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1 Catalogue header information

Name: Feature Catalogue for S-127

Scope: Global coverage of maritime areas

Field of Application: Marine Traffic Management

Version Number: 2.0.0

Version date: 2025-11-04

Producer information:

Individual name:

Organisation name: International Hydrographic Organization

Phone:

Address:

Delivery point	City	Administrative area	Postal code	Country	Email address
		4b quai Antoine 1er		Monaco	info@ihd.int

Online resource information:

Hours of Service:

Contact Instructions:

Position Name:

Role: pointOfContact

Classification: unclassified

Filename: 127_FC_2.0.0.20251104.xml

2 Definition Sources

Source Id (internal catalogue tag): IHOREG

Title: IHO GI Registry

Identifier:

3 Simple Attributes

3.1 Administrative Division

Name: Administrative Division [IHOREG 384]

Definition: A generic term for an administrative region within a country at a level below that of the sovereign state.

Code: administrativeDivision

Remarks:

Aliases: (none)

Value Type: text

3.2 Application Profile

Name: Application Profile [IHOREG 389]

Definition: Name of an application profile that can be used with the online resource.

Code: applicationProfile

Remarks:

Aliases: APPRF

Value Type: text

3.3 Call Name

Name: Call Name [IHOREG 396]

Definition: The designated call name of a station; for example, radio station, radar station, pilot.

Code: callName

Remarks: This is the name used when calling a radio station by radio; for example, "Singapore Pilots".

Aliases: (none)

Value Type: text

3.4 Call Sign

Name: Call Sign [IHOREG 271]

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

Code: callSign

Remarks:

Aliases: CALSGN

Value Type: text

3.5 Cardinal Direction

Name: Cardinal Direction [IHOREG 397]

Definition: Principal and intermediate compass points.

Code: cardinalDirection

Remarks:

Aliases: CARDIR

Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
North	348.75-011.25 degrees (true north). [IHOREG 1773]	1	
North Northeast	011.25 - 033.75 degrees. [IHOREG 1774]	2	
Northeast	033.75 - 056.25 degrees. [IHOREG 1775]	3	
East Northeast	056.25-078.75 degrees. [IHOREG 1776]	4	
East	078.75-101.25 degrees. [IHOREG 1777]	5	

Label	Definition	Code	Remarks
East Southeast	101.25-123.75 degrees. [IHOREG 1778]	6	
Southeast	123.75-146.25 degrees. [IHOREG 1779]	7	
South Southeast	146.25-168.75 degrees. [IHOREG 1780]	8	
South	168.75-191.25 degrees. [IHOREG 1781]	9	
South Southwest	191.25-213.75 degrees. [IHOREG 1782]	10	
Southwest	213.75-236.25 degrees. [IHOREG 1783]	11	
West Southwest	236.25-258.75 degrees. [IHOREG 1784]	12	
West	258.75-281.25 degrees. [IHOREG 1785]	13	
West Northwest	281.25-303.75 degrees. [IHOREG 1786]	14	
Northwest	303.75 - 326.25 degrees. [IHOREG 1787]	15	
North Northwest	326.25 - 348.75 degrees. [IHOREG 1788]	16	

3.6 Category of Authority

Name: Category of Authority [IHOREG 398]

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

Code: categoryOfAuthority

Remarks:

Aliases: CATAUT

Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Border Control	The administration to prevent or detect and prosecute violations of rules and regulations at international boundaries. [IHOREG 1789]	2	
Police	The department of government, or civil force, charged with maintaining public order. [IHOREG 1790]	3	
Port	Person or corporation, owners of, or entrusted with or invested with the power of managing a port. May be called a Harbour Board, Port Trust, Port Commission, Harbour Commission, Marine Department. [IHOREG 1791]	4	
Immigration	The authority controlling people entering a country. [IHOREG 1792]	5	
Health	The authority with responsibility for checking the validity of the health declaration of a vessel and for declaring free pratique. [IHOREG 1793]	6	
Coast Guard	Organization keeping watch on shipping and coastal waters according to governmental law; normally the authority with responsibility for search and rescue.	7	

Label	Definition	Code	Remarks
	[IHOREG 1794]		
Agricultural	The authority with responsibility for preventing infection of the agriculture of a country and for the protection of the agricultural interests of a country. [IHOREG 1795]	8	
Military	A military authority which provides control of access to or approval for transit through designated areas or airspace. [IHOREG 1796]	9	
Private Company	A private or publicly owned company or commercial enterprise which exercises control of facilities, for example a calibration area. [IHOREG 1797]	10	
Maritime Police	A governmental or military force with jurisdiction in territorial waters. Examples could include Gendarmerie Maritime, Carabinerie, and Guardia Civil. [IHOREG 1798]	11	
Environmental	An authority with responsibility for the protection of the environment. [IHOREG 1799]	12	
Fishery	An authority with responsibility for the control of fisheries. [IHOREG 1800]	13	
Finance	An authority with responsibility for the control and movement of money. [IHOREG 1801]	14	
Maritime	A national or regional authority charged with administration of maritime affairs. [IHOREG 1802]	15	
Customs	The agency or establishment for collecting duties, tolls. [IHOREG 1803]	16	

3.7 Category of Communication Preference

Name: Category of Communication Preference [IHOREG 402]

Definition: Classification of frequencies, VHF channels, telephone numbers, or other means of communication based on preference.

Code: categoryOfCommunicationPreference

Remarks:

Aliases: (none)

Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Preferred Calling	The first choice channel or frequency to be used when calling a radio station. [IHOREG 1815]	1	
Alternate Calling	A channel or frequency to be used for calling a radio station when the preferred channel or frequency is busy or is suffering from interference. [IHOREG 1816]	2	
Preferred Working	The first choice channel or frequency to be used when working with a radio station. [IHOREG 1817]	3	
Alternate Working	A channel or frequency to be used for working with a radio station when the preferred working channel or frequency is busy or is suffering from interference. [IHOREG 1818]	4	

3.8 Category of Cargo

Name: Category of Cargo [IHOREG 401]

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

Code: categoryOfCargo

Remarks: If item 7 is used, the nature of dangerous or hazardous cargoes can be amplified with category of dangerous or hazardous cargo.

Aliases: CATCGO

Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Bulk	Unpacked homogenous cargo poured loose in a certain space of a vessel, for example oil or grain. [IHOREG 1353]	1	
Container	One of a number of standard sized cargo carrying units, secured using standard corner attachments and bar. [IHOREG 1808]	2	
General	Break bulk cargo normally loaded by crane. [IHOREG 1809]	3	
Liquid	Any cargo loaded by pipeline. [IHOREG 1810]	4	
Passenger	A fee paying traveller. [IHOREG 1811]	5	
Livestock	Live animals carried in bulk. [IHOREG 1812]	6	
Dangerous or Hazardous	Dangerous or hazardous cargo as described by the IMO International Maritime Dangerous Goods code. [IHOREG 1813]	7	
Heavy Lift	Indivisible heavy items of weight generally over 100 tons, and width or height greater than 100 metres. [IHOREG 1814]	8	
Ballast	Material carried by a ship to ensure its stability. [IHOREG 1351]	9	
Dry Bulk Cargo	Commodity cargo that is transported unpackaged in large quantities. These types of goods usually need to be kept dry during the whole transportation period. [IHOREG 3201]	10	
Liquid Bulk Cargo	Liquids or gases that are transported in bulk and carried unpackaged. [IHOREG 3202]	11	
Reefer Container Cargo	Cargo transported in refrigerated containers, generally perishable commodities which require temperature-controlled transportation, such as fruit, meat, fish, vegetables, dairy products and other foods. [IHOREG 3203]	12	
Ro-Ro Cargo	Wheeled cargo, such as cars, busses, trucks, agricultural vehicles and cranes, that are driven on and off the ship on their own wheels or using a platform vehicle, such as a self-propelled modular transporter. [IHOREG 3204]	13	
Project Cargo	Project cargo is a term used to broadly describe the national or international transportation of large, heavy, high value, or critical (to the project they are intended for) pieces of equipment. Also commonly referred to as heavy lift, this includes shipments made of various components which need disassembly for shipment and	14	

Label	Definition	Code	Remarks
	reassembly after delivery. [IHOREG 3205]		
Break Bulk Cargo	Goods that are stowed on board ship in individually counted units, and not in intermodal containers nor in bulk as with oil or grain. [IHOREG 3206]	15	

3.9 Category of Concentration of Shipping Hazard Area

Name: Category of Concentration of Shipping Hazard Area [IHOREG 403]

Definition: Classification of shipping hazards due to traffic volume or density.

Code: categoryOfConcentrationOfShippingHazardArea

Remarks:

Aliases: (none)

Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Concentration of Merchant Shipping	Concentration of vessels whose primary purpose is to engage in commerce, including ferries. [IHOREG 1819]	1	
Concentration of Recreational Vessels	Concentration of powered or sailing vessels principally engaged in recreation, leisure, or sporting competition. [IHOREG 1820]	2	
Concentration of Fishing Vessels	Concentration of vessels whose primary purpose is to hunt, trap or process fish. The concentration could be on the fishing ground, in transit or in the approaches to home bases or fish markets. [IHOREG 1821]	3	
Concentration of Military Vessels	Concentration of vessels principally engaged in military activities. This includes activities based on mandate of international organizations (for example, UN). The concentration is in areas others than military exercise areas. [IHOREG 1822]	4	

3.10 Category Of Dangerous Or Hazardous Cargo

Name: Category Of Dangerous Or Hazardous Cargo [IHOREG 406]

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

Code: categoryOfDangerousOrHazardousCargo

Remarks:

Aliases: CATDHC

Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
IMDG Code Class 1 Div. 1.1	Explosives, Division 1: Substances and articles which have a mass explosion hazard. [IHOREG 1834]	1	
IMDG Code Class 1 Div. 1.2	Explosives, Division 2: Substances and articles which have a projection hazard but not a mass explosion hazard. [IHOREG 1835]	2	
IMDG Code Class 1 Div. 1.3	Explosives, Division 3: Substances and articles which have a fire hazard and either a minor blast hazard or a minor projection hazard or both, but not a mass explosion hazard. [IHOREG 1836]	3	

Label	Definition	Code	Remarks
IMDG Code Class 1 Div. 1.4	Explosives, Division 4: Substances and articles which present no significant hazard. [IHOREG 1837]	4	
IMDG Code Class 1 Div. 1.5	Explosives, Division 5: Very insensitive substances which have a mass explosion hazard. [IHOREG 1838]	5	
IMDG Code Class 1 Div. 1.6	Explosives, Division 6: Extremely insensitive articles which do not have a mass explosion hazard. [IHOREG 1839]	6	
IMDG Code Class 2 Div. 2.1	Gases, flammable gases. [IHOREG 1840]	7	
IMDG Code Class 2 Div. 2.2	Gases, non-flammable, non-toxic gases. [IHOREG 1841]	8	
IMDG Code Class 2 Div. 2.3	Gases, toxic gases. [IHOREG 1842]	9	
IMDG Code Class 3	Flammable liquids. [IHOREG 1843]	10	
IMDG Code Class 4 Div. 4.1	Flammable solids, self-reactive substances and desensitized explosives. [IHOREG 1844]	11	
IMDG Code Class 4 Div. 4.2	Substances liable to spontaneous combustion. [IHOREG 1845]	12	
IMDG Code Class 4 Div. 4.3	Substances which, in contact with water, emit flammable gases. [IHOREG 1846]	13	
IMDG Code Class 5 Div. 5.1	Oxidizing substances. [IHOREG 1847]	14	
IMDG Code Class 5 Div. 5.2	Organic peroxides. [IHOREG 1848]	15	
IMDG Code Class 6 Div. 6.1	Toxic substances. [IHOREG 1849]	16	
IMDG Code Class 6 Div. 6.2	Infectious substances. [IHOREG 1850]	17	
IMDG Code Class 7	Radioactive material. [IHOREG 1851]	18	
IMDG Code Class 8	Corrosive substances. [IHOREG 1852]	19	
IMDG Code Class 9	Miscellaneous dangerous substances and articles. [IHOREG 1853]	20	
Harmful Substances in Packaged Form	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. [IHOREG 1854]	21	

3.11 Category of Military Practice Area

Name: Category of Military Practice Area [IHOREG 37]

Definition: Classification of area by military use.

Code: categoryOfMilitaryPracticeArea

Remarks:

Aliases: CATMPA

Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Torpedo Exercise Area	An area within which exercises are carried out with torpedoes. [IHOREG 297]	2	
Submarine Exercise Area	An area within which submarine exercises are carried out. [IHOREG 298]	3	
Firing Danger Area	Areas for bombing and missile exercises. [IHOREG 299]	4	
Mine-Laying Practice Area	An area within which mine laying exercises are carried out. [IHOREG 300]	5	
Small Arms Firing Range	An area for shooting pistols, rifles and machine guns etc. at a target. [IHOREG 301]	6	

3.12 Category of Navigation Line

Name: Category of Navigation Line [IHOREG 39]

Definition: Classification of route guidance given to vessels.

Code: categoryOfNavigationLine

Remarks:

Aliases: CATNAV

Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Clearing Line	A straight line that marks the boundary between a safe and a dangerous area or that passes clear of a navigational danger. [IHOREG 308]	1	
Transit Line	A line passing through one or more fixed marks. [IHOREG 309]	2	
Leading Line Bearing a Recommended Track	A line passing through one or more clearly defined objects, along the path of which a vessel can approach safely up to a certain distance off. [IHOREG 310]	3	

3.13 Category of Pilot

Name: Category of Pilot [IHOREG 416]

Definition: Classification of pilots and pilot services by type of waterway where piloting services are provided.

Code: categoryOfPilot

Remarks:

Aliases: CATPLT

Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Pilot	Pilot licenced to conduct vessels during approach from sea to a specified place which may be a handover place, an anchorage or alongside. [IHOREG 1906]	1	
Deep Sea	Pilot licenced to conduct vessels over extensive sea areas. [IHOREG 1907]	2	
Harbour	A reporting point of a harbour. [IHOREG 1376]	3	
Bar	A ridge or succession of ridges of sand or other substances extending across the mouth of a river or harbour and which may	4	

Label	Definition	Code	Remarks
	obstruct navigation. [IHOREG 1908]		
River	A relatively large natural stream of water. [IHOREG 531]	5	
Channel	Pilot licensed to conduct vessels from and to specified places, along the course of a channel. (For example as used in Rio Amazonas and Rio de La Plata.) [IHOREG 1909]	6	
Lake	A large body of water entirely surrounded by land. [IHOREG 530]	7	

3.14 Category of Pilot Boarding Place

Name: Category of Pilot Boarding Place [IHOREG 45]

Definition: Classification of pilot boarding method.

Code: categoryOfPilotBoardingPlace

Remarks:

Aliases: CATPIL

Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Boarding by Pilot-Cruising Vessel	Pilot boards from a cruising vessel. [IHOREG 354]	1	
Boarding by Helicopter	Pilot boards by helicopter which comes out from the shore. [IHOREG 355]	2	
Pilot Comes Out from Shore	Pilot embarks from a vessel or disembarks on a vessel which comes out from the shore on request. [IHOREG 356]	3	

3.15 Category of Preference

Name: Category of Preference [IHOREG 47]

Definition: The selection of a first choice compared to other options.

Code: categoryOfPreference

Remarks:

Aliases: (none)

Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Primary	The preferred first choice used in normal conditions. [IHOREG 363]	1	
Alternate	The preferred choice in extraordinary conditions. [IHOREG 364]	2	

3.16 Category of Relationship

Name: Category of Relationship [IHOREG 422]

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

Code: categoryOfRelationship

Remarks:

Print date: 10-November-2025	16
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Aliases: (none)
 Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Prohibited	Use of facility, waterway or service is forbidden. [IHOREG 1953]	1	
Not Recommended	Use of facility, waterway or service is not recommended. [IHOREG 1954]	2	
Permitted	Use of facility, waterway, or service is permitted but not required. [IHOREG 1955]	3	
Recommended	Use of facility, waterway, or service is recommended. [IHOREG 1956]	4	
Required	Use of facility, waterway, or service is required. [IHOREG 1957]	5	
Not Required	Use of facility, waterway, or service is not required. [IHOREG 1958]	6	
Exclusively Permitted	Only vessels of the specified characteristics may use the facility, waterway, or service. [IHOREG TBD]	7	

3.17 Category of Restricted Area

Name: Category of Restricted Area [IHOREG 90]

Definition: The official legal status of each kind of restricted area defines the kind of restriction(s), for example the restriction for a 'game reserve' may be 'entering prohibited'.

Code: categoryOfRestrictedArea

Remarks:

Aliases: CATREA

Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Offshore Safety Zone	The area around an offshore installation within which vessels are prohibited from entering without permission. Special regulations protect installations within a safety zone and vessels of all nationalities are required to respect the zone. [IHOREG 397]	1	
Nature Reserve	A tract of land or water managed so as to preserve its flora, fauna, physical features, etc. [IHOREG 398]	4	
Bird Sanctuary	A place where birds are bred and protected. [IHOREG 399]	5	
Game Reserve	A place where wild animals or birds hunted for sport or food are kept undisturbed for private use. [IHOREG 400]	6	
Seal Sanctuary	A place where seals are protected. [IHOREG 401]	7	
Degaussing Range	An area, usually about two cables diameter, within which ships' magnetic fields may be measured; sensing instruments and cables are installed on the sea bed in the range and there are cables leading from the range to a control position ashore. [IHOREG 402]	8	
Military Area	An area controlled by the military in which restrictions may apply. [IHOREG 403]	9	

Label	Definition	Code	Remarks
Historic Wreck Area	An area around certain wrecks of historical importance to protect the wrecks from unauthorized interference by diving, salvage or deposition (including anchoring). [IHOREG 404]	10	
Navigational Aid Safety Zone	An area around a navigational aid which vessels are prohibited from entering. [IHOREG 405]	12	
Minefield	An area laid and maintained with explosive mines for defence or practice purposes. [IHOREG 406]	14	
Waiting Area	An area reserved for vessels waiting to enter a harbour. [IHOREG 408]	19	
Research Area	An area where marine research takes place. [IHOREG 409]	20	
Fish Sanctuary	A place where fish (including shellfish and crustaceans) are protected. [IHOREG 411]	22	
Ecological Reserve	A tract of land managed so as to preserve the relation of plants and living creatures to each other and to their surroundings. [IHOREG 412]	23	
Swinging Area	An area where vessels turn. [IHOREG 414]	25	
Environmentally Sensitive Sea Area	A generic term which may be used to describe a wide range of areas, considered sensitive for a variety of environmental reasons. [IHOREG 415]	27	
Particularly Sensitive Sea Area	An area that needs special protection through action by IMO because of its significance for regional ecological, socio-economic or scientific reasons and because it may be vulnerable to damage by international shipping activities. [IHOREG 416]	28	
Disengagement Area	An area near a fairway where vessels can go to clear the way or make an about turn and possibly return to a waiting area when nautical conditions impose it. [IHOREG 417]	29	
Port Security Area	An area in which defence, law and treaty enforcement, and counter-terrorism activities that fall within the port and maritime domain apply. [IHOREG 418]	30	
Coral Sanctuary	A place where coral is protected. [IHOREG 419]	31	
Recreation Area	An area within which recreational activities regularly take place and therefore vessel movement may be restricted. [IHOREG 420]	32	

3.18 Category of Routeing Measure

Name: Category of Routeing Measure [IHOREG 427]

Definition: Classification of routeing measures by type.

Code: categoryOfRouteingMeasure

Remarks:

Aliases: (none)

Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Print date: 10-November-2025		18	

Label	Definition	Code	Remarks
Archipelagic Sea Lane	Sea lanes designated by an archipelagic State for the passage of ships and aircraft. The Archipelagic Sea Lane aggregates all component parts of an Archipelagic Sea Lane system. [IHOREG 1982]	1	
Deep Water Route	A route within defined limits which has been accurately surveyed for clearance of sea bottom and submerged obstacles as indicated on the chart. [IHOREG 1983]	2	
Fairway System	That part of a river, harbour and so on, where the main navigable channel for vessels of larger size lies. It is also the usual course followed by vessels entering or leaving harbours, called ship channel. A fairway system is an aggregation of connected fairway features making up a complex fairway system. [IHOREG 1984]	3	
Recommended Route	A navigation line, range system, or a recommended track, lane, or route. [IHOREG 1985]	4	
Traffic Separation Scheme	A routeing measure aimed at the separation of opposing streams of traffic by appropriate means and by the establishment of traffic lanes. [IHOREG 1986]	5	
Two-Way Route	A route within defined limits inside which two way traffic is established, aimed at providing safe passage of ships through waters where navigation is difficult or dangerous. [IHOREG 1987]	6	

3.19 Category of Schedule

Name: Category of Schedule [IHOREG 57]

Definition: The type of schedule, for instance opening, closure, etc.

Code: categoryOfSchedule

Remarks:

Aliases: (none)

Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Normal Operation	The service, office, is open, fully manned, and operating normally, or the area is accessible as usual. [IHOREG 429]	1	
Closure	The service, office, or area is closed. [IHOREG 430]	2	
Unmanned Operation	The service is available but not manned. [IHOREG 431]	3	

3.20 Category of Ship Report

Name: Category of Ship Report [IHOREG 428]

Definition: Classification of ship reports based on IMO standard report formats.

Code: categoryOfShipReport

Remarks: Through Resolution A.851(20), the IMO encourages authorities to require standard formats and procedures for ship reporting and recognizes that some authorities require amended formats. (Appendix to IMO Resolution A.851(20) GENERAL PRINCIPLES FOR SHIP REPORTING SYSTEMS AND SHIP REPORTING REQUIREMENTS, INCLUDING GUIDELINES FOR REPORTING INCIDENTS INVOLVING DANGEROUS GOODS, HARMFUL SUBSTANCES AND/OR MARINE POLLUTANTS.)

Aliases: CATREP

Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Sailing Plan	Before or as near as possible to the time of departure from a port within a system or when entering the area covered by a system (for instance A, B, J, X etc). [IHOREG 1988]	1	
Position Report	When necessary to ensure effective operation of the system. [IHOREG 1989]	2	
Deviation Report	When the ships position varies significantly from the position that would have been predicted from previous reports; when changing the reported route; or as decided by the master. [IHOREG 1990]	3	
Final Report	On arrival at the destination or on leaving the area covered by the system. [IHOREG 1991]	4	
Dangerous Goods Report	When an incident takes place involving the loss or likely loss overboard of packaged dangerous goods, including those in freight containers, portable tanks, road and rail vehicles and ship-borne barges, into the sea. [IHOREG 1992]	5	
Harmful Substances Report	Report submitted when an incident takes place involving the discharge or probable discharge of oil or noxious liquid substances in bulk. [IHOREG 1993]	6	
Marine Pollutants Report	In the case of the loss or likely loss overboard of harmful substances in packaged form, including those in freight containers, portable tanks, road and rail vehicles and ship-borne barges identified in the International Maritime Goods Code as marine pollutants. [IHOREG 1994]	7	
Any Other Report	Any other type of non-defined report that is made in accordance with the system procedures as notified in accordance with paragraph 9 of the general principles. [IHOREG 1995]	8	

3.21 Category of Signal Station, Traffic

Name: Category of Signal Station, Traffic [IHOREG 60]

Definition: Classification of station based on the traffic service provided.

Code: categoryOfSignalStationTraffic

Remarks:

Aliases: CATSIT

Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Port Control	A signal station for the control of vessels within a port. [IHOREG 553]	1	
Port Entry and Departure	A signal station for the control of vessels entering or leaving a port. [IHOREG 554]	2	
International Port Traffic	A signal station displaying International Port Traffic signals. [IHOREG 555]	3	
Berthing	A signal station for the control of vessels when berthing. [IHOREG 556]	4	

Label	Definition	Code	Remarks
Dock	A signal station for the control of vessels entering or leaving a dock. [IHOREG 557]	5	
Lock	A signal station for the control of vessels entering or leaving a lock. [IHOREG 558]	6	
Flood Barrage Station	A signal station for the control of vessels wishing to pass through a flood control barrage. [IHOREG 559]	7	
Bridge Passage	A signal station for the control of vessels wishing to pass under a bridge. [IHOREG 560]	8	
Dredging	A signal station indicating when dredging is in progress. [IHOREG 561]	9	
Traffic Control Light	Visual signal lights placed in a waterway to indicate to shipping the movements authorized at the time at which they are shown. [IHOREG 562]	10	
Oncoming Traffic Indication	Indicates the oncoming traffic on an inland waterway. [IHOREG 1613]	13	

3.22 Category of Signal Station, Warning

Name: Category of Signal Station, Warning [IHOREG 61]

Definition: Classification of station based on the warning service provided.

Code: categoryOfSignalStationWarning

Remarks:

Aliases: CATSIW

Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Danger	A signal or message warning of the presence of a danger to navigation. [IHOREG 563]	1	
Maritime Obstruction	A signal or message warning of the presence of a maritime obstruction. [IHOREG 564]	2	
Cable	A signal or message warning of the presence of a cable. [IHOREG 565]	3	
Military Practice	A signal or message warning of activity in a military practice area. [IHOREG 566]	4	
Distress	A station that may receive or transmit distress signals. [IHOREG 567]	5	
Weather	A visual signal displayed to indicate a weather forecast. [IHOREG 568]	6	
Storm	A signal or message conveying information about storm conditions. [IHOREG 569]	7	
Ice Warning	A signal or message conveying information about ice conditions. [IHOREG 570]	8	
Time	An accurate signal marking a specified time or time interval. It is used primarily for determining errors of timepieces. Such signals are usually sent from an observatory by radio or telegraph, but visual signals are used at some ports. [IHOREG 571]	9	

Label	Definition	Code	Remarks
Tide	A signal or message conveying information on tidal conditions in the area in question. [IHOREG 572]	1.0	
Tidal Stream	A signal or message conveying information on condition of tidal currents in the area in question. [IHOREG 573]	1.1	
Tide Gauge	A device for measuring the height of tide. A graduated staff in a sheltered area where visual observations can be made or it may consist of an elaborate recording instrument making a continuous graphic record of tide height against time. Such an instrument is usually actuated by a float in a pipe communicating with the sea through a small hole which filters out shorter waves. [IHOREG 574]	1.2	
Tide Scale	A visual scale which directly shows the height of the water above chart datum or a local datum. [IHOREG 575]	1.3	
Diving	A signal or message warning of diving activity. [IHOREG 576]	1.4	
Water Level Gauge	A device for measuring and conveying information about the water level (non-tidal) in the area in question. [IHOREG 577]	1.5	
Vertical Clearance Indication	An indication of the vertical clearance of a bridge, overhead cable, etc. [IHOREG 1614]	1.6	
High Water Mark	An indication of the official high water level. [IHOREG 1615]	1.7	
Depth Indication	An indication of the local depth. [IHOREG 1616]	1.8	

3.23 Category of Temporal Variation

Name: Category of Temporal Variation [IHOREG 200]

Definition: An assessment of the likelihood of change over time.

Code: categoryOfTemporalVariation

Remarks:

Aliases: (none)

Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Extreme Event	Indication of the possible impact of a significant event (for example hurricane, earthquake, volcanic eruption, landslide, etc), which is considered likely to have changed the seafloor or landscape significantly. [IHOREG 1241]	1	
Likely to Change	Continuous or frequent change to non-bathymetric features (for example river siltation, glacier creep/recession, sand dunes, buoys, marine farms, etc). [IHOREG 1244]	4	
Unlikely to Change	Significant change to the seafloor is not expected. [IHOREG 1245]	5	
Unassessed	Not having been assessed. [IHOREG 1246]	6	

3.24 Category of Text

Name: Category of Text [IHOREG 429]

Definition: Classification of completeness of textual information in relation to the source material from which it is derived.

Code: categoryOfText

Remarks:

Aliases: CATTXT

Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Abstract or Summary	A statement summarizing the important points of a text. [IHOREG 1996]	1	
Extract	An excerpt or excerpts from a text. [IHOREG 1997]	2	
Full Text	The whole text. [IHOREG 1998]	3	

3.25 Category of Traffic Separation Scheme

Name: Category of Traffic Separation Scheme [IHOREG 274]

Definition: International classification of traffic separation scheme.

Code: categoryOfTrafficSeparationScheme

Remarks:

Aliases: CATSS

Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
IMO Adopted	A defined maritime traffic route that has been adopted as an IMO routing measure. [IHOREG 1304]	1	
Not IMO - Adopted	A defined Traffic Separation Scheme that has not been adopted as an IMO routing measure. [IHOREG 1305]	2	

3.26 Category of Vessel Registry

Name: Category of Vessel Registry [IHOREG 430]

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

Code: categoryOfVesselRegistry

Remarks:

Aliases: (none)

Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Domestic	The vessel is registered or enrolled under the same national flag as the port, harbour, territorial sea, exclusive economic zone, or administrative area in which the object that possesses this attribute applies or is located. [IHOREG 1999]	1	
Foreign	The vessel is registered or enrolled under a national flag different from the port, harbour, territorial sea, exclusive economic zone, or	2	

Label	Definition	Code	Remarks
	other administrative area in which the object that possesses this attribute applies or is located. [IHOREG 2000]		

3.27 City Name

Name: City Name [IHOREG 434]

Definition: The name of a town or city.

Code: cityName

Remarks:

Aliases: CITYNM

Value Type: text

3.28 Communication Channel

Name: Communication Channel [IHOREG 74]

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

Code: communicationChannel

Remarks: The expected input is the specific VHF-Channel. The attribute 'communication channel' encodes the various VHF-channels used for communication.

Aliases: COMCHA

Value Type: text

3.29 Comparison Operator

Name: Comparison Operator [IHOREG 441]

Definition: Numerical comparison.

Code: comparisonOperator

Remarks: Provides the relation between the value given in the model and the real ship's value.

Aliases: COMPOP

Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Greater Than	The value of the left value is greater than that of the right. [IHOREG 2039]	1	
Greater Than or Equal To	The value of the left expression is greater than or equal to that of the right. [IHOREG 2040]	2	
Less Than	The value of the left expression is less than that of the right. [IHOREG 2041]	3	
Less Than or Equal To	The value of the left expression is less than or equal to that of the right. [IHOREG 2042]	4	
Equal To	The two values are equivalent. [IHOREG 2043]	5	
Not Equal To	The two values are not equivalent. [IHOREG 2044]	6	

3.30 Condition

Name: Condition [IHOREG 75]

Definition: The various conditions of buildings and other constructions.

Code: condition

Remarks: The default 'condition' should be considered to be completed, undamaged and working normally.

Aliases: CONDTN

Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Under Construction	Being built but not yet capable of function. [IHOREG 804]	1	
Under Reclamation	An area of the sea, a lake or the navigable part of a river that is being reclaimed as land, usually by the dumping of earth and other material. [IHOREG 806]	3	
Planned Construction	Detailed planning has been completed but construction has not been initiated. [IHOREG 808]	5	

3.31 Contact Instructions

Name: Contact Instructions [IHOREG 76]

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

Code: contactInstructions

Remarks:

Aliases: (none)

Value Type: text

3.32 Country Name

Name: Country Name [IHOREG 449]

Definition: The name of a nation.

Code: countryName

Remarks:

Aliases: (none)

Value Type: text

3.33 Date End

Name: Date End [IHOREG 790]

Definition: The latest date on which an object (for example a buoy) will be present.

Code: dateEnd

Remarks: The Date End should be encoded using 4 digits for the calendar year (YYYY), 2 digits for the month (MM) (for example April = 04) and 2 digits for the day (DD). When no specific month and/or day is required/known, indication of the month and/or day is omitted, and replaced with dashes (-). When no specific year is required (that is, the event or date range ends at the same time each year) the following two cases may be considered:- same day each year: ---MMDD- same month each year: ---MM--This conforms to ISO 8601: 2004. Date End indicates the latest date of an event or the end of a date range. It is used to indicate the end of a fixed date range, the end of a periodic date range, or the removal or cancellation of a feature at a specific date in the future.

Aliases: DATEND

Value Type: S100_TruncatedDate

3.34 Date Fixed

Name: Date Fixed [IHOREG 791]

Definition: The date of an event.

Code: dateFixed

Remarks:

Aliases: (none)

Value Type: S100_TruncatedDate

3.35 Date Start

Name: Date Start [IHOREG 792]

Definition: The earliest date on which an object (for example a buoy) will be present.

Code: dateStart

Remarks: The Date Start should be encoded using 4 digits for the calendar year (YYYY), 2 digits for the month

(MM) (for example April = 04) and 2 digits for the day (DD). When no specific month and/or day is required/known, indication of the month and/or day is omitted, and replaced with dashes (-). When no specific year is required (that is, the event or date range ends at the same time each year) the following two cases may be considered:- same day each year: ----MMDD- same month each year: ----MM--This conforms to ISO 8601: 2004. Date Start indicates the earliest date of an event or the start of a date range. It is used to indicate the start of a fixed date range, the start of a periodic date range, or the deployment or implementation of a feature at a specific date in the future.

Aliases: DATSTA

Value Type: S100_TruncatedDate

3.36 Date Variable

Name: Date Variable [IHOREG 82]

Definition: A day which is not fixed in the Gregorian calendar.

Code: dateVariable

Remarks: Examples: The fourth Thursday in November; new moon day of Kartika (Diwali); Easter Sunday.

Aliases: (none)

Value Type: text

3.37 Day of Week

Name: Day of Week [IHOREG 83]

Definition: Any one of seven days in a week.

Code: dayOfWeek

Remarks:

Aliases: (none)

Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Sunday	The first day of the week. [IHOREG 813]	1	
Monday	The second day of the week. [IHOREG 814]	2	
Tuesday	The third day of the week. [IHOREG 815]	3	
Wednesday	The fourth day of the week. [IHOREG 816]	4	
Thursday	The fifth day of the week. [IHOREG 817]	5	
Friday	The sixth day of the week. [IHOREG 818]	6	
Saturday	The seventh day of the week. [IHOREG 819]	7	

3.38 Day of Week is Range

Name: Day of Week is Range [IHOREG 84]

Definition: A statement expressing if the days of the week identified define a range or not.

Code: dayOfWeekIsRange

Remarks: A True value is an indication that the identified days of the week define a range between and inclusive of those days.

Aliases: (none)

Value Type: boolean

3.39 Delivery Point

Name: Delivery Point [IHOREG 460]

Definition: Details of where post can be delivered such as the apartment, name and/or number of a street, building

or PO Box.
 Code: deliveryPoint
 Remarks:
 Aliases: DELPNT
 Value Type: text

3.40 Destination

Name: Destination [IHOREG 93]
 Definition: The place or general direction to which a vessel is going or directed.
 Code: destination
 Remarks: In addition to a place name of a port, harbour area or terminal, the place could include generalities such as The north-west, or upriver.
 Aliases: (none)
 Value Type: text

3.41 Distance

Name: Distance [IHOREG 812]
 Definition: A numeric measure of the spatial separation between two locations.
 Code: distance
 Remarks:
 Aliases: (none)
 Value Type: real

3.42 Dynamic Resource

Name: Dynamic Resource [IHOREG 471]
 Definition: Whether a vessel must use a shore-based or other resource to obtain up-to-date information.
 Code: dynamicResource
 Remarks:
 Aliases: (none)
 Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Static	The information is static, or a source of up-to-date information is unavailable or unknown. [IHOREG 2073]	1	
Mandatory External Dynamic	An external source of up-to-date information is available and interaction with it to obtain up-to-date information is required. [IHOREG 2074]	2	
Optional External Dynamic	An external source of up-to-date information is available but interaction with it to obtain up-to-date information is not required. [IHOREG 2075]	3	
Onboard Dynamic	Up-to-date information may be computed using only onboard resources. [IHOREG 2076]	4	

3.43 File Locator

Name: File Locator [IHOREG 101]
 Definition: The location of a fragment of text or other information in a support file.
 Code: fileLocator
 Remarks: Application schemas must describe how the associated file is identified. The associated file will commonly be named in a file reference co-attribute of the same complex attribute. Each DCEG must specify requirements for the format of the associated file and the semantics of file locator. For example, the value of file locator may be an HTML ID in an HTML file, line number in a text file) or a bookmark in a PDF file.
 Aliases: (none)
 Value Type: text

3.44 File Reference

Name: File Reference [IHOREG 102]

Definition: The file name of an externally referenced text file.

Code: fileReference

Remarks:

Aliases: TXTDSC

Value Type: text

3.45 Frequency Shore Station Receives

Name: Frequency Shore Station Receives [IHOREG 924]

Definition: The shore station receiver frequency.

Code: frequencyShoreStationReceives

Remarks:

Aliases: FRQRXV

Value Type: integer

Unit of measure name: Hz definition: Cycles per second symbol: Hz

Quantity specification: frequency

Constraints

string	Length	text	Pattern	range	precision
(not specified)		(none)		lowerBound 1 upperBound (none) closure gtSemiInterval	(not specified)

3.46 Frequency Shore Station Transmits

Name: Frequency Shore Station Transmits [IHOREG 925]

Definition: The shore station transmitter frequency.

Code: frequencyShoreStationTransmits

Remarks:

Aliases: FRQTXM

Value Type: integer

Unit of measure name: Hz definition: Cycles per second symbol: Hz

Quantity specification: frequency

Constraints

string	Length	text	Pattern	range	precision
(not specified)		(none)		lowerBound 1 upperBound (none) closure gtSemiInterval	(not specified)

3.47 Headline

Name: Headline [IHOREG 108]

Definition: Words set at the head of a passage or page to introduce or categorize.

Code: headline

Remarks:

Aliases: (none)

Value Type: text

3.48 Horizontal Distance Uncertainty

Name: Horizontal Distance Uncertainty [IHOREG 837]

Definition: The best estimate of the horizontal accuracy of horizontal clearances and distances.

Code: horizontalDistanceUncertainty

Remarks: The error is assumed to be positive and negative. The plus/minus character must not be encoded.

Aliases: HORACC

Value Type: real

3.49 IMO Format for Reporting

Name: IMO Format for Reporting [IHOREG 523]

Definition: Whether a report must be in an IMO standard format.

Code: iMOFormatForReporting

Remarks:

Aliases: IMOREP

Value Type: boolean

3.50 Interoperability Identifier

Name: Interoperability Identifier [IHOREG 1134]

Definition: A common unique identifier for entities which describe a single real-world feature, and which is used to identify instances of the feature in end-user systems where the feature may be included in multiple data product types.

Code: interoperabilityIdentifier

Remarks:

Aliases: (none)

Value Type: URN

3.51 ISPS level

Name: ISPS level [IHOREG 533]

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

Code: iSPSLvl

Remarks:

Aliases: ISPSLV

Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
ISPS Level 1	The level for which minimum appropriate protective security measures shall be maintained at all times. [IHOREG 2461]	1	
ISPS Level 2	The level for which appropriate additional protective security measures shall be maintained for a period of time as a result of heightened risk of a security incident. [IHOREG 2462]	2	
ISPS Level 3	The level for which further specific protective security measures shall be maintained for a limited period of time when a security incident is probable or imminent, although it may not be possible to identify the specific target. [IHOREG 2463]	3	

3.52 In Ballast

Name: In Ballast [IHOREG 524]

Definition: Whether the vessel is in ballast.

Code: inBallast
Remarks:
Aliases: (none)
Value Type: boolean

3.53 Language

Name: Language [IHOREG 120]

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: The language is encoded by a 3 character code following ISO 639-2/T.

Aliases: (none)

Value Type: text

3.54 Linkage

Name: Linkage [IHOREG 124]

Definition: Location (address) for on-line access using a URL/URI address or similar addressing scheme.

Code: linkage

Remarks:

Aliases: (none)

Value Type: URI

3.55 Membership

Name: Membership [IHOREG 556]

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

Code: membership

Remarks:

Aliases: MBRSHP

Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Included	Vessels with these characteristics are included in the regulation/restriction/recommendation/nautical information. [IHOREG 2499]	1	
Excluded	Vessels with these characteristics are excluded from the regulation/restriction/recommendation/nautical information. [IHOREG 3437]	2	

3.56 Name Usage

Name: Name Usage [IHOREG 1143]

Definition: Classification of the type and display level of the name of a feature in an end-user system.

Code: nameUsage

Remarks:

Aliases: (none)

Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Default Name Display	The name is intended to be displayed when the end-user system is set to the default name/text display setting. [IHOREG 3469]	1	
Alternate Name Display	The name is intended to be displayed when the end-user system is set to an alternate name/text display setting, for example an	2	

Label	Definition	Code	Remarks
	alternate language. [IHOREG 3470]		
No Chart Display	The name or text is not intended to be displayed. [IHOREG 3471]	3	

3.57 Logical Connectives

Name: Logical Connectives [IHOREG 547]

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

Code: logicalConnectives

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

Aliases: LOGCON

Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Logical Conjunction	All the conditions described by the other attributes of the object, or sub-attributes of the same complex attribute, are true. [IHOREG 2487]	1	
Logical Disjunction	At least one of the conditions described by the other attributes of the object, or sub-attributes of the same complex attributes, is true. [IHOREG 2488]	2	

3.58 Maximum Display Scale

Name: Maximum Display Scale [IHOREG 936]

Definition: The largest intended viewing scale for the data.

Code: maximumDisplayScale

Remarks:

Aliases: (none)

Value Type: integer

Constraints

string Length	text Pattern	range	precision
(not specified)	(none)	lowerBound 1 upperBound (none) closure geSemiInterval	(not specified)

3.59 Minimum Display Scale

Name: Minimum Display Scale [IHOREG 941]

Definition: The smallest intended viewing scale for the data.

Code: minimumDisplayScale

Remarks:

Aliases: (none)

Value Type: integer

Constraints

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string	Length	text	Pattern	range	precision
(not specified)	(none)		lowerBound	1	(not specified)
			upperBound	(none)	
			closure	geSemiInterval	

3.60 MMSI Code

Name: MMSI Code [IHOREG 1175]

Definition: The Maritime Mobile Service Identity (MMSI) Code is formed of a series of nine digits which are transmitted over the radio path in order to uniquely identify ship stations, ship earth stations, coast stations, coast earth stations, and group calls. These identities are formed in such a way that the identity or part thereof can be used by telephone and telex subscribers connected to the general telecommunications network principally to call ships automatically.

Code: mMSICode

Remarks:

Aliases: (none)

Value Type: text

Constraints

string	Length	text	Pattern	range	precision
9		\d{9}		(not specified)	(not specified)

3.61 Name

Name: Name [IHOREG 134]

Definition: The individual name of a feature.

Code: name

Remarks:

Aliases: OBNAM

Value Type: text

3.62 Name of Resource

Name: Name of Resource [IHOREG 135]

Definition: Name of the online resource.

Code: nameOfResource

Remarks:

Aliases: (none)

Value Type: text

3.63 Nationality

Name: Nationality [IHOREG 136]

Definition: Identifier of membership of a particular nation.

Code: nationality

Remarks:

Aliases: NATION

Value Type: text

3.64 Notice Time Hours

Name: Notice Time Hours [IHOREG 858]

Definition: The time duration prior to the time the service is needed, when notice must be provided to the service provider.

Code: noticeTimeHours

Remarks:

Aliases: (none)
Value Type: real

Unit of measure name: hours definition: 60 minutes or 3600 seconds. symbol: hrs

Quantity specification: duration

Constraints

string Length	text Pattern	range	precision
(not specified)	(none)	(not specified)	1

For real values, precision is the number of digits after the decimal point.

3.65 Notice Time Text

Name: Notice Time Text [IHOREG 572]

Definition: Text string qualifying the notice time hours. This may explain the time specification of the hours (for example, 3 working days for a value of 72 for the notice time hours intended to indicate a time period of 3 days) or consist of other language qualifying the time; for example, On departure from last port or On passing reporting line XY).

Code: noticeTimeText

Remarks:

Aliases: (none)

Value Type: text

3.66 Online Function

Name: Online Function [IHOREG 577]

Definition: Code for function performed by the online resource.

Code: onlineFunction

Remarks:

Aliases: ONLFUN

Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Download	Online instructions for transferring data from one storage device or system to another. [IHOREG 1894]	1	
Offline Access	Online instructions for requesting the resource from the provider. [IHOREG 1896]	3	
Order	Online order process for obtaining the resource. [IHOREG 1897]	4	
Search	To make painstaking investigation or examination. [IHOREG 1898]	5	
Complete Metadata	Complete metadata provided. [IHOREG 2510]	6	
Browse Graphic	Browse graphic provided. [IHOREG 2511]	7	
Upload	Online resource upload capability provided. [IHOREG 2512]	8	
Email Service	Online email service provided. [IHOREG 2513]	9	
Browsing	Online browsing provided. [IHOREG 2514]	10	

Label	Definition	Code	Remarks
File Access	Online file access provided. [IHOREG 2515]	11	

3.67 Online Resource Description

Name: Online Resource Description [IHOREG 579]

Definition: Detailed text description of what the online resource is/does.

Code: onlineResourceDescription

Remarks:

Aliases: (none)

Value Type: text

3.68 Operation

Name: Operation [IHOREG 583]

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

Code: operation

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

Aliases: OPERAT

Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Largest Value	The numerically largest value computed from the applicable attributes or sub-attributes. [IHOREG 2516]	1	
Smallest Value	The numerically smallest value computed from the applicable attributes or sub-attributes. [IHOREG 2517]	2	

3.69 Orientation Uncertainty

Name: Orientation Uncertainty [IHOREG 859]

Definition: The best estimate of the accuracy of a bearing.

Code: orientationUncertainty

Remarks:

Aliases: (none)

Value Type: real

Unit of measure name: degrees definition: degrees of arc symbol: °

Quantity specification: planeAngle

Constraints

string Length	text Pattern	range	precision
(not specified)	(none)	lowerBound 0.000 upperBound 360.000 closure closedInterval	3

For real values, precision is the number of digits after the decimal point.

3.70 Orientation Value

Name: Orientation Value [IHOREG 860]

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

Code: orientationValue

Remarks:

Aliases: ORIENT

Value Type: real

Unit of measure name: degrees definition: degrees of arc symbol: °

Quantity specification: planeAngle

Constraints

string	Length	text	Pattern	range	precision
(not specified)				lowerBound 0.0	
				upperBound 360.0	1
				closure closedInterval	

For real values, precision is the number of digits after the decimal point.

3.71 Pictorial Representation

Name: Pictorial Representation [IHOREG 142]

Definition: Indicates whether a pictorial representation of the feature is available.

Code: pictorialRepresentation

Remarks: The 'pictorial representation' could be a drawing or a photo. The string encodes the file name of an external graphic file (pixel/vector).

Aliases: PICREP

Value Type: text

3.72 Picture Caption

Name: Picture Caption [IHOREG 593]

Definition: Short description of the purpose of the image.

Code: pictureCaption

Remarks:

Aliases: (none)

Value Type: text

3.73 Picture Information

Name: Picture Information [IHOREG 594]

Definition: A set of information to provide credits to picture creator, copyright owner etc.

Code: pictureInformation

Remarks:

Aliases: (none)

Value Type: text

3.74 Pilot Movement

Name: Pilot Movement [IHOREG 143]

Definition: Classification of pilot activity by arrival, departure, or change of pilot. It may also describe the place where the pilot's advice begins, ends, or is transferred to a different pilot.

Code: pilotMovement

Remarks:

Aliases: (none)

Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Embarkation	The place where vessels not being navigated according to a pilot's instructions pick up a pilot while in transit from sea to a port or constricted waters for future navigation under pilot instructions. [IHOREG 976]	1	
Disembarkation	The place where vessels being navigated under a pilot's instructions in transit from sea to a port or constricted waters drop the pilot and proceed without being subject to pilot instructions. [IHOREG 977]	2	
Pilot Change	The place where vessels being navigated under a pilot's instructions drop off the pilot and pick up a different pilot for future navigation under pilot's instructions. [IHOREG 978]	3	

3.75 Pilot Qualification

Name: Pilot Qualification [IHOREG 595]

Definition: Classification of pilots and pilot services by type of license qualification or type of organization providing services.

Code: pilotQualification

Remarks:

Aliases: (none)

Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Government Pilot	A pilot service carried out by government pilots. [IHOREG 2519]	1	
Pilot Approved by Government	A pilot service carried out by pilots who are approved by government. [IHOREG 2520]	2	
State Pilot	A pilot that is licensed by the State (USA) and/or their respective pilot association, required for all foreign vessels and all American vessels under registry, bound for a port with compulsory State pilotage. A federal licence is not sufficient to pilot such vessels into the port. [IHOREG 2521]	3	
Federal Pilot	A pilot who carries a Federal endorsement, offering services to vessels that are not required to obtain compulsory State pilotage. Services are usually contracted for in advance. [IHOREG 2522]	4	
Company Pilot	A pilot provided by a commercial company. [IHOREG 2523]	5	
Local Pilot	A pilot with local knowledge but who does not hold a qualification as a pilot. [IHOREG 2524]	6	
Citizen With Sufficient Local Knowledge	A pilot service carried out by a citizen with sufficient local knowledge. [IHOREG 2525]	7	
Citizen With Doubtful Local Knowledge	A pilot service carried out by a citizen whose local knowledge is uncertain. [IHOREG 2526]	8	

3.76 Pilot Request

Name: Pilot Request [IHOREG 596]

Definition: Description of the pilot request procedure.

Code: pilotRequest

Remarks:

Aliases: PLTRQS

Value Type: text

3.77 Pilot Vessel

Name: Pilot Vessel [IHOREG 597]

Definition: Description of the pilot vessel. The pilot vessel is a small vessel used by a pilot to go to or from a vessel employing the pilot's services.

Code: pilotVessel

Remarks:

Aliases: (none)

Value Type: text

3.78 Postal Code

Name: Postal Code [IHOREG 602]

Definition: Known in various countries as a postcode, or ZIP code, the postal code is a series of letters and/or digits that identifies each postal delivery area.

Code: postalCode

Remarks:

Aliases: POSCOD; Postcode; ZIP Code

Value Type: text

3.79 Protocol

Name: Protocol [IHOREG 608]

Definition: Connection protocol to be used. Example: ftp, http get KVP, http POST, etc.

Code: protocol

Remarks:

Aliases: PROTCL

Value Type: text

3.80 Protocol Request

Name: Protocol Request [IHOREG 609]

Definition: Request used to access the resource. Structure and content depend on the protocol and standard used by the online resource, such as Web Feature Service standard.

Code: protocolRequest

Remarks:

Aliases: PROTRQ

Value Type: text

3.81 Quality of Horizontal Measurement

Name: Quality of Horizontal Measurement [IHOREG 215]

Definition: The degree of reliability attributed to a position.

Code: qualityOfHorizontalMeasurement

Remarks:

Aliases: QUAPOS

Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Surveyed	The position(s) was(were) determined by the operation of making measurements for determining the relative position of points on, above or beneath the earth's surface. Survey implies a regular,	1	

Label	Definition	Code	Remarks
	controlled survey of any date. [IHOREG 1262]		
Unsurveyed	Survey data is does not exist or is very poor. [IHOREG 1263]	2	
Inadequately Surveyed	Not surveyed to modern standards; or due to its age, scale, or positional or vertical uncertainties is not suitable to the type of navigation expected in the area. [IHOREG 1264]	3	
Approximate	A position that is considered to be less than third-order accuracy, but is generally considered to be within 30.5 metres of its correct geographic location. Also may apply to an object whose position does not remain fixed. [IHOREG 1265]	4	
Position Doubtful	Of uncertain position. The expression is used principally on charts to indicate that a wreck, shoal, etc., has been reported in various positions and not definitely determined in any. [IHOREG 1266]	5	
Unreliable	A feature's position has been obtained from questionable or unreliable data. [IHOREG 1267]	6	
Reported (Not Surveyed)	An object whose position has been reported and its position confirmed by some means other than a formal survey such as an independent report of the same object. [IHOREG 2711]	7	
Reported (Not Confirmed)	An object whose position has been reported and its position has not been confirmed. [IHOREG 2710]	8	
Estimated	The most probable position of an object determined from incomplete data or data of questionable accuracy. [IHOREG 1268]	9	
Precisely Known	A position that is of a known value, such as the position of an anchor berth or other defined object. [IHOREG 1269]	10	
Calculated	A position that is computed from data. [IHOREG 1270]	11	

3.82 Remote Pilot

Name: Remote Pilot [IHOREG 618]

Definition: Indication as to whether pilotage is available remotely from shore or other location remote from the vessel requiring pilotage or not.

Code: remotePilot

Remarks:

Aliases: RMTPLT

Value Type: boolean

3.83 Reported Date

Name: Reported Date [IHOREG 154]

Definition: The date that the item was observed, done, or investigated.

Code: reportedDate

Remarks:

Aliases: SORDAT

Value Type: S100_TruncatedDate

3.84 Requirements for Maintenance of Listening Watch

Name: Requirements for Maintenance of Listening Watch [IHOREG 622]
 Definition: Something needed to ensure constant acoustic monitoring.
 Code: requirementsForMaintenanceOfListeningWatch
 Remarks:
 Aliases: (none)
 Value Type: text

3.85 Restriction

Name: Restriction [IHOREG 155]
 Definition: The official legal statute of each kind of restricted area.
 Code: restriction
 Remarks: Defines the kind of restriction(s), for example, the restriction for 'a game preserve' may be 'entry prohibited', the restriction for an 'anchoring prohibition' is 'anchoring prohibited'. The complete information about the restriction(s), actually held in handbooks or other publications, may be encoded using an Information type.
 Aliases: RESTRN
 Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Anchoring Prohibited	An area within which anchoring is not permitted. [IHOREG 1016]	1	
Anchoring Restricted	A specified area designated by appropriate authority, within which anchoring is restricted in accordance with certain specified conditions. [IHOREG 1017]	2	
Fishing Prohibited	An area within which fishing is not permitted. [IHOREG 1018]	3	
Fishing Restricted	A specified area designated by appropriate authority, within which fishing is restricted in accordance with certain specified conditions. [IHOREG 1019]	4	
Trawling Prohibited	An area within which trawling is not permitted. [IHOREG 1020]	5	
Trawling Restricted	A specified area designated by appropriate authority, within which trawling is restricted in accordance with certain specified conditions. [IHOREG 1021]	6	
Entry Prohibited	An area within which navigation and/or anchoring is prohibited. [IHOREG 1022]	7	
Entry Restricted	A specified area designated by appropriate authority, within which navigation is restricted in accordance with certain specified conditions. [IHOREG 1023]	8	
Dredging Prohibited	An area within which dredging is not permitted. [IHOREG 1024]	9	
Dredging Restricted	A specified area designated by appropriate authority, within which dredging is restricted in accordance with certain specified conditions. [IHOREG 1025]	10	
Diving Prohibited	An area within which diving is not permitted. [IHOREG 1026]	11	
Diving Restricted	A specified area designated by appropriate authority, within which diving is restricted in accordance with certain specified conditions. [IHOREG 1027]	12	
No Wake	Mariners must adjust the speed of their vessels to reduce	13	

Label	Definition	Code	Remarks
	the wave or wash which may cause erosion or disturb moored vessels. [IHOREG 1028]		
Area To Be Avoided	An IMO declared routeing measure comprising an area within defined limits in which either navigation is particularly hazardous or it is exceptionally important to avoid casualties and which should be avoided by all ships, or certain classes of ships. [IHOREG 1029]	14	
Construction Prohibited	The erection of permanent or temporary fixed structures or artificial islands is prohibited. [IHOREG 1030]	15	
Discharging Prohibited	An area within which discharging or dumping is prohibited. [IHOREG 1031]	16	
Discharging Restricted	A specified area designated by an appropriate authority, within which discharging or dumping is restricted in accordance with specified conditions. [IHOREG 1032]	17	
Industrial or Mineral Exploration/Development Prohibited	An area within which industrial or mineral exploration and development are prohibited. [IHOREG 1033]	18	
Industrial or Mineral Exploration/Development Restricted	A specified area designated by an appropriate authority, within which industrial or mineral exploration and development is restricted in accordance with certain specified conditions. [IHOREG 1034]	19	
Drilling Prohibited	An area within which excavating a hole on the sea-bottom with a drill is prohibited. [IHOREG 1035]	20	
Drilling Restricted	A specified area designated by an appropriate authority, within which excavating a hole on the sea-bottom with a drill is restricted in accordance with certain specified conditions. [IHOREG 1036]	21	
Removal of Historical Artefacts Prohibited	An area within which the removal of historical artefacts is prohibited. [IHOREG 1037]	22	
Cargo Transhipment (Lightening) Prohibited	An area in which cargo transhipment (lightening) is prohibited. [IHOREG 1038]	23	
Dragging Prohibited	An area in which the dragging of anything along the bottom, e.g. bottom trawling, is prohibited. [IHOREG 1039]	24	
Stopping Prohibited	An area in which a vessel is prohibited from stopping. [IHOREG 1040]	25	
Landing Prohibited	An area in which landing is prohibited. [IHOREG 1041]	26	
Speed Restricted	An area within which speed is restricted. [IHOREG 1042]	27	
Overtaking Prohibited	A specified area designated by appropriate authority, within which overtaking is generally prohibited. [IHOREG 1676]	28	
Overtaking of Convoys by Convoys Prohibited	A specified area designated by appropriate authority, within which overtaking between convoys is prohibited.	29	

Label	Definition	Code	Remarks
	[IHOREG 1677]		
Passing or Overtaking Prohibited	A specified area designated by appropriate authority, within which passing or overtaking is generally prohibited. [IHOREG 1678]	30	
Berthing Prohibited	A specified area designated by appropriate authority, within which vessels, assemblies of floating material or floating establishments may not berth. [IHOREG 1679]	31	
Berthing Restricted	A specified area designated by appropriate authority, within which berthing is restricted. [IHOREG 1680]	32	
Making Fast Prohibited	A specified area designated by appropriate authority, within which vessels, assemblies of floating material or floating establishments may not make fast to the bank. [IHOREG 1681]	33	
Making Fast Restricted	A specified area designated by appropriate authority, within which making fast to the bank is restricted. [IHOREG 1682]	34	
Turning Prohibited	A specified area designated by appropriate authority, within which all turning is generally prohibited. [IHOREG 1683]	35	
Restricted Fairway Depth	An area within which the fairway depth is restricted. [IHOREG 1684]	36	
Restricted Fairway Width	An area within which the fairway width is restricted. [IHOREG 1685]	37	
Use of Spuds Prohibited	The use of anchoring spuds (telescopic piles) is prohibited. [IHOREG 1318]	38	
Swimming Prohibited	An area in which swimming is prohibited. [IHOREG 1043]	39	
SOx Emission Restricted	An area within which the emission of SOx is restricted. [IHOREG 1686]	40	
NOx Emission Restricted	An area within which the emission of NOx is restricted. [IHOREG 1687]	41	
Power-Driven Vessels Prohibited	An area within which any vessel propelled by machinery is prohibited. [IHOREG 3462]	42	
Passing or Overtaking of Convoys by Convoys Prohibited	A specified area designated by appropriate authority, within which passing or overtaking of convoys by convoys is prohibited [IHOREG 3484]	43	

3.86 Scale Minimum

Name: Scale Minimum [IHOREG 958]

Definition: The minimum scale at which the feature may be used for example for ECDIS presentation.

Code: scaleMinimum

Remarks: The modulus of the scale is indicated, that is 1:1 250 000 is encoded as 1250000.

Aliases: SCAMIN

Value Type: integer

3.87 Service Access Procedure

Name: Service Access Procedure [IHOREG 634]

Definition: A description of the procedure to access the marine service.

Code: serviceAccessProcedure

Remarks:

Aliases: (none)

Value Type: text

3.88 Siltation Rate

Name: Siltation Rate [IHOREG 637]

Definition: A description of the rate at which the depth in an area decreases.

Code: siltationRate

Remarks:

Aliases: (none)

Value Type: text

3.89 Source

Name: Source [IHOREG 220]

Definition: The publication, document, or reference work from which information comes or is acquired.

Code: source

Remarks: May be populated with the corresponding paper chart Notice to Mariners numbers, although other references are permitted.

Aliases: (none)

Value Type: text

3.90 Source Date

Name: Source Date [IHOREG 288]

Definition: The production date of the source; for example the date of measurement.

Code: sourceDate

Remarks:

Aliases: SORDAT

Value Type: date

3.91 SRS Format Code

Name: SRS Format Code [IHOREG TBD]

Definition: The standard ship reporting formats according to IMO Resolution A.531(13) General Principles for Ship Reporting System or IMO A.851(20).

Code: sRSFormatCode

Remarks:

Aliases: (none)

Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
IMO Ship Reporting Format A	IMO Ship Reporting Format A-Ship (alpha); Information required: Name, call sign or ship station identity, and flag [IHOREG TBD]	1	
IMO Ship Reporting Format B	IMO Ship Reporting Format B-Time (bravo); Information required: A 6-digit group giving day of month (first two digits), hours and minutes (last four digits). If other than UTC state time zone used [IHOREG TBD]	2	
IMO Ship Reporting Format C	IMO Ship Reporting Format C-Position (charlie); Information required: A 4-digit group giving latitude in degrees and minutes suffixed with N (north) or S (south) and a 5-digit group giving longitude in degrees and minutes suffixed with E (east) or W (west) [IHOREG TBD]	3	
IMO Ship Reporting Format D	IMO Ship Reporting Format D-Position (delta); Information required: True bearing (first 3-digits) and distance (state distance) in nautical miles from a clearly identified landmark (state	4	

Label	Definition	Code	Remarks
D	landmark) [IHOREG TBD]		
IMO Ship Reporting Format E	IMO Ship Reporting Format E-Course (echo); Information required: True course, a 3-digit group [IHOREG TBD]	5	
IMO Ship Reporting Format F	IMO Ship Reporting Format F-Speed (foxtrot); Information required: Speed in knots and tenths of knots, a 3-digit group [IHOREG TBD]	6	
IMO Ship Reporting Format G	IMO Ship Reporting Format G-Departed (golf); Information required: Name of last port of call [IHOREG TBD]	7	
IMO Ship Reporting Format H	IMO Ship Reporting Format H-Entry (hotel); Information required: Entry time expressed as in (B) and entry position expressed as in (C) or (D) [IHOREG TBD]	8	
IMO Ship Reporting Format I	IMO Ship Reporting Format I-Destination and ETA (india); Information required: Name of port and date time group expressed as in (B) [IHOREG TBD]	9	
IMO Ship Reporting Format J	IMO Ship Reporting Format J-Pilot (juliet); Information required: State whether a deep-sea or local pilot is on board [IHOREG TBD]	10	
IMO Ship Reporting Format K	IMO Ship Reporting Format K-Exit (kilo); Information required: Exit time expressed as in (B) and exit position expressed as in (C) or (D) [IHOREG TBD]	11	
IMO Ship Reporting Format L	IMO Ship Reporting Format L-Route (lima); Information required: Intended track [IHOREG TBD]	12	
IMO Ship Reporting Format M	IMO Ship Reporting Format M-Radio communications (mike); Information required: State in full names of stations/frequencies guarded [IHOREG TBD]	13	
IMO Ship Reporting Format N	IMO Ship Reporting Format N-Next report (november); Information required: Date time group expressed as in (B) [IHOREG TBD]	14	
IMO Ship Reporting Format O	IMO Ship Reporting Format O-Draught (oscar); Information required: 4-digit group giving metres and centimetres [IHOREG TBD]	15	
IMO Ship Reporting Format P	IMO Ship Reporting Format P-Cargo (papa); Information required: Cargo and brief details of any dangerous cargoes as well as harmful substances and gases that could endanger persons or the environment (See detailed reporting requirements) [IHOREG TBD]	16	
IMO Ship Reporting Format Q	IMO Ship Reporting Format Q-Defect, damage, deficiency, limitations (quebec); Information required: Brief details of defects, damage, deficiencies or other limitations (See detailed reporting requirements) [IHOREG TBD]	17	
IMO Ship Reporting Format R	IMO Ship Reporting Format R-Pollution/dangerous goods lost overboard (romeo); Information required: Brief details of type of pollution (oil, chemicals, etc.) or dangerous goods lost overboard; position expressed as in (C) or (D) (See detailed reporting requirements) [IHOREG TBD]	18	

Label	Definition	Code	Remarks
IMO Ship Reporting Format S	IMO Ship Reporting Format S-Weather (sierra); Information required: Brief details of weather and sea conditions prevailing [IHOREG TBD]	19	
IMO Ship Reporting Format T	IMO Ship Reporting Format T-Agent (tango); Information required: Details of name and particulars of ship's representative or owner or both for provision of information (See detailed reporting requirements) [IHOREG TBD]	20	
IMO Ship Reporting Format U	IMO Ship Reporting Format U-Size and type (uniform); Information required: Details of length, breadth, tonnage, and type, etc., as required [IHOREG TBD]	21	
IMO Ship Reporting Format V	IMO Ship Reporting Format V-Medic (victor); Information required: Doctor, physician's assistant, nurse, personnel without medical training [IHOREG TBD]	22	
IMO Ship Reporting Format W	IMO Ship Reporting Format W-Persons (whiskey); Information required: State number [IHOREG TBD]	23	
IMO Ship Reporting Format X	IMO Ship Reporting Format X-Remarks (x-ray); Information required: Any other information-including, as appropriate, brief details of incident and of other ships involved either in incident, assistance or salvage (See detailed reporting requirements) [IHOREG TBD]	24	
IMO Ship Reporting Format Y	IMO Ship Reporting Format Y-Relay (yankee); Information required: Content of report [IHOREG TBD]	25	
IMO Ship Reporting Format Z	IMO Ship Reporting Format Z-End of report (zulu); Information required: No further information required [IHOREG TBD]	26	

3.92 Source Type

Name: Source Type [IHOREG 724]

Definition: Type of the source.

Code: sourceType

Remarks:

Aliases: (none)

Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Law or Regulation	Treaty, convention, or international agreement; law or regulation issued by a national or other authority. [IHOREG 2685]	1	
Official Publication	Publication not having the force of law, issued by an international organisation or a national or local administration. [IHOREG 2686]	2	
Mariner Report, Confirmed	Reported by mariner(s) and confirmed by another source. [IHOREG 2687]	7	
Mariner Report, Not Confirmed	Reported by mariner(s) but not confirmed. [IHOREG 2688]	8	
Industry Publications and	Shipping and other industry publications, including graphics, charts and web sites.	9	

Label	Definition	Code	Remarks
Reports	[IHOREG 2689]		
Remotely Sensed Images	Information obtained from satellite images. [IHOREG 2690]	1.0	
Photographs	Information obtained from photographs. [IHOREG 2691]	1.1	
Products Issued by HO Services	Information obtained from products issued by Hydrographic Offices. [IHOREG 2692]	1.2	
News Media	Information obtained from news media. [IHOREG 2693]	1.3	
Traffic Data	Information obtained from the analysis of traffic data. [IHOREG 2694]	1.4	

3.93 Status

Name: Status [IHOREG 725]

Definition: The condition of an object at a given instant in time.

Code: status

Remarks:

Aliases: STATUS

Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Permanent	Intended to last or function indefinitely. [IHOREG 1052]	1	
Occasional	Acting on special occasions; happening irregularly. [IHOREG 1053]	2	
Recommended	Presented as worthy of confidence, acceptance, use, etc. [IHOREG 1054]	3	
Not in Use	Use has ceased, but the facility still exists intact; disused. [IHOREG 1055]	4	
Periodic/Intermittent	Recurring at intervals. [IHOREG 1056]	5	
Reserved	Set apart for some specific use. [IHOREG 1057]	6	
Temporary	Meant to last only for a time. [IHOREG 1058]	7	
Private	Administered by an individual or corporation, rather than a State or a public body. [IHOREG 1059]	8	
Mandatory	Compulsory; enforced. [IHOREG 1060]	9	
Illuminated	Lit by floodlights, strip lights, etc. [IHOREG 1062]	1.2	
Public	Belonging to, available to, used or shared by, the community as a whole and not restricted to private use. [IHOREG 1064]	1.4	
Synchronized	Occur at a time, coincide in point of time, be contemporary or simultaneous. [IHOREG 1065]	1.5	
Watched	Looked at or observed over a period of time especially so as to be aware of any movement or change. [IHOREG 1066]	1.6	

Label	Definition	Code	Remarks
Unwatched	Usually automatic in operation, without any permanently-stationed personnel to superintend it. [IHOREG 1067]	17	
Existence Doubtful	A feature that has been reported but has not been definitely determined to exist. [IHOREG 1068]	18	
Buoyed	Marked by buoys. [IHOREG 1069]	28	

3.94 Telecommunication Identifier

Name: Telecommunication Identifier [IHOREG 174]

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

3.95 Telecommunication Carrier

Name: Telecommunication Carrier [IHOREG 661]

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: telecommunicationCarrier

Remarks:

Aliases: (none)

Value Type: text

3.96 Telecommunication Service

Name: Telecommunication Service [IHOREG 175]

Definition: Classification of methods of communication over a distance by electrical, electronic, or electromagnetic means.

Code: telecommunicationService

Remarks:

Aliases: (none)

Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Voice	The transfer or exchange of information by using sounds that are being made by mouth and throat when speaking. [IHOREG 1085]	1	
Facsimile	A system of transmitting and reproducing graphic matter (as printing or still pictures) by means of signals sent over telephone lines. [IHOREG 1086]	2	
SMS	Short Message Service is a form of text messaging communication on phones and mobile phones. [IHOREG 1087]	3	
Data	A representation of facts, concepts or instructions in a formalised manner suitable for communication, interpretation or processing. [IHOREG 1088]	4	
Streamed Data	Data that is constantly received by and presented to an end-user while being delivered by a provider. [IHOREG 1089]	5	

Label	Definition	Code	Remarks
Telex	A system of communication in which messages are sent over long distances by using a telephone system and are printed by using a special machine (called a teletypewriter). [IHOREG 1090]	6	
Telegraph	An apparatus, system or process for communication at a distance by electric transmission over wire. [IHOREG 62]	7	
Email	Messages and other data exchanged between individuals using computers in a network. [IHOREG 1091]	8	

3.97 Text

Name: Text [IHOREG 176]

Definition: A non-formatted digital text string.

Code: text

Remarks: Should be used, for example, to hold the information that is for short cautionary or explanatory notes. Therefore, text populated in text must not exceed 300 characters. Text may be in English, or in a national language. No formatting of text is possible within text. If formatted text, or text strings exceeding 300 characters, is required, then an alternate concept should be used.

Aliases: INFORM; NINFOM

Value Type: text

3.98 Text Offset Bearing

Name: Text Offset Bearing [IHOREG 1201]

Definition: The angular distance measured from true north that text associated with a feature is positioned from the feature in an end-user system.

Code: textOffsetBearing

Remarks:

Aliases: (none)

Value Type: integer

Unit of measure name: Degree of Arc definition: $1^\circ = (\pi/180) \text{ rad}$ symbol: $^\circ$

Constraints

string Length	text Pattern	range	precision
(not specified)	(none)	lowerBound 0.0 upperBound 360.0 closure geLtInterval	(not specified)

3.99 Text Offset Distance

Name: Text Offset Distance [IHOREG 1202]

Definition: The distance that text associated with a feature is positioned from the feature in an end-user system.

Code: textOffsetDistance

Remarks:

Aliases: (none)

Value Type: integer

Unit of measure name: Millimetre definition: 1 metre = 1000 millimetres symbol: mm

Quantity specification: length

Constraints

string	Length	text	Pattern	range	precision
(not specified)	(none)			lowerBound 0 upperBound 50 closure gtLeInterval	(not specified)

3.100 Text Rotation

Name: Text Rotation [IHOREG 1141]

Definition: A statement that expresses if text associated with a feature is to be rotated in the ECDIS display or not.

Code: textRotation

Remarks:

Aliases: (none)

Value Type: boolean

3.101 Text Type

Name: Text Type [IHOREG 179]

Definition: The attribute from which a text string is derived.

Code: textType

Remarks:

Aliases: (none)

Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Name	The individual name of a feature. [IHOREG 1095]	1	

3.102 Thickness of Ice Capability

Name: Thickness of Ice Capability [IHOREG 967]

Definition: The thickness of ice that the ship can safely transit.

Code: thicknessOfIceCapability

Remarks:

Aliases: (none)

Value Type: integer

Unit of measure name: centimetres definition: Centimetres (SI) symbol: cm

Quantity specification: length

Constraints

string	Length	text	Pattern	range	precision
(not specified)	(none)			lowerBound 0 upperBound (none) closure gtSemiInterval	0

3.103 Time of Day End

Name: Time of Day End [IHOREG 180]

Definition: The time corresponding to the end of an active period.

Code: `timeOfDayEnd`

Remarks: The time of day end must be encoded using 2 digits for the hour (hh), 2 digits for the minutes(mm) and 2 digits for the seconds (ss). This conforms to ISO 8601:2004.

Aliases: (none)

Value Type: time

3.104 Time of Day Start

Name: Time of Day Start [IHOREG 181]

Definition: The time corresponding to the start of an active period.

Code: `timeOfDayStart`

Remarks: The time of day start must be encoded using 2 digits for the hour (hh), 2 digits for the minutes(mm) and 2 digits for the seconds (ss). This conforms to ISO 8601:2004.

Aliases: (none)

Value Type: time

3.105 Traffic Flow

Name: Traffic Flow [IHOREG 184]

Definition: Direction of vessels passing a reference point.

Code: `trafficFlow`

Remarks:

Aliases: TRAFIC

Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Inbound	Traffic flow in a general direction toward a port or similar destination. [IHOREG 1156]	1	
Outbound	Traffic flow in a general direction away from a port or similar point of origin. [IHOREG 1157]	2	
One-Way	Traffic flow in one general direction only. [IHOREG 1158]	3	
Two-Way	Traffic flow in two generally opposite directions. [IHOREG 1159]	4	

3.106 Under Keel Allowance Fixed

Name: Under Keel Allowance Fixed [IHOREG 887]

Definition: A fixed allowance given by an authority, which is added to draught in order to maintain a minimum under keel clearance.

Code: `underKeelAllowanceFixed`

Remarks:

Aliases: (none)

Value Type: real

Unit of measure name: metre definition: SI metre symbol: m

Constraints

string Length	text Pattern	range	precision
(not specified)	(none)	(not specified)	1

For real values, precision is the number of digits after the decimal point.

3.107 Under Keel Allowance Variable Beam Based

Name: Under Keel Allowance Variable Beam Based [IHOREG 888]

Definition: A percentage value, given by an authority, which is applied to ship's beam in order to calculate under keel allowance.

Code: underKeelAllowanceVariableBeamBased

Remarks:

Aliases: (none)

Value Type: real

Constraints

string	Length	text	Pattern	range	precision
(not specified)			(none)	lowerBound 0 upperBound (none) closure gtSemiInterval	0

For real values, precision is the number of digits after the decimal point.

3.108 Under Keel Allowance Variable Draught Based

Name: Under Keel Allowance Variable Draught Based [IHOREG 889]

Definition: A percentage value, given by an authority, which is applied to ship's draught in order to calculate under keel allowance.

Code: underKeelAllowanceVariableDraughtBased

Remarks:

Aliases: (none)

Value Type: real

Constraints

string	Length	text	Pattern	range	precision
(not specified)			(none)	lowerBound 0 upperBound (none) closure gtSemiInterval	0

For real values, precision is the number of digits after the decimal point.

3.109 Uncertainty Fixed

Name: Uncertainty Fixed [IHOREG 885]

Definition: The best estimate of the fixed horizontal or vertical accuracy component for positions, depths, heights, vertical distances and vertical clearances.

Code: uncertaintyFixed

Remarks:

Aliases: POSACC; SOUACC; VERACC

Value Type: real

Unit of measure name: Metre definition: The basic unit of length in the International System of Units (SI) system.
symbol: m

Constraints

string	Length	text	Pattern	range	precision
(not specified)		(none)		(not specified)	1

For real values, precision is the number of digits after the decimal point.

3.110 Uncertainty Variable Factor

Name: Uncertainty Variable Factor [IHOREG 886]

Definition: The factor to be applied to the variable component of an uncertainty equation so as to provide the best estimate of the variable horizontal or vertical accuracy component for positions, depths, heights, vertical distances and vertical clearances.

Code: uncertaintyVariableFactor

Remarks:

Aliases: (none)

Value Type: real

3.111 Vessel Performance

Name: Vessel Performance [IHOREG 710]

Definition: A description of the required handling characteristics of a vessel including hull design, main and auxiliary machinery, cargo handling equipment, navigation equipment and manoeuvring behaviour.

Code: vesselPerformance

Remarks:

Aliases: (none)

Value Type: text

3.112 Vessels Characteristics

Name: Vessels Characteristics [IHOREG 711]

Definition: Characteristics of vessels.

Code: vesselsCharacteristics

Remarks:

Aliases: VSLCAR

Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Length Overall	The maximum length of the ship. [IHOREG 2637]	1	
Length at Waterline	The ship's length measured at the waterline. [IHOREG 2638]	2	
Breadth	The width or beam of the vessel. [IHOREG 2639]	3	
Draught	The depth of water necessary to float a vessel fully loaded. [IHOREG 2640]	4	
Displacement Tonnage	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. [IHOREG 2641]	6	
Displacement Tonnage, Light	The weight of the ship excluding cargo, fuel, ballast, stores, passengers, and crew, but with water in the boilers to steaming level. [IHOREG 2642]	7	
Displacement	The weight of the ship including cargo, passengers, fuel, water, stores, dunnage and such other items necessary for use on a	8	

Label	Definition	Code	Remarks
Tonnage, Loaded	voyage, which brings the vessel down to her load draft. [IHOREG 2643]		
Deadweight Tonnage	The difference between displacement, light and displacement, loaded. A measure of the ship's total carrying capacity. [IHOREG 2644]	9	
Gross Tonnage	The entire internal cubic capacity of the ship expressed in tons of 100 cubic feet to the ton, except certain spaces which 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. [IHOREG 2645]	10	
Net Tonnage	Obtained from the gross tonnage by deducting crew and navigating spaces and allowances for propulsion machinery. [IHOREG 2646]	11	
Panama Canal/Universal Measurement System Net Tonnage	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. [IHOREG 2647]	12	
Suez Canal Net Tonnage	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. [IHOREG 2648]	13	

3.113 Vessels Characteristics Unit

Name: Vessels Characteristics Unit [IHOREG 1106]

Definition: The unit used for vessel characteristics attribute.

Code: vesselsCharacteristicsUnit

Remarks:

Aliases: VSLUNT

Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Metres	The basic unit of length in the International System of Units (SI) system. [IHOREG 820]	1	
Metric Ton	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. [IHOREG 2649]	3	

Label	Definition	Code	Remarks
Ton	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 m ³) of salt water with a density of 64 lb/ft ³ (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). [IHOREG 2650]	4	
Short Ton	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 US 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 US system (short or net hundredweight) and 112 pounds (50.80234544 kg) in the Imperial system (long or gross hundredweight). [IHOREG 2651]	5	
Gross Ton	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. [IHOREG 2652]	6	
Net Ton	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. [IHOREG 2653]	7	
Suez Canal Net Tonnage	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. [IHOREG 2648]	9	

3.114 Vessels Characteristics Value

Name: Vessels Characteristics Value [IHOREG 908]

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

Code: vesselsCharacteristicsValue

Remarks: Examples: VSLVAL = 12.345 + VSLCAR = 4 (draught) = draught of 12.345 VSLUNT = 1 (m); VSLVAL = 12345 + VSLCAR = 11 (net tonnage) = net tonnage of 12345 VSLUNT = 7 (net ton (NT)); VSLVAL = 123.45 + VSLCAR = 1 (length overall) = length overall of 123.45 VSLUNT = 1 (m).

Aliases: (none)

Value Type: real

3.115 Water Level Trend

Name: Water Level Trend [IHOREG 378]

Definition: The tendency of water level to change in a particular direction.

Code: waterLevelTrend

Remarks:

Aliases: (none)

Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Decreasing	Becoming smaller in magnitude. [IHOREG 1387]	1	
Increasing	Becoming larger in magnitude. [IHOREG 1388]	2	
Steady	Constant. [IHOREG 1389]	3	

3.116 Action or Activity

Name: Action or Activity [IHOREG 974]

Definition: The action or activity of a vessel.

Code: actionOrActivity

Remarks:

Aliases: (none)

Value Type: S100_CodeList

Listed Values

Label	Definition	Code	Remarks
Navigating With a Pilot	Carrying a qualified pilot as part of the vessel navigation team. [IHOREG 2844]	1	
Entering Port	Navigating a vessel into a port. [IHOREG 2845]	2	
Leaving Port	Navigating a vessel out of a port. [IHOREG 2846]	3	
Berthing	A signal station for the control of vessels when berthing. [IHOREG 2858]	4	
Slipping	Detaching a vessel from a wharf or jetty. [IHOREG 2847]	5	
Anchoring	Attaching a vessel to the seabed by means of an anchor and cable. [IHOREG 2848]	6	
Weighing Anchor	Detaching a vessel from the seabed by recovering an anchor and cable. [IHOREG 2849]	7	
Transiting	Navigating a vessel along a route or through a narrow gap, such as under a bridge or through a lock. [IHOREG 2850]	8	
Overtaking	Navigating a vessel past another traveling broadly in the same direction. [IHOREG 2851]	9	
Reporting	Providing details such as the name, location or intentions of a vessel. [IHOREG 2852]	10	

Label	Definition	Code	Remarks
Working Cargo	Loading or unloading cargo. [IHOREG 2853]	11	
Landing	Placing crew or passengers on shore. [IHOREG 2854]	12	
Diving	A signal or message warning of diving activity. [IHOREG 2859]	13	
Fishing	Hunting or catching fish. [IHOREG 2855]	14	
Discharging Overboard	Releasing anything into the sea; often ballast water; or spoil from dredging elsewhere. [IHOREG 2856]	15	
Passing	Navigating a vessel past another travelling broadly in the opposite direction. [IHOREG 2857]	16	
Ballast Water Exchange	Discharge and uptake of ballast water.	17	
Hull Cleaning	The removal or treatment of biofouling (accumulation of aquatic organisms including microfouling and macrofouling) from a ship's submerged surfaces, including hull and niche areas, conducted either in-water or during dry-docking. The process includes both proactive cleaning (periodic removal of microfouling) and reactive cleaning (removal of micro- and macrofouling as corrective action).	18	
Scientific Research	The conduct of observational, sampling, or experimental activities by authorised personnel to collect scientific or environmental data, which may involve the deployment of scientific instruments, collection of biological or geological samples, or in-water survey operations. [IHOREG TBD]	19	
Tourism	Organised recreational visitation and leisure activities in marine areas, including sight-seeing, wildlife observation, glass-bottom vessel tours, and guided nature excursions conducted by commercial or permitted operators. [IHOREG TBD]	20	
Education	Structured activities conducted for training, awareness, or interpretive purposes involving groups or individuals learning about the marine environment, including guided educational programs, school activities, and field instruction conducted within designated marine areas. [IHOREG TBD]	21	
Infrastructure Maintenance	Inspection, repair, or upkeep of existing marine or coastal infrastructure such as wharves, piers, pipelines, moorings, subsea cables, navigational aids, or coastal protection structures, including minor works that do not expand the original footprint. [IHOREG TBD]	22	

3.117 Category of RxN

Name: Category of RxN [IHOREG 978]

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

Code: categoryOfRxN

Remarks:

Aliases: (none)

Value Type: S100_CodeList

Listed Values

Label	Definition	Code	Remarks
Navigation	The process of directing the movement of a craft from one point to another. [IHOREG 2861]	1	
Communication	Transmitting and/or receiving electronic communication signals. [IHOREG 2869]	2	
Environmental Protection	Pertaining to environmental protection. [IHOREG 2862]	3	
Wildlife Protection	Pertaining to wildlife protection. [IHOREG 2863]	4	
Security	Pertaining to security. [IHOREG 2864]	5	
Customs	The agency or establishment for collecting duties, tolls. [IHOREG 2870]	6	
Cargo Operation	Pertaining to cargo operations. [IHOREG 2865]	7	
Refuge	Pertaining to a place of safety or refuge. [IHOREG 2866]	8	
Health	The authority with responsibility for checking the validity of the health declaration of a vessel and for declaring free pratique. [IHOREG 2871]	9	
Natural Resources or Exploitation	Pertaining to natural resources or exploitation. [IHOREG 2867]	10	
Port	Person or corporation, owners of, or entrusted with or invested with the power of managing a port. May be called a Harbour Board, Port Trust, Port Commission, Harbour Commission, Marine Department. [IHOREG 2872]	11	
Finance	An authority with responsibility for the control and movement of money. [IHOREG 2873]	12	
Agriculture	The science, art, or practice of cultivating the soil, producing crops, and raising livestock and in varying degrees the preparation and marketing of the resulting products. [IHOREG 2868]	13	

3.118 Category of Vessel

Name: Category of Vessel [IHOREG 979]

Definition: Classification of vessels by function or use.

Code: categoryOfVessel

Remarks:

Aliases: (none)

Value Type: S100_CodeList

Listed Values

Label	Definition	Code	Remarks
General Cargo Vessel	A vessel which is designed for carrying general cargo, e.g. boxes, sacks. [IHOREG 2886]	1	
Container Carrier	A vessel designed to carry ISO containers. [IHOREG 2874]	2	
Tanker	A vessel which is designed for carrying liquid goods, for example oil or water. [IHOREG 2887]	3	

Label	Definition	Code	Remarks
Bulk Carrier	A vessel which is designed for carrying bulk goods, e.g. coal, ore or grain. [IHOREG 2888]	4	
Passenger Vessel	A day trip or cabin vessel constructed and equipped to carry more than 12 passengers. [IHOREG 2889]	5	
Roll-On Roll-Off	A vessel designed to allow road vehicles to be driven on and off; often a ferry. [IHOREG 2875]	6	
Refrigerated Cargo Vessel	A vessel designed to carry refrigerated cargo. [IHOREG 2876]	7	
Fishing Vessel	A vessel that is used and equipped for the fishing of living aquatic resources. [IHOREG 2890]	8	
Service	A vessel which provides a service such as a tug, anchor handler, survey or supply vessel. [IHOREG 2877]	9	
Warship	A vessel designed for the conduct of military operations. [IHOREG 2878]	10	
Towed or Pushed Composite Unit	Either a tug and tow, or any combination of a tug providing propulsion to barges or vessels secured ahead or alongside. [IHOREG 2879]	11	
Tug and Tow	A combination of tug(s) and non-powered tow(s). [IHOREG 2880]	12	
Light Recreational	A pleasure boat or watercraft, or an excursion vessel used for short cruises such as whale watching. [IHOREG 2881]	13	
Semi-Submersible Offshore Installation	An installation which is designed to float at all times and which is normally anchored in position when deployed in the offshore gas and oil industry. [IHOREG 2882]	14	
Jack-Up Exploration or Project Installation	An exploration or project installation with legs which can be raised and lowered. The legs are raised when the installation is re-positioned. When stationary the legs are lowered to the sea floor and the working platform is raised clear of the sea surface. [IHOREG 2883]	15	
Livestock Carrier	A vessel designed to carry large quantities of live animals. [IHOREG 2884]	16	
Sport Fishing	A vessel used in fishing for pleasure or competition. [IHOREG 2885]	17	

4 Complex Attributes

4.1 Bearing Information

Name: Bearing Information [IHOREG 733]

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

Code: bearingInformation

Remarks:

Aliases: (none)

Sub-Attributes				
Sub-attribute	Type	Mult.	Permitted Values	Sequential
cardinalDirection	enumeration	0..1	1: North 2: North Northeast 3: Northeast 4: East Northeast 5: East 6: East Southeast 7: Southeast 8: South Southeast 9: South 10: South Southwest 11: Southwest 12: West Southwest 13: West 14: West Northwest 15: Northwest 16: North Northwest	false
distance	real	0..1		false
information	complex	0..*		false
orientation	complex	0..1		false

4.2 Contact Address

Name: Contact Address [IHOREG 735]

Definition: Direction or superscription of a letter, package, etc., specifying the name of the place to which it is directed, and optionally a contact person or organisation who should receive it.

Code: contactAddress

Remarks:

Aliases: (none)

Sub-Attributes				
Sub-attribute	Type	Mult.	Permitted Values	Sequential
deliveryPoint	text	0..1		false
cityName	text	0..1		false
administrativeDivision	text	0..1		false
countryName	text	0..1		false
postalCode	text	0..1		false

4.3 Feature Name

Name: Feature Name [IHOREG 1129]

Definition: Provides the name of an entity, defines the national language of the name, and provides the option to

display the name at various system display settings.

Code: `featureName`

Remarks:

Aliases: (none)

Sub-Attributes

Sub-attribute	Type	Mult.	Permitted Values	Sequential
language	text	1..1		false
name	text	1..1		false
nameUsage privateVisibility	enumeration	0..1	1: Default Name Display 2: Alternate Name Display 3: No Chart Display	false

4.4 Fixed Date Range

Name: Fixed Date Range [IHOREG 798]

Definition: An active period of a single fixed event or occurrence, as the date range between discrete start and end dates.

Code: `fixedDateRange`

Remarks: Dates must be encoded in the format YYYYMMDD; using 4 digits for the calendar year (YYYY) and, optionally, 2 digits for the month (MM) (for example April = 04) and 2 digits for the day (DD). When no specific month and/or day is required/known, the values are replaced with dashes (-). The date range of a recurring event or occurrence must be encoded using periodicDateRange.

Aliases: (none)

Sub-Attributes

Sub-attribute	Type	Mult.	Permitted Values	Sequential
dateStart	S100_TruncatedDate	0..1		false
dateEnd	S100_TruncatedDate	0..1		false

4.5 Frequency Pair

Name: Frequency Pair [IHOREG 230]

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

Code: `frequencyPair`

Remarks:

Aliases: FRQPAR

Sub-Attributes

Sub-attribute	Type	Mult.	Permitted Values	Sequential
frequencyShoreStationReceives	integer	0..1		false
frequencyShoreStationTransmits	integer	1..1		false

4.6 Graphic

Name: Graphic [IHOREG 745]

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

Code: `graphic`

Remarks:

Aliases: (none)

Sub-Attributes

Sub-attribute	Type	Mult.	Permitted Values	Sequential
pictorialRepresentation	text	1..*		false
pictureCaption	text	0..1		false
sourceDate	date	0..1		false
pictureInformation	text	0..1		false
bearingInformation	complex	0..1		false

4.7 Horizontal Position Uncertainty

Name: Horizontal Position Uncertainty [IHOREG 233]

Definition: The best estimate of the accuracy of a position.

Code: horizontalPositionUncertainty

Remarks: The expected input is the maximum of the two-dimensional error. The error is assumed to be positive and negative.

Aliases: POSACC

Sub-Attributes

Sub-attribute	Type	Mult.	Permitted Values	Sequential
uncertaintyFixed	real	1..1		false
uncertaintyVariableFactor	real	0..1		false

4.8 Information

Name: Information [IHOREG 234]

Definition: Textual information about the feature. The information may be provided as a string of text or as a file name of a single external text file that contains the text.

Code: information

Remarks: At least one of the sub-attributes file reference or text must be populated. The sub-attribute file reference is generally used for long text strings or those that require formatting, however, there is no restriction on the type of text (except for lexical level) that can be held in files referenced by sub-attribute file reference.

Aliases: INFORM

Sub-Attributes

Sub-attribute	Type	Mult.	Permitted Values	Sequential
fileLocator	text	0..1		false
fileReference	text	0..1		false
headline	text	0..*		true
language	text	0..1		false
text	text	0..1		false

4.9 Notice Time

Name: Notice Time [IHOREG 755]

Definition: Span of time, prior to the time the service is needed, for preparations to be made to fulfill the requirement.

Code: noticeTime

Remarks:

Aliases: (none)

Sub-Attributes

Sub-attribute	Type	Mult.	Permitted Values	Sequential
noticeTimeHours	real	0..*		true

Sub-attribute	Type	Mult.	Permitted Values	Sequential
noticeTimeText	text	0..1		false
operation	enumeration	0..1	1: Largest Value 2: Smallest Value	false

4.10 Online Resource

Name: Online Resource [IHOREG 243]

Definition: Information about online sources from which a resource or data can be obtained.

Code: `onlineResource`

Remarks:

Aliases: (none)

Sub-Attributes

Sub-attribute	Type	Mult.	Permitted Values	Sequential
linkage	URI	1..1		false
protocol	text	0..1		false
applicationProfile	text	0..1		false
nameOfResource	text	0..1		false
onlineResourceDescription	text	0..1		false
onlineFunction	enumeration	0..1	1: Download 3: Offline Access 4: Order 5: Search 6: Complete Metadata 7: Browse Graphic 8: Upload 9: Email Service 10: Browsing 11: File Access	false
protocolRequest	text	0..1		false

4.11 Orientation

Name: Orientation [IHOREG 225]

Definition: (1) The angular distance measured from true north to the major axis of the feature. (2) In ECDIS, the mode in which information on the ECDIS is being presented. Typical modes include: north-up - as shown on a nautical chart, north is at the top of the display; Ships head-up - based on the actual heading of the ship, (e.g. Ships gyrocompass); course-up display - based on the course or route being taken.

Code: `orientation`

Remarks:

Aliases: (none)

Sub-Attributes

Sub-attribute	Type	Mult.	Permitted Values	Sequential
orientationUncertainty	real	0..1		false
orientationValue	real	1..1		false

4.12 Periodic Date Range

Name: Periodic Date Range [IHOREG 794]

Definition: The active period of a recurring event or occurrence.

Code: periodicDateRange

Remarks: The sub-attributes date start and date end should be encoded using 4 digits for the calendar year (YYYY), 2 digits for the month (MM) (for example April = 04) and 2 digits for the day (DD). When no specific year is required (that is, the feature is removed at the same time each year) the following two cases may be considered: - same day each year: ----MMDD - same month each year: ----MM-- This conforms to ISO 8601:2004.
 Aliases: (none)

Sub-Attributes

Sub-attribute	Type	Mult.	Permitted Values	Sequential
dateStart	S100_TrimmedDate	1..1		false
dateEnd	S100_TrimmedDate	1..1		false

4.13 RxN Code

Name: RxN Code [IHOREG 765]

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

Code: rxNCode

Remarks:

Aliases: (none)

Sub-Attributes

Sub-attribute	Type	Mult.	Permitted Values	Sequential
categoryOfRxN	S100_CodeList	0..1	1: Navigation 2: Communication 3: Environmental Protection 4: Wildlife Protection 5: Security 6: Customs 7: Cargo Operation 8: Refuge 9: Health 10: Natural Resources or Exploitation 11: Port 12: Finance 13: Agriculture	false
actionOrActivity	S100_CodeList	0..1	1: Navigating With a Pilot 2: Entering Port 3: Leaving Port 4: Berthing 5: Slipping 6: Anchoring 7: Weighing Anchor 8: Transiting 9: Overtaking 10: Reporting 11: Working Cargo 12: Landing 13: Diving 14: Fishing 15: Discharging Overboard 16: Passing 17: Ballast Water Exchange 18: Hull Cleaning 19: Scientific Research 20: Tourism 21: Education 22: Infrastructure Maintenance	false

Sub-attribute	Type	Mult.	Permitted Values	Sequential
headline	text	0..*		true

4.14 Schedule by Day of Week

Name: Schedule by Day of Week [IHOREG 249]

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

Code: scheduleByDayOfWeek

Remarks:

Aliases: (none)

Sub-Attributes

Sub-attribute	Type	Mult.	Permitted Values	Sequential
categoryOfSchedule	enumeration	0..1	1: Normal Operation 2: Closure 3: Unmanned Operation	false
text	text	0..1		false
timeIntervalsByDayOfWeek	complex	1..*		false

4.15 Source Indication

Name: Source Indication [IHOREG 1320]

Definition: Information about the source document, publication, or reference from which object data or textual material included or referenced in a dataset are derived.

Code: sourceIndication

Remarks:

Aliases: (none)

Sub-Attributes

Sub-attribute	Type	Mult.	Permitted Values	Sequential
categoryOfAuthority	enumeration	0..1		false
countryName	text	0..1		false
source	text	0..1		false
sourceType	enumeration	0..1	1: Law or Regulation 2: Official Publication 7: Mariner Report, Confirmed 8: Mariner Report, Not Confirmed 9: Industry Publications and Reports 10: Remotely Sensed Images 11: Photographs 12: Products Issued by HO Services 13: News Media 14: Traffic Data	false
reportedDate	S100_TruncatedDate	0..1		false
featureName	complex	0..*		false

4.16 Survey Date Range

Name: Survey Date Range [IHOREG 795]

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

Code: surveyDateRange

Remarks:

Aliases: (none)

Sub-Attributes

Sub-attribute	Type	Mult.	Permitted Values	Sequential
dateStart	S100_TruncatedDate	0..1		false
dateEnd	S100_TruncatedDate	1..1		false

4.17 Spatial Accuracy

Name: Spatial Accuracy [IHOREG 985]

Definition: Provides an indication of the vertical and horizontal positional uncertainty of bathymetric data, optionally within a specified date range.

Code: spatialAccuracy

Remarks:

Aliases: (none)

Sub-Attributes

Sub-attribute	Type	Mult.	Permitted Values	Sequential
fixedDateRange	complex	0..1		false
horizontalPositionUncertainty	complex	0..1		false

4.18 Telecommunications

Name: Telecommunications [IHOREG 255]

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

Code: telecommunications

Remarks: If no value is populated for the sub-attribute telecommunication service, this means the service is by voice communication. If no value is populated for the sub-attribute telecommunication carrier, this means the service is by land line communication.

Aliases: (none)

Sub-Attributes

Sub-attribute	Type	Mult.	Permitted Values	Sequential
categoryOfCommunicationPreference	enumeration	0..1	1: Preferred Calling 2: Alternate Calling 3: Preferred Working 4: Alternate Working	false
telecommunicationIdentifier	text	1..1		false
telecommunicationCarrier	text	0..1		false
contactInstructions	text	0..1		false
telecommunicationService	enumeration	0..*	1: Voice 2: Facsimile 3: SMS 4: Data 5: Streamed Data 6: Telex 7: Telegraph 8: Email	false

4.19 Text Content

Name: Text Content [IHOREG 768]

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

Code: `textContent`

Remarks: Exactly one of sub-attributes `onlineResource` or `information` must be completed in one instance of `textContent`. Product specifications may restrict the use or content of `onlineResource` for security. For example, a product specification may forbid populating `onlineResource`. Product specification authors must consider whether applications using the data product may be prevented from accessing off-system resources by security policies.

Aliases: `TXTCON`

Sub-Attributes

Sub-attribute	Type	Mult.	Permitted Values	Sequential
categoryOfText	enumeration	0..1	1: Abstract or Summary 2: Extract 3: Full Text	false
information	complex	0..*		false
onlineResource	complex	0..1		false
sourceIndication	complex	0..*		false

4.20 Time Intervals by Day of Week

Name: Time Intervals by Day of Week [IHOREG 248]

Definition: The regular weekly operation times of a service or schedule.

Code: `timeIntervalsByDayOfWeek`

Remarks:

Aliases: (none)

Sub-Attributes

Sub-attribute	Type	Mult.	Permitted Values	Sequential
dayOfWeek	enumeration	0..7	1: Sunday 2: Monday 3: Tuesday 4: Wednesday 5: Thursday 6: Friday 7: Saturday	true
dayOfWeekIsRange	boolean	0..1		false
timeOfDayStart	time	0..*		true
timeOfDayEnd	time	0..*		true

4.21 Under Keel Allowance

Name: Under Keel Allowance [IHOREG 770]

Definition: A fixed figure, or a figure derived by calculation, which is added to draught in order to maintain the minimum under keel clearance taking into account the vessel's static and dynamic characteristics, sea state and weather forecast, the reliability of the chart and variance from predicted height of tide or water level.

Code: `underKeelAllowance`

Remarks:

Aliases: (none)

Sub-Attributes

Sub-attribute	Type	Mult.	Permitted Values	Sequential
underKeelAllowanceFixed	real	0..1		false
underKeelAllowanceVariableBeamBased	real	0..1		false

Sub-attribute	Type	Mult.	Permitted Values	Sequential
underKeelAllowanceVariableDraughtBased	real	0..1		false
operation	enumeration	0..1	1: Largest Value 2: Smallest Value	false

4.22 Vessel Measurements Specification

Name: Vessel Measurements Specification [IHOREG 772]

Definition: Combinations of values of measurable characteristics or dimensions of vessels, used to specify size and tonnage ranges.

Code: vesselMeasurementsSpecification

Remarks: Combines (i) specifications of vessels' measurable characteristics (length, beam, tonnages, etc.), (ii) limit values for the specified characteristics (with units), (iii) arithmetical comparison operators (greater than, etc.), and (iv) logical operators (AND/OR) to define a subset of vessels characterized by the specified ranges. For example, the combination (draught, 10.5, metres, greaterThan) describes "vessels with draught greater than 10.5 metres".

Aliases: (none)

Sub-Attributes

Sub-attribute	Type	Mult.	Permitted Values	Sequential
comparisonOperator	enumeration	1..1	1: Greater Than 2: Greater Than or Equal To 3: Less Than 4: Less Than or Equal To 5: Equal To 6: Not Equal To	false
vesselCharacteristics	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
vesselCharacteristicsValue	real	1..1		false
vesselCharacteristicsUnit	enumeration	1..1	1: Metres 3: Metric Ton 4: Ton 5: Short Ton 6: Gross Ton 7: Net Ton 9: Suez Canal Net Tonnage	false

5 Roles

5.1 The Component

Name: The Component

Definition: A pointer to the aggregate in a whole-part relationship.

Code: theComponent

Remarks:

Aliases: (none)

5.2 The Collection

Name: The Collection

Definition: A pointer to a part in a whole-part relationship.

Code: theCollection

Remarks:

Aliases: (none)

5.3 Authority(reference)

Name: Authority(reference) [IHOREG 20]

Definition: A pointer to an Authority object

Code: theAuthority

Remarks:

Aliases: (none)

5.4 Authority service hours

Name: Authority service hours [IHOREG 21]

Definition: The authority for which service hours are given

Code: theAuthority_srvHrs

Remarks:

Aliases: (none)

5.5 Contact details

Name: Contact details [IHOREG 22]

Definition: A pointer to an Contact Details object

Code: theContactDetails

Remarks:

Aliases: (none)

5.6 Component of

Name: Component of

Definition: A pointer to the aggregate in a whole-part relationship.

Code: componentOf

Remarks:

Aliases: (none)

5.7 Consists Of

Name: Consists Of

Definition: A pointer to a part in a whole-part relationship.

Code: consistsOf

Remarks:

Aliases: (none)

5.8 Control authority

Name: Control authority

Definition: The controlling organization or authority for a geographically located service

Code: controlAuthority

Remarks:

Aliases: (none)

5.9 Is Applicable To

Name: Is Applicable To [IHOREG 28]

Definition: The object or class of objects to which the regulation, restriction, recommendation, or nautical information applies

Code: isApplicableTo

Remarks:

Aliases: (none)

5.10 Must be Filed by

Name: Must be Filed by [IHOREG 37]

Definition: The class (generally, qualifying vessels) which must file the report

Code: mustBeFiledBy

Remarks:

Aliases: (none)

5.11 Organisation-Related RxN

Name: Organisation-Related RxN

Definition: Reference to regulation, recommendation, restriction or general information related to an organisation

Code: organisationRelatedRxN

Remarks:

Aliases: (none)

5.12 Partial Working Day

Name: Partial Working Day [IHOREG 36]

Definition: The work hours for a non-standard workday

Code: partialWorkingDay

Remarks:

Aliases: (none)

5.13 Permission

Name: Permission [IHOREG 49]

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

Code: permission

Remarks:

Aliases: (none)

5.14 Report to

Name: Report to [IHOREG 38]

Definition: The organisation or place to which a report is sent.

Code: reportTo

Remarks:

Aliases: (none)

5.15 The RxN

Name: The RxN [IHOREG 30]

Definition: The regulation, restriction, recommendation, or nautical information

Code: theRxN

Remarks:

Aliases: (none)

5.16 Service Hours (reference)

Name: Service Hours (reference) [IHOREG 29]
Definition: Service hours for an authority or service provider
Code: theServiceHours
Remarks:
Aliases: (none)

5.17 The Applicable RxN

Name: The Applicable RxN [IHOREG 18]
Definition: The applicable regulation, restriction, recommendation or nautical information
Code: theApplicableRxN
Remarks:
Aliases: (none)

5.18 The Cartographic Text

Name: The Cartographic Text [IHOREG 3]
Definition: A pointer to a specific cartographically positioned location for text.
Code: theCartographicText
Remarks:
Aliases: (none)

5.19 The Information

Name: The Information [IHOREG 48]
Definition: The information
Code: theInformation
Remarks:
Aliases: (none)

5.20 The organisation

Name: The organisation [IHOREG 47]
Definition: The organisation to which information relates
Code: theOrganisation
Remarks:
Aliases: (none)

5.21 The Position Provider

Name: The Position Provider
Definition: A pointer to a specific feature(s).
Code: thePositionProvider
Remarks:
Aliases: (none)

5.22 The Quality Information

Name: The Quality Information
Definition: A pointer to an information type providing spatial quality information.
Code: theQualityInformation
Remarks:
Aliases: (none)

5.23 The service hours for a non-standard workday

Name: The service hours for a non-standard workday [IHOREG 32]
Definition: The usual service hours to which an exception applies
Code: theServiceHours_nsdy
Remarks:
Aliases: (none)

5.24 Service area

Name: Service area [IHOREG 45]

Definition: The area served by a service provider

Code: serviceArea

Remarks:

Aliases: (none)

5.25 Service provider

Name: Service provider [IHOREG 46]

Definition: Pointer to a feature from where a provider supplies a service

Code: serviceProvider

Remarks:

Aliases: (none)

5.26 The ship report

Name: The ship report [IHOREG 33]

Definition: The report to be filed by a vessel

Code: theShipReport

Remarks:

Aliases: (none)

5.27 Traffic service report

Name: Traffic service report

Definition: The report for a traffic service

Code: reptForTrafficServ

Remarks:

Aliases: (none)

6 Information Associations

6.1 Additional information

Name: Additional information [IHOREG 8000001]

Definition: A feature association for the binding between at least one instance of a geo feature and an instance of an information type.

Code: AdditionalInformation

Remarks:

Aliases: (none)

Attribute Bindings

(No local attribute bindings)

Role: theInformation

6.2 Authority contact

Name: Authority contact [IHOREG 8000003]

Definition: Contact information for an authority

Code: AuthorityContact

Remarks:

Aliases: (none)

Attribute Bindings

(No local attribute bindings)

Role: theAuthority theContactDetails

6.3 Authority hours

Name: Authority hours [IHOREG 8000004]

Definition: Service hours for an authority

Code: AuthorityHours

Remarks:

Aliases: (none)

Attribute Bindings

(No local attribute bindings)

Role: theAuthority_srvHrs theServiceHours

6.4 Associated RxN

Name: Associated RxN [IHOREG 8000005]

Definition: Association between a geographic location and a regulation, restriction, recommendation, or nautical information

Code: AssociatedRxN

Remarks:

Aliases: (none)

Attribute Bindings

(No local attribute bindings)

Role: theRxN

6.5 Exceptional workday

Name: Exceptional workday [IHOREG 8000006]

Definition: Exception to the usual working day

Code: ExceptionalWorkday

Remarks:

Aliases: (none)

Attribute Bindings

(No local attribute bindings)

Role: theServiceHours_nsdy partialWorkingDay

6.6 InclusionType

Name: InclusionType [IHOREG 8000015]

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

Code: InclusionType

Remarks:

Aliases: (none)

Attribute Bindings

Attribute	Type	Mult.	Permitted Values	Sequential
membership	enumeration	1..1	1 : Included 2 : Excluded	false

Role: theApplicableRxN isApplicableTo

6.7 Permission Type

Name: Permission Type [IHOREG 8000016]

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

Code: PermissionType

Remarks:

Aliases: (none)

Attribute Bindings

Attribute	Type	Mult.	Permitted Values	Sequential
categoryOfRelationship	enumeration	1..1	1 : Prohibited 2 : Not Recommended 3 : Permitted 4 : Recommended 5 : Required 6 : Not Required 7 : Exclusively Permitted	false

Role: permission

6.8 Related organisation

Name: Related organisation [IHOREG 8000014]

Definition: Related organisation

Code: RelatedOrganisation

Remarks:

Aliases: (none)

Attribute Bindings

(No local attribute bindings)

Role: organisationRelatedRxN theOrganisation

6.9 Reporting Authority

Name: Reporting Authority [IHOREG 8000008]

Definition: The authority with which a report must be filed

Code: ReportingAuthority

Remarks:

Aliases: (none)

Attribute Bindings

(No local attribute bindings)

Role: reportTo theShipReport

6.10 Reporting Requirement

Name: Reporting Requirement [IHOREG 8000007]

Definition: Association between types of reports and classes of vessels which must file report of the type described

Code: ReportingRequirement

Remarks:

Aliases: (none)

Attribute Bindings

(No local attribute bindings)

Role: mustBeFiledBy theShipReport

6.11 Service Contact

Name: Service Contact

Definition: Contact details for a service or facility

Code: ServiceContact

Remarks:

Aliases: (none)

Attribute Bindings

(No local attribute bindings)

Role: theContactDetails

6.12 Service control

Name: Service control [IHOREG 8000010]

Definition: The controlling authority for a service area

Code: ServiceControl

Remarks: This is an information association linking a location where a service is provided with an information type describing the provider. Contrast to serviceProvisionArea, which is a feature association linking the area served with another feature describing the provider. Role controlledService encodable only as a generic inverse association in 3.0.0 datasets as it is an information->feature link

Aliases: (none)

Attribute Bindings

(No local attribute bindings)

Role: controlAuthority

6.13 Spatial Association

Name: Spatial Association [IHOREG 8000019]

Definition: An association for the binding between a spatial type and its spatial quality information.

Code: SpatialAssociation

Remarks:

Aliases: (none)

Association is not referenced in any information binding

Attribute Bindings

(No local attribute bindings)

Role: theQualityInformation

6.14 Location Hours

Filename: 127_FC_2.0.0.20251104.xml

Name: Location Hours [IHOREG 8000013]

Definition: Working hours for a service or facility described by a geographic location

Code: LocationHours

Remarks:

Aliases: (none)

Attribute Bindings

(No local attribute bindings)

Role: theServiceHours

6.15 Traffic Service Report

Name: Traffic Service Report

Definition: Association between traffic control service and reports required of vessels pertaining to that area

Code: TrafficServiceReport

Remarks:

Aliases: (none)

Attribute Bindings

(No local attribute bindings)

Role: reptForTrafficServ

7 Feature Associations

7.1 Service provision area

Name: Service provision area [IHOREG 9000019]

Definition: Association linking the location from which a service is provided and the area(s) served.

Code: ServiceProvisionArea

Remarks:

Aliases: (none) [IHOREG 9000019]

Attribute Bindings

(No local attribute bindings)

Role(s): serviceArea serviceProvider

7.2 Pilotage District Association

Name: Pilotage District Association [IHOREG 9000018]

Definition: A feature association for the binding between a pilotage district and its component pilot boarding places.

Code: PilotageDistrictAssociation

Remarks:

Aliases: (none) [IHOREG 9000018]

Attribute Bindings

(No local attribute bindings)

Role(s): theCollection theComponent

7.3 Text association

Name: Text association [IHOREG 9000014]

Definition: A feature association for the binding between a geo feature and the cartographically positioned location for text.

Code: TextAssociation

Remarks:

Aliases: (none) [IHOREG 9000014]

Attribute Bindings

(No local attribute bindings)

Role(s): thePositionProvider theCartographicText

7.4 Traffic Control Service Aggregation

Name: Traffic Control Service Aggregation

Definition: A feature association for the binding between a traffic control service and auxiliary features.

Code: TrafficControlServiceAggregation

Remarks:

Aliases: (none)

Attribute Bindings

(No local attribute bindings)

Role(s): componentOf consistsOf

8 Information Types

8.1 Information Type

Name: Information Type Abstract type: true [IHOREG 42]

Definition: Generalized information type which carries all the common attributes.

Code: [InformationType](#)

Remarks:

Aliases: (none)

Attribute Bindings

Attribute	Type	Mult.	Permitted Values	Sequential
featureName	complex	0..*		false
fixedDateRange	complex	0..1		false
periodicDateRange	complex	0..*		false
graphic	complex	0..*		false
sourceIndication	complex	0..*		false

Information bindings

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

8.2 AbstractRxN

Name: AbstractRxN Abstract type: true [IHOREG 33]

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

Code: [AbstractRxN](#)

Remarks:

Aliases: (none) Supertype: [InformationType](#)

Attribute Bindings

See [InformationType](#) for inherited attributes

Attribute	Type	Mult.	Permitted Values	Sequential
categoryOfAuthority	enumeration	0..1	2 : Border Control 3 : Police 4 : Port 5 : Immigration 6 : Health 7 : Coast Guard 8 : Agricultural 9 : Military 10 : Private Company 11 : Maritime Police 12 : Environmental 13 : Fishery 14 : Finance 15 : Maritime 16 : Customs	false
rxNCode	complex	0..*		false
textContent	complex	0..*		false

Information bindings

See [InformationType](#) for inherited bindings

Assoc. Type	Code of association	Code of associated class	Role	Mult.
association	InclusionType	Applicability	isApplicableTo	0..*
association	RelatedOrganisation	Authority	theOrganisation	0..*

8.3 Applicability

Name: Applicability [IHOREG 35]

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

Code: Applicability

Remarks:

Aliases: (none) Supertype: [InformationType](#)

Attribute Bindings

See [InformationType](#) for inherited attributes

Attribute	Type	Mult.	Permitted Values	Sequential
inBallast	boolean	0..1		false
categoryOfCargo	enumeration	0..*	1 : Bulk 2 : Container 3 : General 4 : Liquid 5 : Passenger 6 : Livestock 7 : Dangerous or Hazardous 8 : Heavy Lift 10 : Dry Bulk Cargo 11 : Liquid Bulk Cargo 12 : Reefer Container Cargo 13 : Ro-Ro Cargo 14 : Project Cargo 15 : Break Bulk Cargo	false
categoryOfDangerousOrHazardousCargo	enumeration	0..*	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
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	false

Attribute	Type	Mult.	Permitted Values	Sequential
			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	
categoryOfVesselRegistry	enumeration	0..1	1 : Domestic 2 : Foreign	false
logicalConnectives	enumeration	0..1	1 : Logical Conjunction 2 : Logical Disjunction	false
thicknessOfIceCapability	integer	0..1		false
vesselPerformance	text	0..1		false
destination	text	0..1		false
information	complex	0..*		false
vesselMeasurementsSpecification	complex	0..*		false

Information bindings
See [InformationType](#) for inherited bindings

Assoc. Type	Code of association	Code of associated class	Role	Mult.
association	InclusionType	AbstractRxN	theApplicableRxN	0..*

8.4 Authority

Name: Authority [IHOREG 36]

Definition: A person or organisation having political or administrative power and control.

Code: Authority

Remarks:

Aliases: (none) Supertype: [InformationType](#)

Attribute Bindings
See [InformationType](#) for inherited attributes

Attribute	Type	Mult.	Permitted Values	Sequential
categoryOfAuthority	enumeration	1..1	2 : Border Control 3 : Police 4 : Port 5 : Immigration 6 : Health 7 : Coast Guard 8 : Agricultural 9 : Military 10 : Private Company 11 : Maritime Police 12 : Environmental 13 : Fishery 14 : Finance 15 : Maritime	false

Attribute	Type	Mult.	Permitted Values	Sequential
			16 : Customs	
textContent	complex	0..1		false

Information bindings

See [InformationType](#) for inherited bindings

Assoc. Type	Code of association	Code of associated class	Role	Mult.
association	AuthorityContact	ContactDetails	theContactDetails	0..*
association	RelatedOrganisation	AbstractRxN	organisationRelatedRxN	0..*
association	AuthorityHours	ServiceHours	theServiceHours	0..*

8.5 Contact Details

Name: Contact Details [IHOREG 27]

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

Code: [ContactDetails](#)

Remarks:

Aliases: (none) Supertype: [InformationType](#)

Attribute Bindings

See [InformationType](#) for inherited attributes

Attribute	Type	Mult.	Permitted Values	Sequential
callName	text	0..1		false
callSign	text	0..1		false
categoryOfCommunicationPreference	enumeration	0..1	1 : Preferred Calling 2 : Alternate Calling 3 : Preferred Working 4 : Alternate Working	false
communicationChannel	text	0..*		false
contactInstructions	text	0..1		false
language	text	0..*		false
mMSICode	text	0..1		false
contactAddress	complex	0..*		false
frequencyPair	complex	0..*		false
information	complex	0..*		false
onlineResource	complex	0..*		false
telecommunications	complex	0..*		false

Information bindings

See [InformationType](#) for inherited bindings

Assoc. Type	Code of association	Code of associated class	Role	Mult.
association	AuthorityContact	Authority	theAuthority	0..*

8.6 Nautical Information

Name: Nautical Information [IHOREG 30]

Definition: Nautical information about a related area or facility.

Code: [NauticalInformation](#)

Remarks:

Aliases: (none) Supertype: [AbstractRxN](#)

Attribute Bindings

See [AbstractRxN](#) for inherited attributes

(No local attribute bindings)

Information bindings

See [AbstractRxN](#) for inherited bindings

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

8.7 Non-Standard Working Day

Name: Non-Standard Working Day [IHOREG 29]

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

Code: NonStandardWorkingDay

Remarks:

Aliases: (none) Supertype: [InformationType](#)

Attribute Bindings

See [InformationType](#) for inherited attributes

Attribute	Type	Mult.	Permitted Values	Sequential
dateFixed	S100_TrimmedDate	0..*		false
dateVariable	text	0..*		false
information	complex	0..*		false

Information bindings

See [InformationType](#) for inherited bindings

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

8.8 Recommendations

Name: Recommendations [IHOREG 44]

Definition: Recommendations for a related area or facility.

Code: Recommendations

Remarks:

Aliases: RCMDTS Supertype: [AbstractRxN](#)

Attribute Bindings

See [AbstractRxN](#) for inherited attributes

(No local attribute bindings)

Information bindings

See [AbstractRxN](#) for inherited bindings

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

8.9 Regulations

Name: Regulations [IHOREG 45]

Definition: Regulations for a related area or facility.

Code: Regulations

Remarks:

Aliases: REGLTS Supertype: [AbstractRxN](#)

Attribute Bindings

See [AbstractRxN](#) for inherited attributes

(No local attribute bindings)

Information bindings

See [AbstractRxN](#) for inherited bindings

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

8.10 Restrictions

Name: Restrictions [IHOREG 47]

Definition: Restrictions for a related area or facility.

Code: Restrictions

Remarks:

Aliases: RESDES Supertype: [AbstractRxN](#)

Attribute Bindings

See [AbstractRxN](#) for inherited attributes

(No local attribute bindings)

Information bindings

See [AbstractRxN](#) for inherited bindings

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

8.11 Service Hours

Name: Service Hours [IHOREG 28]

Definition: The time when a service is available and known exceptions.

Code: ServiceHours

Remarks:

Aliases: (none) Supertype: [InformationType](#)

Attribute Bindings

See [InformationType](#) for inherited attributes

Attribute	Type	Mult.	Permitted Values	Sequential
scheduleByDayOfWeek	complex	1..*		false
information	complex	0..*		false

Information bindings

See [InformationType](#) for inherited bindings

Assoc. Type	Code of association	Code of associated class	Role	Mult.
association	ExceptionalWorkday	NonStandardWorkingDay	partialWorkingDay	0..*
association	AuthorityHours	Authority	theAuthority_srvHrs	0..*

8.12 Ship Report

Name: Ship Report [IHOREG 48]

Definition: Description of how a ship should report to a maritime authority, including when to report, what to report and whether the format conforms to the IMO standard.

Code: ShipReport

Remarks:

Aliases: SHPREP Supertype: [InformationType](#)

Attribute Bindings

See [InformationType](#) for inherited attributes

Attribute	Type	Mult.	Permitted Values	Sequential
categoryOfShipReport	enumeration	1..*	1 : Sailing Plan	false

Attribute	Type	Mult.	Permitted Values	Sequential
			2 : Position Report 3 : Deviation Report 4 : Final Report 5 : Dangerous Goods Report 6 : Harmful Substances Report 7 : Marine Pollutants Report 8 : Any Other Report	
IMOFormatForReporting	boolean	1..1		false
sRSFormatCode	enumeration	0..*	1 : IMO Ship Reporting Format A 2 : IMO Ship Reporting Format B 3 : IMO Ship Reporting Format C 4 : IMO Ship Reporting Format D 5 : IMO Ship Reporting Format E 6 : IMO Ship Reporting Format F 7 : IMO Ship Reporting Format G 8 : IMO Ship Reporting Format H 9 : IMO Ship Reporting Format I 10 : IMO Ship Reporting Format J 11 : IMO Ship Reporting Format K 12 : IMO Ship Reporting Format L 13 : IMO Ship Reporting Format M 14 : IMO Ship Reporting Format N 15 : IMO Ship Reporting Format O 16 : IMO Ship Reporting Format P 17 : IMO Ship Reporting Format Q 18 : IMO Ship Reporting Format R 19 : IMO Ship Reporting Format S 20 : IMO Ship Reporting Format T 21 : IMO Ship Reporting Format U 22 : IMO Ship Reporting Format V 23 : IMO Ship Reporting Format W 24 : IMO Ship Reporting Format X 25 : IMO Ship Reporting Format Y 26 : IMO Ship Reporting Format Z	true
noticeTime	complex	1..*		false
textContent	complex	0..1		false

Information bindings

See [InformationType](#) for inherited bindings

Assoc. Type	Code of association	Code of associated class	Role	Mult.
association	ReportingRequirement	Applicability	mustBeFiledBy	0..*
association	ReportingAuthority	Authority	reportTo	0..*

8.13 Spatial Quality

Name: Spatial Quality [IHOREG 31]

Definition: The indication of the quality of the locational information for features in a dataset.

Code: [SpatialQuality](#)

Remarks:

Aliases: (none)

Attribute Bindings

Attribute	Type	Mult.	Permitted Values	Sequential
qualityOfHorizontalMeasurement	enumeration	0..1	1 : Surveyed	false

Attribute	Type	Mult.	Permitted Values	Sequential
			2 : Unsurveyed 3 : Inadequately Surveyed 4 : Approximate 5 : Position Doubtful 6 : Unreliable 7 : Reported (Not Surveyed) 8 : Reported (Not Confirmed) 9 : Estimated 10 : Precisely Known 11 : Calculated	
spatialAccuracy	complex	0..*		false

Information bindings

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

9 Feature Types

9.1 Feature Type

Name: Feature Type Abstract type: true [IHOREG 422]

Definition: Generalized feature type which carries all the common attributes.

Code: FeatureType

Remarks:

Aliases: (none)

Feature use type: geographic

Permitted primitives: noGeometry

Attribute Bindings

Attribute	Type	Mult.	Permitted Values	Sequential
fixedDateRange	complex	0..1		false
periodicDateRange	complex	0..*		false
featureName	complex	0..*		false
sourceIndication	complex	0..1		false
textContent	complex	0..1		false
interoperabilityIdentifier	URN	0..*		false
privateVisibility				

Information bindings

Assoc. Type	Code of association	Code of associated class	Role	Mult.
association	PermissionType	Applicability	permission	0..*
association	AssociatedRxN	AbstractRxN	theRxN	0..*
association	AdditionalInformation	NauticalInformation	theInformation	0..*

Feature bindings

Assoc. Type	Code of association	Code of associated class	Role	Mult.
association	TextAssociation	TextPlacement	theCartographicText	0..1

9.2 Organization Contact Area

Name: Organization Contact Area Abstract type: true [IHOREG 481]

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

Code: OrganizationContactArea

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

Aliases: (none) Supertype: [FeatureType](#)

Feature use type: geographic

Permitted primitives: noGeometry

Attribute Bindings

See [FeatureType](#) for inherited attributes

(No local attribute bindings)

Information bindings

See [FeatureType](#) for inherited bindings

Assoc. Type	Code of association	Code of associated class	Role	Mult.
association	ServiceContact	ContactDetails	theContactDetails	0..*

Feature bindings

See [FeatureType](#) for inherited bindings.

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

9.3 Supervised Area

Name: Supervised Area Abstract type: true [IHOREG 519]

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

Code: SupervisedArea

Remarks: It is not a requirement that every feature instance be associated with an authority. Note that having AbstractService as well as SupervisedArea allows the subclasses to link to CONDET both directly and via AUTORI, which may not be desirable because it gives encoders two ways to reach almost the same result.

Aliases: (none) Supertype: [OrganizationContactArea](#)

Feature use type: geographic

Permitted primitives: noGeometry

Attribute Bindings

See [OrganizationContactArea](#) for inherited attributes

(No local attribute bindings)

Information bindings

See [OrganizationContactArea](#) for inherited bindings

Assoc. Type	Code of association	Code of associated class	Role	Mult.
association	ServiceControl	Authority	controlAuthority	0..1

Feature bindings

See [OrganizationContactArea](#) for inherited bindings.

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

9.4 Reportable Service Area

Name: Reportable Service Area Abstract type: true [IHOREG 503]

Definition: A service feature generally involving one or more reports from the requester, including communications not strictly considered "reporting".

Code: ReportableServiceArea

Remarks: It is not a requirement for every instance to require a report.

Aliases: (none) Supertype: [SupervisedArea](#)

Feature use type: geographic

Permitted primitives: noGeometry

Attribute Bindings

See [SupervisedArea](#) for inherited attributes

(No local attribute bindings)

Information bindings

See [SupervisedArea](#) for inherited bindings

Assoc. Type	Code of association	Code of associated class	Role	Mult.
association	TrafficServiceReport	ShipReport	reptForTrafficServ	0..*

Feature bindings

See [SupervisedArea](#) for inherited bindings.

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

9.5 Caution Area

Name: Caution Area [IHOREG 314]

Definition: Generally, an area where the mariner has to be made aware of circumstances influencing the safety of navigation.

Code: CautionArea

Remarks: This may be required to identify: a danger, a risk, a rule, or advice -- which is not directly related to a specific object.

Aliases: CTNARE Supertype: [FeatureType](#)

Feature use type: geographic

Permitted primitives: point surface

Attribute Bindings

See [FeatureType](#) for inherited attributes

Attribute	Type	Mult.	Permitted Values	Sequential
condition	enumeration	0..1	1 : Under Construction 3 : Under Reclamation 5 : Planned Construction	false
status	enumeration	0..1	5 : Periodic/Intermittent 7 : Temporary	false

Information bindings

See [FeatureType](#) for inherited bindings

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

Feature bindings

See [FeatureType](#) for inherited bindings.

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

9.6 Concentration of Shipping Hazard Area

Name: Concentration of Shipping Hazard Area [IHOREG 412]

Definition: An area where hazards, caused by concentrations of shipping, may occur. Hazards are risks to shipping, which stem from sources other than shoal water or obstructions.

Code: ConcentrationOfShippingHazardArea

Remarks:

Aliases: (none) Supertype: [FeatureType](#)

Feature use type: geographic

Permitted primitives: surface

Attribute Bindings

See [FeatureType](#) for inherited attributes

Attribute	Type	Mult.	Permitted Values	Sequential
categoryOfConcentrationOfShippingHazardArea	enumeration	0..*	1 : Concentration of Merchant	false

Attribute	Type	Mult.	Permitted Values	Sequential
			Shipping 2 : Concentration of Recreational Vessels 3 : Concentration of Fishing Vessels 4 : Concentration of Military Vessels	
status	enumeration	0..*	1 : Permanent 2 : Occasional 5 : Periodic/Intermittent 7 : Temporary 16 : Watched 17 : Unwatched	false

Information bindings

See [FeatureType](#) for inherited bindings

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

Feature bindings

See [FeatureType](#) for inherited bindings.

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

9.7 ISPS Code Security Level

Name: ISPS Code Security Level [IHOREG 458]

Definition: The area to which an International Ship and Port Facility Security (ISPS) level applies. The ISPS Code is a comprehensive set of measures to enhance the security of ships and port facilities, developed in response to the perceived threats to ships and port facilities in the wake of the 9/11 attacks in the United States.

Code: [ISPSCodeSecurityLevel](#)

Remarks:

Aliases: SECLVL Supertype: [OrganizationContactArea](#)

Feature use type: geographic

Permitted primitives: curve surface

Attribute Bindings

See [OrganizationContactArea](#) for inherited attributes

Attribute	Type	Mult.	Permitted Values	Sequential
iSPSLevel	enumeration	1..1	1 : ISPS Level 1 2 : ISPS Level 2 3 : ISPS Level 3	false

Information bindings

See [OrganizationContactArea](#) for inherited bindings

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

Feature bindings

See [OrganizationContactArea](#) for inherited bindings.

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

9.8 Local Port Broadcast Service Area

Name: Local Port Broadcast Service Area

Definition: A broadcast service established to provide port information without interaction between the customer and the service provider. This information could be inter alia berthing information, availability of port services, shipping schedules, meteorological and hydrological data.

Code: LocalPortBroadcastServiceArea

Remarks:

Aliases: (none) Supertype: [ReportableServiceArea](#)

Feature use type: geographic

Permitted primitives: surface

Attribute Bindings

See [ReportableServiceArea](#) for inherited attributes

Attribute	Type	Mult.	Permitted Values	Sequential
serviceAccessProcedure	text	0..1		false
requirementsForMaintenanceOfListeningWatch	text	1..1		false

Information bindings

See [ReportableServiceArea](#) for inherited bindings

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

Feature bindings

See [ReportableServiceArea](#) for inherited bindings.

Assoc. Type	Code of association	Code of associated class	Role	Mult.
association	TrafficControlServiceAggregation	RadioCallingInPoint , RadarRange , SignalStationWarning , SignalStationTraffic	consistsOf	0..*

9.9 Military Practice Area

Name: Military Practice Area [IHOREG 311]

Definition: An area within which naval, military or aerial exercises are carried out. Also called an 'exercise area'.

Code: MilitaryPracticeArea

Remarks:

Aliases: MIPARE; Exercise Area Supertype: [SupervisedArea](#)

Feature use type: geographic

Permitted primitives: point surface

Attribute Bindings

See [SupervisedArea](#) for inherited attributes

Attribute	Type	Mult.	Permitted Values	Sequential
categoryOfMilitaryPracticeArea	enumeration	0..*	2 : Torpedo Exercise Area 3 : Submarine Exercise Area 4 : Firing Danger Area 5 : Mine-Laying Practice Area 6 : Small Arms Firing Range	false
nationality	text	0..1		false
restriction	enumeration	0..*	1 : Anchoring Prohibited 2 : Anchoring Restricted 3 : Fishing Prohibited 4 : Fishing Restricted 5 : Trawling Prohibited 6 : Trawling Restricted	false

Attribute	Type	Mult.	Permitted Values	Sequential
			7 : Entry Prohibited 8 : Entry Restricted 9 : Dredging Prohibited 10 : Dredging Restricted 11 : Diving Prohibited 12 : Diving Restricted 13 : No Wake 15 : Construction Prohibited 16 : Discharging Prohibited 17 : Discharging Restricted 18 : Industrial or Mineral Exploration/Development Prohibited 19 : Industrial or Mineral Exploration/Development Restricted 20 : Drilling Prohibited 21 : Drilling Restricted 22 : Removal of Historical Artefacts Prohibited 23 : Cargo Transhipment (Lightening) Prohibited 24 : Dragging Prohibited 25 : Stopping Prohibited 26 : Landing Prohibited 27 : Speed Restricted 39 : Swimming Prohibited	
<u>status</u>	enumeration	0..*	1 : Permanent 2 : Occasional 5 : Periodic/Intermittent 6 : Reserved 7 : Temporary 16 : Watched 17 : Unwatched	false

Information bindings

See [SupervisedArea](#) for inherited bindings

Assoc. Type	Code of association	Code of associated class	Role	Mult.
association	LocationHours	ServiceHours	theServiceHours	0..1

Feature bindings

See [SupervisedArea](#) for inherited bindings.

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

9.10 Pilot Boarding Place

Name: Pilot Boarding Place [IHOREG 361]

Definition: A location offshore where a pilot may board a vessel in preparation to piloting it through local waters.

Code: PilotBoardingPlace

Remarks:

Aliases: PILBOP Supertype: [OrganizationContactArea](#)

Feature use type: geographic

Permitted primitives: point surface

Attribute Bindings

See [OrganizationContactArea](#) for inherited attributes

Attribute	Type	Mult.	Permitted Values	Sequential
callSign	text	0..1		false
categoryOfPilotBoardingPlace	enumeration	0..1	1 : Boarding by Pilot-Cruising Vessel 2 : Boarding by Helicopter 3 : Pilot Comes Out from Shore	false
categoryOfPreference	enumeration	0..1	1 : Primary 2 : Alternate	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
communicationChannel	text	0..*		false
destination	text	0..1		false
pilotMovement	enumeration	0..1	1 : Embarkation 2 : Disembarkation 3 : Pilot Change	false
pilotVessel	text	0..1		false
status	enumeration	0..*	1 : Permanent 2 : Occasional 5 : Periodic/Intermittent 6 : Reserved 9 : Mandatory 16 : Watched 17 : Unwatched 28 : Buoyed	false

Information bindings

See [OrganizationContactArea](#) for inherited bindings

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

Feature bindings

See [OrganizationContactArea](#) for inherited bindings.

Assoc. Type	Code of association	Code of associated class	Role	Mult.
aggregation	PilotageDistrictAssociation	PilotageDistrict	theCollection	0..1
association	ServiceProvisionArea	PilotService	serviceProvider	0..*

9.11 Pilot Service

Name: Pilot Service [IHOREG 570]

Definition: The service provided by a person who directs the movements of a vessel through pilot waters, usually a person who has demonstrated extensive knowledge of channels, aids to navigation, dangers to navigation, etc., in a particular area and is licensed for that area.

Code: PilotService

Remarks:

Aliases: (none) Supertype: [ReportableServiceArea](#)

Feature use type: geographic

Permitted primitives: surface

Attribute Bindings

See [ReportableServiceArea](#) for inherited attributes

Attribute	Type	Mult.	Permitted Values	Sequential
categoryOfPilot	enumeration	0..*	1 : Pilot 2 : Deep Sea 3 : Harbour 4 : Bar 5 : River 6 : Channel 7 : Lake	false
pilotQualification	enumeration	0..1	1 : Government Pilot 2 : Pilot Approved by Government 3 : State Pilot 4 : Federal Pilot 5 : Company Pilot 6 : Local Pilot 7 : Citizen With Sufficient Local Knowledge 8 : Citizen With Doubtful Local Knowledge	false
pilotRequest	text	0..1		false
remotePilot	boolean	1..1		false
noticeTime	complex	0..1		false

Information bindings

See [ReportableServiceArea](#) for inherited bindings

Assoc. Type	Code of association	Code of associated class	Role	Mult.
association	LocationHours	ServiceHours	theServiceHours	0..1

Feature bindings

See [ReportableServiceArea](#) for inherited bindings.

Assoc. Type	Code of association	Code of associated class	Role	Mult.
association	ServiceProvisionArea	PilotageDistrict	serviceArea	0..1
association	ServiceProvisionArea	PilotBoardingPlace	serviceArea	0..*

9.12 Pilotage District

Name: Pilotage District [IHOREG 326]

Definition: An area within which a pilotage direction exists. Such directions are regulated by a competent harbour authority which dictates circumstances under which they apply.

Code: PilotageDistrict

Remarks:

Aliases: (none) Supertype: [FeatureType](#)

Feature use type: geographic

Permitted primitives: surface

Attribute Bindings

See [FeatureType](#) for inherited attributes

Attribute	Type	Mult.	Permitted Values	Sequential
communicationChannel	text	0..*		false

Information bindings

See [FeatureType](#) for inherited bindings

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

Feature bindings

See [FeatureType](#) for inherited bindings.

Assoc. Type	Code of association	Code of associated class	Role	Mult.
aggregation	PilotageDistrictAssociation	PilotBoardingPlace	theComponent	0..*
association	ServiceProvisionArea	PilotService	serviceProvider	0..*

9.13 Piracy Risk Area

Name: Piracy Risk Area [IHOREG 491]

Definition: An area where there is a raised risk of piracy or armed robbery.

Code: PiracyRiskArea

Remarks:

Aliases: (none) Supertype: [ReportableServiceArea](#)

Feature use type: geographic

Permitted primitives: point surface

Attribute Bindings

See [ReportableServiceArea](#) for inherited attributes

Attribute	Type	Mult.	Permitted Values	Sequential
restriction	enumeration	0..*	1 : Anchoring Prohibited 2 : Anchoring Restricted 3 : Fishing Prohibited 4 : Fishing Restricted 5 : Trawling Prohibited 6 : Trawling Restricted 7 : Entry Prohibited 8 : Entry Restricted 9 : Dredging Prohibited 10 : Dredging Restricted 11 : Diving Prohibited 12 : Diving Restricted 14 : Area To Be Avoided 18 : Industrial or Mineral Exploration/Development Prohibited 19 : Industrial or Mineral Exploration/Development Restricted 20 : Drilling Prohibited 21 : Drilling Restricted 24 : Dragging Prohibited 25 : Stopping Prohibited	false

Attribute	Type	Mult.	Permitted Values	Sequential
			26 : Landing Prohibited 27 : Speed Restricted 31 : Berthing Prohibited 32 : Berthing Restricted 33 : Making Fast Prohibited 34 : Making Fast Restricted	
status	enumeration	0..*	1 : Permanent 2 : Occasional 5 : Periodic/Intermittent 7 : Temporary	false

Information bindings

See [ReportableServiceArea](#) for inherited bindings

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

Feature bindings

See [ReportableServiceArea](#) for inherited bindings.

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

9.14 Place of Refuge

Name: Place of Refuge [IHOREG 492]

Definition: A place where a ship in need of assistance can take action to enable it to stabilize its condition and reduce the hazards to navigation, and to protect human life and the environment.

Code: PlaceOfRefuge

Remarks:

Aliases: (none) Supertype: [ReportableServiceArea](#)

Feature use type: geographic

Permitted primitives: point surface

Attribute Bindings

See [ReportableServiceArea](#) for inherited attributes

Attribute	Type	Mult.	Permitted Values	Sequential
communicationChannel	text	0..*		false
status	enumeration	0..*	1 : Permanent 2 : Occasional 3 : Recommended 4 : Not in Use 5 : Periodic/Intermittent 6 : Reserved 7 : Temporary 8 : Private 9 : Mandatory 28 : Buoyed	false

Information bindings

See [ReportableServiceArea](#) for inherited bindings

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

Feature bindings
 See [ReportableServiceArea](#) for inherited bindings.
 (No local bindings, but may inherit bindings from super-types, if any)

9.15 Radar Range

Name: Radar Range [IHOREG 305]

Definition: Indicates the coverage of a sea area by a radar surveillance station. Inside this area a vessel may request shore-based radar assistance, particularly in poor visibility.

Code: RadarRange

Remarks: Many large ports have a radar surveillance system covering their approaches to provide guidance for vessels, particularly in poor visibility. The maximum range of the system forms an arc or series of overlapping arcs (IHO Chart Specifications, M-4).

Aliases: RADRNG Supertype: [FeatureType](#)

Feature use type: geographic

Permitted primitives: surface

Attribute Bindings
 See [FeatureType](#) for inherited attributes

Attribute	Type	Mult.	Permitted Values	Sequential
communicationChannel	text	0..*		false
status	enumeration	0..*	1 : Permanent 2 : Occasional 4 : Not in Use 7 : Temporary	false

Information bindings
 See [FeatureType](#) for inherited bindings
 (No local bindings, but may inherit bindings from super-types, if any)

Feature bindings
 See [FeatureType](#) for inherited bindings.

Assoc. Type	Code of association	Code of associated class	Role	Mult.
aggregation	TrafficControlServiceAggregation	VesselTrafficServiceArea , LocalPortBroadcastServiceArea , ShipReportingServiceArea	componentOf	0..1

9.16 Radio Calling-In Point

Name: Radio Calling-In Point [IHOREG 303]

Definition: A designated position at which vessels are required to report to a traffic control centre. Also called reporting point or radio reporting point.

Code: RadioCallingInPoint

Remarks: Radio calling-in points are established in certain busy waterways and port approaches to assist traffic control.

Aliases: RDOCAL; Radio Reporting Point; Reporting Point; Calling-In Point Supertype: [FeatureType](#)

Feature use type: geographic

Permitted primitives: point curve

Attribute Bindings
 See [FeatureType](#) for inherited attributes

Attribute	Type	Mult.	Permitted Values	Sequential
callSign	text	0..1		false

Attribute	Type	Mult.	Permitted Values	Sequential
communicationChannel	text	0..*		false
categoryOfCargo	enumeration	0..*	1 : Bulk 2 : Container 3 : General 4 : Liquid 5 : Passenger 6 : Livestock 7 : Dangerous or Hazardous 8 : Heavy Lift 9 : Ballast	false
categoryOfVessel	S100_CodeList	0..*	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
orientationValue	real	0..2		false
status	enumeration	0..*	1 : Permanent 3 : Recommended 4 : Not in Use 5 : Periodic/Intermittent 6 : Reserved 7 : Temporary 9 : Mandatory	false
trafficFlow	enumeration	1..1	1 : Inbound 2 : Outbound 3 : One-Way 4 : Two-Way	false

Information bindings

See [FeatureType](#) for inherited bindings

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

Feature bindings

See [FeatureType](#) for inherited bindings.

Assoc. Type	Code of association	Code of associated class	Role	Mult.
aggregation	TrafficControlServiceAggregation	VesselTrafficServiceArea , LocalPortBroadcastServiceArea , ShipReportingServiceArea	componentOf	0..1

9.17 Restricted Area

Name: Restricted Area [IHOREG 375]

Definition: A specified area designated by an appropriate authority within which navigation is restricted in accordance with certain specified conditions.

Code: RestrictedArea

Remarks:

Aliases: RESARE Supertype: [SupervisedArea](#)

Feature use type: geographic

Permitted primitives: surface

Attribute Bindings

See [SupervisedArea](#) for inherited attributes

Attribute	Type	Mult.	Permitted Values	Sequential
categoryOfRestrictedArea	enumeration	0..*	1 : Offshore Safety Zone 4 : Nature Reserve 5 : Bird Sanctuary 6 : Game Reserve 7 : Seal Sanctuary 8 : Degaussing Range 9 : Military Area 10 : Historic Wreck Area 12 : Navigational Aid Safety Zone 14 : Minefield 19 : Waiting Area 20 : Research Area 22 : Fish Sanctuary 23 : Ecological Reserve 25 : Swinging Area 27 : Environmentally Sensitive Sea Area 28 : Particularly Sensitive Sea Area 29 : Disengagement Area 30 : Port Security Area 31 : Coral Sanctuary 32 : Recreation Area	false
restriction	enumeration	1..*	1 : Anchoring Prohibited 2 : Anchoring Restricted 3 : Fishing Prohibited 4 : Fishing Restricted 5 : Trawling Prohibited 6 : Trawling Restricted 7 : Entry Prohibited 8 : Entry Restricted 9 : Dredging Prohibited 10 : Dredging Restricted 11 : Diving Prohibited 12 : Diving Restricted 13 : No Wake 14 : Area To Be Avoided 15 : Construction Prohibited 16 : Discharging Prohibited 17 : Discharging Restricted 18 : Industrial or Mineral Exploration/Development Prohibited 19 : Industrial or Mineral Exploration/Development Restricted 20 : Drilling Prohibited 21 : Drilling Restricted 22 : Removal of Historical Artefacts Prohibited 23 : Cargo Transhipment (Lightening) Prohibited	false

Attribute	Type	Mult.	Permitted Values	Sequential
			24 : Dragging Prohibited 25 : Stopping Prohibited 26 : Landing Prohibited 27 : Speed Restricted 28 : Overtaking Prohibited 29 : Overtaking of Convoys by Convoys Prohibited 30 : Passing or Overtaking Prohibited 35 : Turning Prohibited 36 : Restricted Fairway Depth 37 : Restricted Fairway Width 38 : Use of Spuds Prohibited 39 : Swimming Prohibited 40 : SOx Emission Restricted 41 : NOx Emission Restricted 42 : Power-Driven Vessels Prohibited 43 : Passing or Overtaking of Convoys by Convoys Prohibited	
status	enumeration	0..*	1 : Permanent 2 : Occasional 3 : Recommended 4 : Not in Use 5 : Periodic/Intermittent 6 : Reserved 7 : Temporary 9 : Mandatory 18 : Existence Doubtful 28 : Buoyed	false

Information bindings

See [SupervisedArea](#) for inherited bindings

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

Feature bindings

See [SupervisedArea](#) for inherited bindings.

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

9.18 Routeing Measure

Name: Routeing Measure [IHOREG 506]

Definition: An area or line designating the limits or central line of a routeing measure (or part of a routeing measure). Routeing measures include traffic separation schemes, deep-water routes, two-way routes, archipelagic sea lanes, and fairway systems.

Code: RouteingMeasure

Remarks: (1) categoryOfNavigationLine permitted only if categoryOfRouteingMeasure is 4 (recommended route). (2) categoryOfTrafficSeparationScheme permitted only if categoryOfRouteingMeasure = 5 (traffic separation scheme)

Aliases: (none) Supertype: [FeatureType](#)

Feature use type: geographic

Permitted primitives: surface curve

Attribute Bindings

See [FeatureType](#) for inherited attributes

Attribute	Type	Mult.	Permitted Values	Sequential

Attribute	Type	Mult.	Permitted Values	Sequential
categoryOfRouteingMeasure	enumeration	1..1	1 : Archipelagic Sea Lane 2 : Deep Water Route 3 : Fairway System 4 : Recommended Route 5 : Traffic Separation Scheme 6 : Two-Way Route	false
categoryOfTrafficSeparationScheme	enumeration	0..1	1 : IMO Adopted 2 : Not IMO - Adopted	false
categoryOfNavigationLine	enumeration	0..1	1 : Clearing Line 2 : Transit Line 3 : Leading Line Bearing a Recommended Track	false

Information bindings

See [FeatureType](#) for inherited bindings

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

Feature bindings

See [FeatureType](#) for inherited bindings.

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

9.19 Ship Reporting Service Area

Name: Ship Reporting Service Area

Definition: A service established by a relevant authority consisting of one or more reporting points or lines at which ships are required to report their identity, course, speed and other data to the monitoring authority.

Code: ShipReportingServiceArea

Remarks:

Aliases: (none) Supertype: [ReportableServiceArea](#)

Feature use type: geographic

Permitted primitives: surface

Attribute Bindings

See [ReportableServiceArea](#) for inherited attributes

Attribute	Type	Mult.	Permitted Values	Sequential
serviceAccessProcedure	text	0..1		false
requirementsForMaintenanceOfListeningWatch	text	1..1		false

Information bindings

See [ReportableServiceArea](#) for inherited bindings

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

Feature bindings

See [ReportableServiceArea](#) for inherited bindings.

Assoc. Type	Code of association	Code of associated class	Role	Mult.
association	TrafficControlServiceAggregation	RadioCallingInPoint , RadarRange , SignalStationWarning , SignalStationTraffic	consistsOf	0..*

9.20 Signal Station Warning

Name: Signal Station Warning [IHOREG 364]

Definition: A warning signal station is a place on shore from which warning signals are made to ships at sea.

Code: SignalStationWarning

Remarks:

Aliases: SISTAW Supertype: [FeatureType](#)

Feature use type: geographic

Permitted primitives: point surface

Attribute Bindings

See [FeatureType](#) for inherited attributes

Attribute	Type	Mult.	Permitted Values	Sequential
categoryOfSignalStationWarning	enumeration	1..*	1 : Danger 2 : Maritime Obstruction 3 : Cable 4 : Military Practice 5 : Distress 6 : Weather 7 : Storm 8 : Ice Warning 9 : Time 10 : Tide 11 : Tidal Stream 12 : Tide Gauge 13 : Tide Scale 14 : Diving 15 : Water Level Gauge 16 : Vertical Clearance Indication 17 : High Water Mark 18 : Depth Indication	false
communicationChannel	text	0..*		false
status	enumeration	0..*	1 : Permanent 2 : Occasional 4 : Not in Use 5 : Periodic/Intermittent 7 : Temporary 8 : Private 12 : Illuminated 14 : Public 15 : Synchronized 16 : Watched 17 : Unwatched	false

Information bindings

See [FeatureType](#) for inherited bindings

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

Feature bindings

See [FeatureType](#) for inherited bindings.

Assoc. Type	Code of association	Code of associated class	Role	Mult.
aggregation	TrafficControlServiceAggregation	VesselTrafficServiceArea , LocalPortBroadcastServiceArea ,	componentOf	0..1

Assoc. Type	Code of association	Code of associated class	Role	Mult.
		ShipReportingServiceArea		

9.21 Signal Station Traffic

Name: Signal Station Traffic [IHOREG 365]

Definition: A traffic signal station is a place on shore from which signals are made to regulate the movement of traffic.

Code: `SignalStationTraffic`

Remarks: A signal station is a place on shore from which signals are made to ships at sea (IHO Dictionary, S-32, 5th Edition).

Aliases: SISTAT Supertype: [OrganizationContactArea](#)

Feature use type: geographic

Permitted primitives: point surface

Attribute Bindings

See [OrganizationContactArea](#) for inherited attributes

Attribute	Type	Mult.	Permitted Values	Sequential
categoryOfSignalStationTraffic	enumeration	1..*	1 : Port Control 2 : Port Entry and Departure 3 : International Port Traffic 4 : Berthing 5 : Dock 6 : Lock 7 : Flood Barrage Station 8 : Bridge Passage 9 : Dredging 10 : Traffic Control Light 13 : Oncoming Traffic Indication	false
communicationChannel	text	0..*		false
status	enumeration	0..*	1 : Permanent 2 : Occasional 4 : Not in Use 5 : Periodic/Intermittent 7 : Temporary 8 : Private 12 : Illuminated 14 : Public 15 : Synchronized 16 : Watched 17 : Unwatched	false

Information bindings

See [OrganizationContactArea](#) for inherited bindings

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

Feature bindings

See [OrganizationContactArea](#) for inherited bindings.

Assoc. Type	Code of association	Code of associated class	Role	Mult.
aggregation	TrafficControlServiceAggregation	VesselTrafficServiceArea , LocalPortBroadcastServiceArea , ShipReportingServiceArea	componentOf	0..1

9.22 Under Keel Clearance Allowance Area

Name: Under Keel Clearance Allowance Area [IHOREG 537]

Definition: An area for which an authority has stated under keel allowance requirements.

Code: UnderKeelClearanceAllowanceArea

Remarks:

Aliases: (none) Supertype: [FeatureType](#)

Feature use type: geographic

Permitted primitives: surface

Attribute Bindings

See [FeatureType](#) for inherited attributes

Attribute	Type	Mult.	Permitted Values	Sequential
underKeelAllowance	complex	0..1		false
waterLevelTrend	enumeration	0..1	1 : Decreasing 2 : Increasing 3 : Steady	false

Information bindings

See [FeatureType](#) for inherited bindings

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

Feature bindings

See [FeatureType](#) for inherited bindings.

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

9.23 Under Keel Clearance Management Area

Name: Under Keel Clearance Management Area [IHOREG 540]

Definition: An area for which an authority permits use of dynamic under keel clearance information or provides dynamic information related to under keel clearances.

Code: UnderKeelClearanceManagementArea

Remarks:

Aliases: (none) Supertype: [ReportableServiceArea](#)

Feature use type: geographic

Permitted primitives: surface

Attribute Bindings

See [ReportableServiceArea](#) for inherited attributes

Attribute	Type	Mult.	Permitted Values	Sequential
dynamicResource	enumeration	1..1	1 : Static 2 : Mandatory External Dynamic 3 : Optional External Dynamic 4 : Onboard Dynamic	false

Information bindings

See [ReportableServiceArea](#) for inherited bindings

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

Feature bindings
 See [ReportableServiceArea](#) for inherited bindings.
 (No local bindings, but may inherit bindings from super-types, if any)

9.24 Vessel Traffic Service Area

Name: Vessel Traffic Service Area [IHOREG 362]

Definition: The area of any service implemented by a relevant authority primarily designed to improve safety and efficiency of traffic flow and the protection of the environment. It may range from simple information messages, to extensive organisation of the traffic involving national or regional schemes.

Code: VesselTrafficServiceArea

Remarks:

Aliases: ADMARE; VTS Area Supertype: [ReportableServiceArea](#)

Feature use type: geographic

Permitted primitives: surface

Attribute Bindings
 See [ReportableServiceArea](#) for inherited attributes

Attribute	Type	Mult.	Permitted Values	Sequential
serviceAccessProcedure	text	0..1		false
requirementsForMaintenanceOfListeningWatch	text	1..1		false

Information bindings
 See [ReportableServiceArea](#) for inherited bindings
 (No local bindings, but may inherit bindings from super-types, if any)

Feature bindings
 See [ReportableServiceArea](#) for inherited bindings.

Assoc. Type	Code of association	Code of associated class	Role	Mult.
association	TrafficControlServiceAggregation	RadioCallingInPoint , RadarRange , SignalStationWarning , SignalStationTraffic	consistsOf	0..*

9.25 Waterway Area

Name: Waterway Area [IHOREG 391]

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

Code: WaterwayArea

Remarks:

Aliases: (none) Supertype: [SupervisedArea](#)

Feature use type: geographic

Permitted primitives: surface

Attribute Bindings
 See [SupervisedArea](#) for inherited attributes

Attribute	Type	Mult.	Permitted Values	Sequential
dynamicResource	enumeration	1..1	1 : Static 2 : Mandatory External Dynamic 3 : Optional External Dynamic 4 : Onboard Dynamic	false
siltationRate	text	0..1		false
status	enumeration	0..*	1 : Permanent	false

Attribute	Type	Mult.	Permitted Values	Sequential
			2 : Occasional 3 : Recommended 4 : Not in Use 5 : Periodic/Intermittent 6 : Reserved 7 : Temporary 8 : Private 9 : Mandatory 28 : Buoyed	

Information bindings

See [SupervisedArea](#) for inherited bindings

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

Feature bindings

See [SupervisedArea](#) for inherited bindings.

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

9.26 Data Coverage

Name: Data Coverage [IHOREG 187]

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

Code: DataCoverage

Remarks:

Aliases: M_COVR

Feature use type: meta

Permitted primitives: surface

Attribute Bindings

Attribute	Type	Mult.	Permitted Values	Sequential
interoperabilityIdentifier	URN	0..*		false
privateVisibility				
maximumDisplayScale	integer	1..1		false
minimumDisplayScale	integer	1..1		false

Information bindings

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

Feature bindings

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

9.27 Quality of Non-Bathymetric Data

Name: Quality of Non-Bathymetric Data [IHOREG 186]

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

Code: QualityOfNonBathymetricData

Remarks:

Aliases: M_ACCY

Feature use type: meta

Permitted primitives: surface

Attribute Bindings

Attribute	Type	Mult.	Permitted Values	Sequential
categoryOfTemporalVariation	enumeration	0..1	1 : Extreme Event 4 : Likely to Change 5 : Unlikely to Change 6 : Unassessed	false
horizontalDistanceUncertainty	real	0..1		false
orientationUncertainty	real	0..1		false
horizontalPositionUncertainty	complex	0..1		false
interoperabilityIdentifier privateVisibility	URN	0..*		false
sourceIndication	complex	0..1		false
surveyDateRange	complex	0..1		false
information	complex	0..*		false

Information bindings

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

Feature bindings

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

9.28 Text Placement

Name: Text Placement [IHOREG 662]

Definition: The Text Placement feature is used in association with the Feature Name attribute or a light description to optimize text positioning in ECDIS.

Code: TextPlacement

Remarks:

Aliases: (none)

Feature use type: cartographic

Permitted primitives: point

Attribute Bindings

Attribute	Type	Mult.	Permitted Values	Sequential
textOffsetBearing	integer	1..1		false
textOffsetDistance	integer	1..1		false
textRotation	boolean	0..1		false
textType	enumeration	1..2	1 : Name	false
scaleMinimum	integer	0..1		false

Information bindings

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

Feature bindings

Assoc. Type	Code of association	Code of associated class	Role	Mult.

Assoc. Type	Code of association	Code of associated class	Role	Mult.
composition	TextAssociation	FeatureType	thePositionProvider	1..1