
| assistanceDetail | text | 0..\* |  | false |

Information bindings

(Bindings are also inherited from super-types, if any.)

(No local bindings, but may inherit bindings from super-types, if any)

Feature bindings

(Bindings are also inherited from super-types, if any.)

(No local bindings, but will inherit super-type bindings if any)

| Assoc. type | Mult. | Name of association | Role of assoc. target | Name of target class |
| --- | --- | --- | --- | --- |
| association | 0..1 | relatedShip | provideInformation | VTSDigitalInformationServiceMessage |

## 9.5 Navigational Equipment Condition

Name: Navigational Equipment Condition

Definition: Mechanical defects, An item to manage the condition of items to determine whether mechanical defects that can affect the normal operation of a ship are present.

Code: ‘NavigationalEquipmentCondition’

Remarks:

Aliases: (none)

Feature use type: geographic

Permitted primitives: noGeometry

Attribute Bindings

| **Attribute** | **Type** | **Mult.** | **Permitted Values** | **Sequential** |
| --- | --- | --- | --- | --- |
| whistles | enumeration | 1..1 | 1: no equipment  2: normal  3: abnormal | false |
| radarEquipment | complex | 0..\* | 1: no equipment  2: normal  3: abnormal | false |
| speedLog | enumeration | 1..1 | 1: no equipment  2: normal  3: abnormal | false |
| electronicPositionFixing | enumeration | 1..1 | 1: no equipment  2: normal  3: abnormal | false |
| compassSystem | enumeration | 1..1 | 1: no equipment  2: normal  3: abnormal | false |
| numberOfPowerUnitsInUse | text | 0..1 |  | false |
| engineTelegraph | enumeration | 1..1 | 1: no equipment  2: normal  3: abnormal | false |
| steeringGear | enumeration | 1..1 | 1: no equipment  2: normal  3: abnormal | false |
| rudderIndicator | enumeration | 1..1 | 1: no equipment  2: normal  3: abnormal | false |
| RPMPitchIndicator | enumeration | 1..1 | 1: no equipment  2: normal  3: abnormal | false |
| rateOfTurnIndicator | integer | 0..1 |  | false |
| VHFEquipment | enumeration | 1..1 | 1: no equipment  2: normal  3: abnormal |  |
| mooringWinchesAndLines | enumeration | 1..1 | 1: no equipment  2: normal  3: abnormal |  |
| availableElectronicNavigationAids | text | 0..\* |  |  |

Information bindings

(Bindings are also inherited from super-types, if any.)

(No local bindings, but may inherit bindings from super-types, if any)

Feature bindings

(Bindings are also inherited from super-types, if any.)

(No local bindings, but will inherit super-type bindings if any)

| Assoc. type | Mult. | Name of association | Role of assoc. target | Name of target class |
| --- | --- | --- | --- | --- |
| association | 0..1 | relatedShip | provideInformation | VTSDigitalInformationServiceMessage |

## 9.6 Navigational Assistance

Name: Navigational Assistance

Definition: This class is intended to send navigation support results, A Navigational Assistance is a service that provides essential and timely navigational information to assist in the on board navigational decision‐making process and to monitor its effects.

Code: ‘NavigationalAssistance’

Remarks:

Aliases: (none)

Feature use type: geographic

Permitted primitives: noGeometry

Attribute Bindings

| **Attribute** | **Type** | **Mult.** | **Permitted Values** | **Sequential** |
| --- | --- | --- | --- | --- |
| navigationalInformation | complex | 0..1 |  | false |
| adviceMessage | text | 0..\* |  | false |
| warningMessage | text | 0..\* |  | false |
| instructionMessage | text | 0..\* |  | false |

Information bindings

(Bindings are also inherited from super-types, if any.)

(No local bindings, but may inherit bindings from super-types, if any)

Feature bindings

(Bindings are also inherited from super-types, if any.)

(No local bindings, but will inherit super-type bindings if any)

| Assoc. type | Mult. | Name of association | Role of assoc. target | Name of target class |
| --- | --- | --- | --- | --- |
| association | 0..1 | relatedShip | provideInformation | VTSDigitalInformationServiceMessage |

## 9.7 VTS Area Information

Name: VTS Area Information

Definition: Class for transmitting environmental and warning information, accident information, etc. within the VTS Area.

Code: ‘VTSAreaInformation’

Remarks:

Aliases: (none)

Feature use type: geographic

Permitted primitives: noGeometry

Attribute Bindings

Information bindings

(Bindings are also inherited from super-types, if any.)

(No local bindings, but may inherit bindings from super-types, if any)

Feature bindings

(Bindings are also inherited from super-types, if any.)

(No local bindings, but will inherit super-type bindings if any)

| Assoc. type | Mult. | Name of association | Role of assoc. target | Name of target class |
| --- | --- | --- | --- | --- |
| association | 0..\* | relatedVTSArea | provideInformation | VTSDigitalInformationServiceMessage |

## 9.8 Warning

Name: Warning

Definition: Class for transmitting environmental and warning information, accident information, etc. within the VTS Area.

Code: ‘Warning’

Remarks:

Aliases: (none) Supertype: VTSAreaInformation

Feature use type: geographic

Permitted primitives: noGeometry

Attribute Bindings

Information bindings

(Bindings are also inherited from super-types, if any.)

(No local bindings, but may inherit bindings from super-types, if any)

Feature bindings

(Bindings are also inherited from super-types, if any.)

(No local bindings, but will inherit super-type bindings if any)

| Assoc. type | Mult. | Name of association | Role of assoc. target | Name of target class |
| --- | --- | --- | --- | --- |
| association | 0..\* | relatedVTSArea | provideInformation | VTSDigitalInformationServiceMessage |

## 9.9 Conditions

Name: Conditions

Definition: Class for transmitting environmental conditions and navigational conditions, etc. within the VTS Area.

Code: ‘Conditions’

Remarks:

Aliases: (none) Supertype: VTSAreaInformation

Feature use type: geographic

Permitted primitives: noGeometry

Attribute Bindings

Information bindings

(Bindings are also inherited from super-types, if any.)

(No local bindings, but may inherit bindings from super-types, if any)

Feature bindings

(Bindings are also inherited from super-types, if any.)

(No local bindings, but will inherit super-type bindings if any)

| Assoc. type | Mult. | Name of association | Role of assoc. target | Name of target class |
| --- | --- | --- | --- | --- |
| association | 0..\* | relatedVTSArea | provideInformation | VTSDigitalInformationServiceMessage |

## 9.10 Warning Detail

Name: Warning Detail

Definition: Classes for detailed information on environmental and warning information within the VTS area.

Code: ‘WarningDetail’

Remarks:

Aliases: (none) Supertype: Warning

Feature use type: geographic

Permitted primitives: noGeometry

Attribute Bindings

Information bindings

(Bindings are also inherited from super-types, if any.)

(No local bindings, but may inherit bindings from super-types, if any)

Feature bindings

(Bindings are also inherited from super-types, if any.)

(No local bindings, but will inherit super-type bindings if any)

| Assoc. type | Mult. | Name of association | Role of assoc. target | Name of target class |
| --- | --- | --- | --- | --- |
| association | 0..\* | relatedVTSArea | provideInformation | VTSDigitalInformationServiceMessage |
| association | 1..1 | reference | refers | EnvironmentalWarning |
| association | 1..1 | reference | refers | NavigationalWarning |

## 9.11 Sending Accident Information In VTS Area

Name: Sending Accident Information In VTS Area

Definition: Class that contains information to inform the surrounding vessel of accident information or information about the vessel requesting assistance

Code: ‘SendingAccidentInformationInVTSArea’

Remarks:

Aliases: (none) Supertype: Warning

Feature use type: geographic

Permitted primitives: point, surface

Attribute Bindings

| **Attribute** | **Type** | **Mult.** | **Permitted Values** | **Sequential** |
| --- | --- | --- | --- | --- |
| accidentAlarmType | enumeration | 1..1 | 1: SAR  2: NUC  3: traffic accident | false |
| accidentShipInformation | complex | 1..\* |  | false |
| accidentDetail | text | 1..\* |  | false |

Information bindings

(Bindings are also inherited from super-types, if any.)

(No local bindings, but may inherit bindings from super-types, if any)

Feature bindings

(Bindings are also inherited from super-types, if any.)

(No local bindings, but will inherit super-type bindings if any)

| Assoc. type | Mult. | Name of association | Role of assoc. target | Name of target class |
| --- | --- | --- | --- | --- |
| association | 0..\* | relatedVTSArea | provideInformation | VTSDigitalInformationServiceMessage |

## 9.12 Environmental Warning

Name: Environmental Warning

Definition: Environmental warning Information in the VTS Area from VTS Operator. Use S-412 to get information.

Code: ‘EnvironmentalWarning’

Remarks:

Aliases: (none)

Feature use type: geographic

Permitted primitives: noGeometry

Attribute Bindings

| **Attribute** | **Type** | **Mult.** | **Permitted Values** | **Sequential** |
| --- | --- | --- | --- | --- |
| validDateTime | dateTime | 1..1 |  | false |
| messageIdentifierForEnvironmentalWarning | text | 0..1 |  | false |

Information bindings

(Bindings are also inherited from super-types, if any.)

(No local bindings, but may inherit bindings from super-types, if any)

Feature bindings

(Bindings are also inherited from super-types, if any.)

(No local bindings, but will inherit super-type bindings if any)

| Assoc. type | Mult. | Name of association | Role of assoc. target | Name of target class |
| --- | --- | --- | --- | --- |
| association | 0..\* | relatedVTSArea | provideInformation | VTSDigitalInformationServiceMessage |
| association | 0..\* | reference | referred | WarningDetail |

## 9.13 Navigational Warning

Name: Navigational Warning

Definition: Navigation warning in the VTS Area from VTS Operator. Use S-124 to get information.

Code: ‘NavigationalWarning’

Remarks:

Aliases: (none)

Feature use type: geographic

Permitted primitives: point, curve, surface

Attribute Bindings

| **Attribute** | **Type** | **Mult.** | **Permitted Values** | **Sequential** |
| --- | --- | --- | --- | --- |
| navigationalWarningAreaName | complex | 0..\* |  | false |
| messageIdentifierForNavigationalWarning | text | 0..1 |  | false |

Information bindings

(Bindings are also inherited from super-types, if any.)

(No local bindings, but may inherit bindings from super-types, if any)

Feature bindings

(Bindings are also inherited from super-types, if any.)

(No local bindings, but will inherit super-type bindings if any)

| Assoc. type | Mult. | Name of association | Role of assoc. target | Name of target class |
| --- | --- | --- | --- | --- |
| association | 0..\* | relatedVTSArea | provideInformation | VTSDigitalInformationServiceMessage |
| association | 0..\* | reference | referred | WarningDetail |

## 9.14 Environmental Conditions

Name: Environmental Conditions

Definition: Environmental condition Information in the VTS Area from VTS Operator. Use S-412 to get information.

Code: ‘EnvironmentalConditions’

Remarks:

Aliases: (none) Supertype: Conditions

Feature use type: geographic

Permitted primitives: noGeometry

Attribute Bindings

| **Attribute** | **Type** | **Mult.** | **Permitted Values** | **Sequential** |
| --- | --- | --- | --- | --- |
| validDateTime | dateTime | 1..1 |  | false |
| messageIdentifierForEnvironmentalConditions | text | 0..1 |  | false |

Information bindings

(Bindings are also inherited from super-types, if any.)

(No local bindings, but may inherit bindings from super-types, if any)

Feature bindings

(Bindings are also inherited from super-types, if any.)

(No local bindings, but will inherit super-type bindings if any)

| Assoc. type | Mult. | Name of association | Role of assoc. target | Name of target class |
| --- | --- | --- | --- | --- |
| association | 0..\* | relatedVTSArea | provideInformation | VTSDigitalInformationServiceMessage |

## 9.15 Navigational Conditions

Name: Navigational Conditions

Definition: Navigation conditions in the VTS Area from VTS Operator. Use S-127 to get information.

Code: ‘NavigationalConditions’

Remarks:

Aliases: (none) Supertype: Conditions

Feature use type: geographic

Permitted primitives: noGeometry

Attribute Bindings

| **Attribute** | **Type** | **Mult.** | **Permitted Values** | **Sequential** |
| --- | --- | --- | --- | --- |
| navigationalConditionAreaName | complex | 0..\* |  | false |
| messageIdentifierForNavigationalCondition | text | 0..1 |  | false |
| significantFeatureReference | text | 0..\* |  | false |

Information bindings

(Bindings are also inherited from super-types, if any.)

(No local bindings, but may inherit bindings from super-types, if any)

Feature bindings

(Bindings are also inherited from super-types, if any.)

(No local bindings, but will inherit super-type bindings if any)

| Assoc. type | Mult. | Name of association | Role of assoc. target | Name of target class |
| --- | --- | --- | --- | --- |
| association | 0..\* | relatedVTSArea | provideInformation | VTSDigitalInformationServiceMessage |