

**7th Meeting of the Standardization of Nautical Publications Working Group (SNPWG)
12-16 February 2007, BSH, Rostock, Germany**

Attributes

Drafted by/ Date	Attributes	details (new/deleted/amended)
Jens/ 18. Jul. 06	all	inserted control table
Jens 09. Aug	cattra	amended attribute ID
	infber	see comment
	siused	added definition
	wkdywk	see comment
Jens 11. Aug.	rgdata	new idea implemented IMO reporting system in detail
David 16 Aug		added filename and page nos to footer
		I believe the "Mariner's Information Object" is in fact "Mariner's Navigational Object". If so 6 changes required using search and replace.
	autori	Definitions, changed type, added military
	calnam	Added distiction
	catcgo	Searched for AIS cargo types; definitions;
	CATHAF	definitions
	catplt	Extended list; amended definitions;
	CATRSC	see comment
	cattra	Amended list; definitions;
	catvsl	Aligned with AIS shptypand extended; definitions;
	citynm	amended definition
	diplomaticRepresenta tion	Acronym
	flafInformation	Acronym
16Oct06	holqua	Definition
	infber	Deleted - Unrealistic
	maxair	remarks
	ltelev	definiton
	maxbrd	Definition, remarks
	maxbrd	Definition, remarks
	maxdpl	indication
	maxdrf	remarks
	maxdwt	indication
	maxqtn	Definition, indication
	maxlen	Definition, indication
	maxntn	definiton
	mindpl	Definition, resolution
	mindwt	Definition, resolution
	mingtn	Definition, resolution
	minlen	Definition, remarks

	minntn	definition
	mmsico	Type; definiton; format; example
	natcur	Definiton
	nmtlao	Changed aconym to nmtlow
	nmtlow	Definiton,
	ntctim	reinserted and amended
	otherCurrency	Acronym, definition
	pltrqs	See comment
	prtreg	Deleted Medical requirements
	qualim	See comment
	rqdata	See comment
	rtfrqz	Definiton; expected input
	rtpref	Title; acronym; definition. To make inclusive
	securityLevel	drafted
	siused	Attribute type
	wkhrdy	added
DA 24 Oct 06	rqdata	Definitions
Northern 09. Nov. 2006	cataut	amended definition; amended attribute type
	clabpb	we are not satified with the definitions
	citynm	Attribute name extended, changed definition. Is there any need for city name in English?
	emails	amended definition
	maxgtn	deleted unit
	maxbrd	amended resolution
	nmtlow	amended definition
	rqdata	prosed a new solution; propose to defide into two seperate attributes based on Jens' proposal made on 11.August
	rtfrqz	deleted expected input, inserted indication, format, and examples
	contry	language problems?
	admdiv	see question mark
	catvsl	definition
	catcgo	definitions, proposal
	mmsico	definition
	prcdre	changed to svaprc; extended attribute name to clarify the destingtion of the attribute
	CATHAF	definition
	CATRSC	discussion
	srvmed	propose to devide into two different attributes
	catplt	changed the order once again, which can be a game for the future; definitions proposal for a new definition
	catpsv	do we need this attribute?
	catsup	definitions;attribute type
	cattra	definitions
	qualim	discussion
Jens 27.Nov. 2006	catmac	extended,
	catnpu	comments to discuss

	CATPRA	comments to discuss
	dvlpmt	comments, definition
	diplomaticRepresentation	comment to discuss
	flagInformation	comment to discuss
	headed text	comment to discuss
	languageInformation	comment to discuss
	Language	comments to discuss
	npsubject	discussion; see comments for NPs object
Jens 28.Nov. 2006	otherCurrency	comment, question mark
	othwem	discussion and new proposal in discussion box
	prtreg	discussion
	securityLevel	structured definitions
	trptfc	confused
	traffc	question regarding format
	wkhrdy	comment
	wkdywk	comment
	catsvc	comments, see also comments on object-file version 2006_11_28
	ltelev	question mark perhaps a candidate who can be deleted
	weimen	comment for combining with wearsk
	wearsk	comment for combining with weimen
	holqua	comments on Davids new definition
	prjdep	amended examples
DA 11 Dec 06	npsubject	npsubject diagram replaced by a later version; definitions improved
	ntctim	Indication – Added examples
	wkhrdy	Agreed.
	catsup	Comment
	catmsv	Comment; question
	trptfc	Comment
	traffc	Example and comment.
	Headed text	Moved to information object.
	langge	Question answered. Text redrafted.
DA 9 Jan 07	otherCurrency	Definiton improved
	otherwem	Comment
	weimen	Comment
	wearsk	Comment
	ltelev	Comment
DA 12Jan07		Pasted in new attributes from Americas section in John Nyborgs email 8 Dec 06.
	holqua	Compared with Americas; definition
	grdslo	Compared with Americas; Definition
	prjdep	Compared with Americas version. No change. Example made to fit format
	prddrg	Formatting
	siltat	Compared with Americas version. Added comment in Definiton 1
	CATSLO	Formatting. Double underline for items 8 - 21
	catveg	Formatting; comment; question
	catmgl	Formatting; renumbering
	catcst	Formatting; renumbering

	catvol	Formatting; definitions
	catflu	Formatting; definition.
	rqdata	Comments;
	catrgd	Agreed in principle; editing; acronym.
	holday	Definition and comment
	catsvc	A remark deleted.
18 Jan 07	wkhrdy	Indication and format
Jens 29.01.07	catmsv	deleted Pilot Service which is covered by pilot service, followed David's proposal
NEG 31.01.07/ Jens02.02. 07	Catmsi	added

The control table works with using track changes like the example shown below:

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Western 11.Jul. 2006	Jan 12.Jul. 2006	deleted item 4 because it is superfluous inserted two new attributes	John 13. Jul.2006	SNPWG7 ???????
	David 14. Jul	amended definition improve the English	Svante 15. Jul. 2006	SNPWG7 ?????????
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

Northern Part

action required from SNPWG 6
 amendments to the checked version before inserted control table

FEATURE OBJECT ATTRIBUTES

Attribute: **available berthing length**

Acronym: **avlbfg**

Code: ?

Attribute type: I

Definitions:

The length of a berth or dock which is available for use.

Minimum value: 0

References:

INT 1: not specified;
 M-3: ??????????????
 M-4: not specified;

Indication:

Unit: metre (m)
 Resolution: 1

Example:

112 112 metres available berthing length

Remarks:

No remarks.

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Northern/ before SNPWG 6				SNPWG 6/ 29.06.2006
			DA 16.08.2006	
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **Call name**

Acronym: **calnam**

Code: ?

Attribute type: S

Definition:

The designated call name of a station, e.g. radio station, radar station, pilot.

References:

INT 1: not specified;
 M-3: ??????????????
 M-4: not specified;

Remarks:

Distinction: CALSGN - The designated call-sign of a radio station,

Deleted: 1
 No remarks

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Northern/ before SNPWG 6				SNPWG 6/ 29.06.2006
	DA 22.08.2006	Added distinction	DA 22.08.2006 Northern 8.Nov. 2006	
	Northern 8.Nov. 2006	agreed		
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **Category of authority**

Acronym: **cataut**

Code: ?

Attribute type: **E**

Deleted: I

Deleted: L

Deleted: I

Expected input:

ID	Meaning	INT 1	M-4
1	: customs		
2	: border control		
3	: police		
4	: port authority		
5	: immigration		
6	: health authority		
7	: coast guard		
8	: agriculture authority		
9	: military		
10	: ?????????????? to be completed		

Deleted: 9

Deleted: .

Definitions:

Agencies or establishment for control of shipping, controlling entry, regulating commerce and collecting tolls.

customs:

The agency or establishment for collecting duties, tolls. (Merriam-Websters online Dictionary 23rd February 2006, amended).

border control:

The administration to prevent or detect and prosecute violations of rules and regulations (Merriam-Websters online Dictionary 23rd February 2006, amended).

Deleted: of

police:

[\(DA Proposal\) The department of government, or civil force, charged with maintaining public order. \(Adapted from OED\)](#)

The authority controlling people who come into a country of which one is not a native for permanent residence.

Comment [D1]: Police have more to do with public order than with control of incomers.

port authority:

[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, etc \(NP 100 8th Edition 14 Octo 2004\)](#)

Deleted: ¶

Deleted: **Definition**

immigration:

[\(Northern Proposal\) The authority with responsibility for checking the documents of people entering the country. ☺](#)

Deleted: Definition¶

health authority:

[The authority with responsibility for checking the validity of the health declaration of a vessel and for declaring free pratique. \(Northern/ 8.Nov. 2006//DA 17 Aug 2006\)](#)

Deleted: **Definition**

Deleted: agree

Deleted: that a vessel has a

Deleted: clean bill of

coast guard:

Organisation keeping watch on shipping and coastal waters, according to governmental law

Comment [JM2]: We are th(s)inking the coast guard has more tasks. Take a look to the changes since Bin Laden.

agriculture authority:

The authority with responsibility for preventing infection of the agriculture of a country and for the protection of the agricultural interests of a country (DA 17 Aug 2006).

Deleted:

Comment [D3]: Quite right. Needs to be broad. Added "shipping and"

military:

A military authority which provides control of access to or approval for transit through designated areas or airspace (DA 17 Aug 2006).

Deleted: in order to assist people or ships in danger and to prevent smuggling (Oxford Dictionary of English 2nd Edition 2003).

Deleted: Definition

to be completed:
Definition

Deleted: Definition

Remarks:

List to be completed.
Further details will be collected by BSH only with definitions.

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Northern/ before SNPWG 6	DA 17.08.2006	Provided definitions; added military; changed attribute type to L.	Northern 9.Nov. 2006	SNPWG 6/ 29.06.2006
	Northern 9.Nov. 2006	Attribute type can not be a list;srvhrs and other attributes can not work with a list attribute Immigration/ health authority/ coast guard: New definitions were proposed		
	DA 13 Dec 06	Agree not List; Changed type to E. Proposed new police definition. Agree Northern Immigration definition. Coastguard – will be difficult because Coastguards do different things in different nations.		
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

Deleted: ,

FEATURE OBJECT ATTRIBUTES

Attribute: **Category of berthing assistance**

Acronym: **catbas**

Code: ?

Attribute type: L

Expected input:

ID	Meaning	INT 1	M-4
1	: icebreaker		
2	: harbour tug		
3	: mooring boat		
4	: mule		
5	: towing launch		

Definitions:

icebreaker:

A ship equipped to make and maintain a channel through ice (Websters Ninth New Collegiate Dictionary, 1983).

harbour tug:

A strongly built powerful boat used for towing and pushing vessels in the harbour area. (Adapted from Websters Ninth New Collegiate Dictionary, 1983).

mooring boat:

A boat which assists berthing a vessel with ropes or anchor.

mule:

A locomotive to move vessels, e. g. as used in Panama Canal

towing launch:

A boat, used in harbours for the towage of lighters and other small vessels (International Maritime Dictionary, Second Edition 1961)

Remarks:

No remarks.

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Northern/ before SNPWG 6				SNPWG 6/ 29.06.2006
			DA 16.AUG.20 06	

Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **fire-fighting service**

Acronym: **srvfbg**

Code: ?

Attribute type: L

Expected input:

ID	Meaning	INT 1	M-4
1	: shore fire brigade		
2	: fire-fighting boat		
3	: specialists for fire-fighting aboard vessels or offshore installations		

Definitions:

shore fire brigade:

A shore based organised body of people trained to extinguish fires.

fire-fighting boat:

A boat fitted with fire pumps and other fire-fighting apparatus for assisting vessels and protecting warehouses and piers against damage by fire. (adapted from International Maritime Dictionary, Second edition 1961)

specialists for fire-fighting aboard vessels or offshore installations:

An organised body of people specialised to extinguish fires on vessels and offshore installations.

Remarks:

No remarks.

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Northern/ before SNPWG 6				SNPWG 6/ 29.06.2006
			DA 22.08.2006	
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **Category of marine service**

Acronym: **catmsv**

Code: ?

Attribute type: L

Expected input:

ID	Meaning	INT 1	M-4
1	: Vessel Traffic Service		
3	: Port Service		
4	: Ship Reporting Service		
5	: Broadcast Service		

Deleted: . 2 . : Pilot Service¶

Definitions:

Vessel Traffic Service:

A service implemented by a relevant authority primarily designed to improve safety and efficiency of traffic flow and the protection of the environment (International Hydrographic Dictionary, S32)

Port Service:

A service provided for the control and operation of a place with terminal and transfer facilities for loading and discharging cargo or passengers (adapted from International Hydrographic Dictionary S32/ port)

Deleted: Pilot Service:¶
A service for the direction of vessels through pilot waters. (adapted from International Hydrographic Dictionary S32/ pilotage)¶

Ship Reporting Service:

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.

Broadcast Service

A service consisting of a radio transmission to provide relevant information to the mariner, e.g. natural conditions, safety, traffic information

Remarks:

No remarks.

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Northern/ before SNPWG 6				SNPWG 6/ 29.06.2006
			DA 22.08.2006	

	11 Dec 06	If pltsrv remains, we need to remove pilotage (2) from here		
	16 Jan 07	Shouldn't this be Type 'E'?		
	Jens 29.01.02	deleted Pilot Service / covered by pilot service		
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: class of pilot boarding place

Acronym: **clapbp**

Code: ?

Attribute type: E

Expected input:

ID	Meaning	INT 1	M-4
1:	primary		
2:	alternate		

Definitions:

We should define what a "class" is. Do we mean boarding place depends on weather conditions?

primary:

the primary place ((((better definition!!!!!!!!!!!!))))

alternate:

the alternate place ((((((((better definition!!!!!!!!!!!!))))))

Remarks:

No remarks.

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Northern/ before SNPWG 6			DA 16.08.2006	SNPWG 6/ 29.06.2006
	Northern 09. Nov. 2006	need better definition		
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **repair service**

Acronym: **srvrep**

Code: ?

Attribute type: L

Expected input:

ID	Meaning	INT 1	M-4
1	: engine and engine part repair service		
2	: navigational and electronic equipment service		
3	: underwater repair service		
4	: hull repair service		

Deleted: ally

Definitions:

engine and engine part repair service:
A service for repair of an engine or machine parts.

Deleted: .

navigational and electronic equipment service:
A service for repair of navigational and electronic equipment.

Deleted: ally

Deleted: .

underwater repair service:
A service for underwater repair.

Deleted: .

hull repair service:
A service for repair the hull and superstructure.

Deleted: ,

Remarks:

No remarks.

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Northern/ before SNPWG 6				SNPWG 6/ 29.06.2006
			DA 22.08.2006	
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **technical port service**

Acronym: **srvtec**

Code: ?

Attribute type: L

Expected input:

ID	Meaning	INT 1	M-4
1	: degaussing		
2	: adjustment of magnetic compass		

Definitions:

degaussing:

A service to remove or neutralize the magnetic field of a ship (Websters online Dictionary 2006/02/20).

adjustment of magnetic compass:

A service to check and adjust the magnetic compass.

Remarks:

No remarks.

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Northern/ before SNPWG 6				SNPWG 6/ 29.06.2006
			DA 22.08.2006	
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **UHF Channel**

Acronym: **chauhf**

Code: ?

Attribute type: A

Deleted: I

Deleted: (E???????)

Expected input:

enter specific UHF-Channel

Definitions:

The UHF channel number assigned to a specific radio frequency.

Indication:

Each UHF-Channel should be indicated by 2 digits and up to 2 characters.

e.g. ??????????

Deleted: ??

Deleted: ??

Comment [JM4]: Question marks highlighted: we ask for an example

The indication of several UHF-Channels is possible

Format:

[XXXX];[XXXX]

Remarks:

No remarks.

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Northern/ before SNPWG 6				SNPWG 6/ 29.06.2006
	<u>DA</u> <u>22.08.2006</u>	<u>Format aligned with</u> <u>COMCHA</u>	<u>DA</u> <u>22.08.2006</u> <u>Northern</u> <u>9.Nov. 2006</u>	
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

Deleted: 8

FEATURE OBJECT ATTRIBUTES

Attribute: **city_name**

Acronym: **citynm**

Code: ?

Attribute type: S

Definitions:

The name of a town or city in national language.

Deleted: which may be associated with the address

Remarks:

No remarks

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Northern/ before SNPWG 6				SNPWG 6/ 29.06.2006
			DA 16.08.2006	
	Northern 9.Nov.2006	Attribute name extended Definition extended Do we need an attribute presenting the city name in English?	Northern 9.Nov.2006	
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **email address**

Acronym: **emails**

Code: ?

Attribute type: S

Expected input:

name of the recipient @ name of the domain or subdomain

Definitions:

An address assigned to an organisation or person to send or receive electronic mail via Internet.

Deleted: email

Example:

steven.smith@domain.com

Remarks:

No remarks.

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Northern/ before SNPWG 6				SNPWG 6/ 29.06.2006
			DA 22.08.2006 Northern 9.Nov. 2006	
	Northern 9.Nov. 2006	Definition extended		
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **maximum draft**

Acronym: **maxdrf**

Code: ?

Attribute type: F

Definitions:

The maximum allowed vertical distance, at any section of a vessel from the surface of the water to the bottom of the keel. (adapted from IHO Dictionary, S-32, 5th Edition, 1448)

Indication:

Unit: defined in the HUNITS attribute of the M_UNIT meta object class, e.g. metre (m)

Resolution: 0.01 m or 0.01 ft

Format:

xx.xx

Example:

12.56 for a maximum draught of 12.56 metres.

Remarks:

Align with Mariners Information Object (MIO) in AIS context – [Attribute Not found](#).

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Northern/ before SNPWG 6				SNPWG 6/ 29.06.2006
			DA 21.08.2006 Northern 9.Nov. 2006	
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **maximum air draught**

Acronym: **maxair**

Code: ?

Attribute type: F

Definitions:

The maximum allowed height of the highest point of a vessel above the water-line.

Deleted: allowed

References:

Adapted from UKHO NP100/2004

Indication:

Unit: defined in the HUNITS attribute of the M_UNIT meta object class, e.g. metre (m)

Resolution: 0.1 m or 0.1 ft

Format:

xx.x

Example:

22.5 for a maximum air draught of 22.5 metres.

Remarks:

No equivalent in Mariners Information Object (MIO) in AIS context.

Deleted: Align with

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Northern/ before SNPWG 6	DA 21.08.200 6	AIS Checked	DA 21.08.2006 Northern 9.Nov. 2006	SNPWG 6/ 29.06.2006
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **maximum length**

Acronym: **maxlen**

Code: ?

Attribute type: F

Definitions:

The maximum allowed overall length of a vessel.

Deleted: allowed

Indication:

Unit: defined in the HUNITS attribute of the M_UNIT meta object class, e.g. metre (m)

Resolution: 0.13 m or 0.13 ft

Deleted: .

Format:

xx.xx

Example:

82.54 for an allowed maximum length of 82.54 metres.

Remarks:

Used in conjunction with Mariners Information Object (MIO) "shplen" in AIS context.

Deleted: Align with

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Northern/ before SNPWG 6	DA 21.08.2006	Remarks	DA 21.08.2006 Northern 9.Nov. 2006	SNPWG 6/ 29.06.2006
	Northern 9.Nov. 2006	agreed		
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **maximum displacement tonnage**

Acronym: **maxdpl**

Code: ?

Attribute type: I

Definitions:

The maximum allowed displacement tonnage of a vessel.

Deleted: allowed

Indication:

Unit: defined in the **wunits** attribute of the M_UNIT meta object class, e.g. metric tons (t)

Deleted: .

Resolution: 1

Example:

22254 for allowed maximum displacement tonnage of 22254.

Remarks:

No remarks.

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Northern/ before SNPWG 6				SNPWG 6/ 29.06.2006
			DA 21.08.2006 Northern 9.Nov. 2006	
	Northern 9.Nov. 2006	agreed		
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **maximum deadweight tonnage**

Acronym: **maxdwt**

Code: ?

Attribute type: I

Definitions:

The maximum allowed deadweight tonnage of a vessel.

Deleted: allowed

Indication:

Unit: defined in the **wunits** attribute of the M_UNIT meta object class, e.g. metric tons (t)

Deleted: .

Resolution: 1

Example:

12345 for allowed maximum deadweight tonnage of 12345.

Remarks:

No remarks.

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Northern/ before SNPWG 6				SNPWG 6/ 29.06.2006
			DA 21.08.2006	
		agreed	Northern 9.Nov. 2006	
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **maximum gross tonnage**

Acronym: **maxgtn**

Code: ?

Attribute type: I

Definitions:

The maximum allowed gross tonnage of a vessel. A gross ton is a unit of gross internal capacity equal to 100 cubic ft (2.83 cubic m) (adapted from Oxford Dictionary of English). Gross tonnage is a function of the moulded volume of all enclosed spaces of the ship (International Convention on Tonnage Measurements in Ships, 1969).

Deleted: allowed

Indication:

Resolution: 1

Deleted: Unit: . defined in the **wunits** attribute of the M_UNIT meta object class, e.g. metric tons (t)¶

Example:

98765 for allowed maximum gross tonnage of 98765.

Remarks:

No remarks.

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Northern/ before SNPWG 6	DA 21.08.2006	Indication	DA 21.08.2006 Northern 9. Nov.2006	SNPWG 6/ 29.06.2006
	Northern 9. Nov.2006	GT has no unit, GT itself is a unit		
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **maximum net tonnage**

Acronym: **maxntn**

Code: ?

Attribute type: I

Definitions:

The maximum allowed net tonnage of a vessel. A net ton is the taxable gross tonnage of a merchant ship. The net tonnage is produced by a formula which is a function of the moulded volume of all cargo spaces of the ship (International Convention on Tonnage Measurements in Ships, 1969).

Deleted: allowed

Example:

45678 for allowed maximum net tonnage of 45678.

Remarks:

No remarks.

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Northern/ before SNPWG 6	DA 21.08.2006	Definiton;	DA 21.08.2006 Northern 9. Nov.2006	SNPWG 6/ 29.06.2006
	Northern 9. Nov.2006	agreed		
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **minimum length**

Acronym: **minlen**

Code: ?

Attribute type: F

Definitions:

The minimum allowed length of a vessel.

Deleted: allowed

Indication:

Unit: defined in the HUNITS attribute of the M_UNIT meta object class, e.g. metre (m)

Resolution: 0.13 m or 0.13 ft

Format:

xx.xx

Example:

82.54 for an allowed minimum length of 82.54 metres.

Remarks:

Used in conjunction with with Mariners Information Object (MIO) "shplen" in AIS context.

Deleted: Align

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
SNPWG6/ SNPWG 6	DA 21.08.2006	Definition, remarks		SNPWG 6/ 29.06.2006
			DA 22.08.2006 Northern 9. Nov.2006	
	Northern 9. Nov.2006	agreed		
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **minimum displacement tonnage**

Acronym: **mindpl**

Code: ?

Attribute type: I

Definitions:

The minimum allowed displacement tonnage of a vessel.

Deleted: minimum

Indication:

Unit: defined in the **wunits** attribute of the M_UNIT meta object class, e.g. metric tons (t)

Resolution: 1

Example:

22254 for allowed minimum displacement tonnage of 22254.

Remarks:

No remarks.

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
SNPWG6/ SNPWG 6	DA 21.08.2006	Definition, resolution	DA 21.08.2006 Northern 9. Nov.2006	SNPWG 6/ 29.06.2006
	Northern 9. Nov.2006	agreed		
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **minimum deadweight tonnage**

Acronym: **mindwt**

Code: ?

Attribute type: I

Definitions:

The minimum allowed deadweight tonnage of a vessel.

Deleted: allowed

Indication:

Unit: defined in the **wunits** attribute of the M_UNIT meta object class, e.g. metric tons (t)

Resolution: 1

Example:

12345 for allowed minimum deadweight tonnage of 12345.

Remarks:

No remarks.

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
SNPWG6/ SNPWG 6	DA 21.08.2006	Definition, resolution	DA 21.08.2006 Northern 9. Nov.2006	SNPWG 6/ 29.06.2006
	Northern 9. Nov.2006	agreed		
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **minimum gross tonnage**

acronym: **mingtn**

Code: ?

Attribute type: I

Definitions:

The minimum allowed gross tonnage of a vessel.

Deleted: allowed

Example:

98765 for allowed minimum gross tonnage of 98765.

Remarks:

No remarks.

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
SNPWG6/ SNPWG 6	DA 21.08.2006	Definiton	DA 21.08.2006 Northern 9. Nov.2006	SNPWG 6/ 29.06.2006
	Northern 9. Nov.2006	agreed		
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **minimum net tonnage**

Acronym: **minntn**

Code: ?

Attribute type: I

Definitions:

The minimum allowed net tonnage of a vessel.

Deleted: allowed

Example:

45678 for allowed minimum net tonnage of 45678.

Remarks:

No remarks.

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
SNPWG6/ SNPWG 6	DA 21.10.2006	Definition	DA 21.08.2006 Northern 9. Nov.2006	SNPWG 6/ 29.06.2006
	Northern 9. Nov.2006	agreed		
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **maximum breadth** ([beam](#))

Acronym: **maxbrd**

Code: ?

Attribute type: F

Definitions:

The maximum allowed breadth ([beam](#)) of a vessel.

Deleted: allowed

Indication:

Unit: defined in the HUNITS attribute of the M_UNIT meta object class, e.g. metre (m)

Resolution: 0.01 m or 0.01 ft

Deleted: 13

Deleted: 13

Format:

xx.xx

Example:

22.54 for an allowed maximum breadth of 22.54 metres.

Remarks:

Used in conjunction with, with Mariners Information Object (MIO) "[shpbrd](#)" in AIS context.

Deleted: Align

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Northern/ before SNPWG 6	DA 21.08.2006	Aligned with MIO	DA 21.08.2006 Northern 9. Nov.2006	SNPWG 6/ 29.06.2006
	Northern 9. Nov.2006	Agreed with remarks Amended resolution		
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES(IHO)

Attribute: Telephone number [outside working hours](#)

Acronym: [nmtlow](#)

Code: ?

Deleted: nmtlao

Attribute type: S

Definitions:

A number assigned to a [service for use](#) outside [working hours](#).

Example:

+ 49 172 4019079

Remarks:

The telephone number should include international access code/national code/area code/phone number/extension (if required)
 +/49/172/4019079 (Ext. 53862)

Deleted: telephone

Deleted: service

Deleted: of the day or week

Deleted: hours

Deleted: .

(((SHOM will check whether is right presented) (TSMAD will be asked how to present the requirement of presenting more than one number)

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Northern/ before SNPWG 6				SNPWG 6/ 29.06.2006
			Northern 9. Nov.2006	
	Northern 9. Nov.2006	Amended definition We do not need to explain day and week		
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **fax number**

Acronym: **numfax**

Code: ?

Attribute type: S

Definitions:

A number assigned to a fax machine.

Example:

+ 49 381 4563769

Remarks:

The fax number should include international access code/national code/area code/phone number
 +/49/381/4563769

(((SHOM will check whether is right presented) (TSMAD will be asked how to present the requirement of presenting more than one number)

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Northern/ before SNPWG 6				SNPWG 6/ 29.06.2006
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **telephone number**

Acronym: **numtel**

Code: ?

Attribute type: S

Definitions:

A number assigned to a telephone.

Example:

+ 49 381 4563764

Remarks:

The telephone number should include international access code/national code/area code/phone number/extension (if required)
 +/49/381/4563764 (Ext. 254)

((SHOM will check whether is right presented) (TSMAD will be asked how to present the requirement of presenting more than one number)

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Northern/ before SNPWG 6				SNPWG 6/ 29.06.2006
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **telegraph address**

Acronym: **adrtlg**

Code: ?

Attribute type: S

Definitions:

The telegraphic address assigned to an organisation.

Remarks:

No remarks.

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Northern/ before SNPWG 6			DA 22.08.2006	SNPWG 6/ 29.06.2006
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **telex number**

Acronym: **numtlx**

Code: ?

Attribute type: S

Definitions:

Numbers and letters assigned to a telex machine.

Remarks:

No remarks.

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Northern/ before SNPWG 6				SNPWG 6/ 29.06.2006
			DA 22.08.2006	
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **Total number of berths**

Acronym: **totber**

Code: ?

Attribute type: I

Definition:

The total quantity of berths.

Remarks:

No remarks.

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Northern/ before SNPWG 6				SNPWG 6/ 29.06.2006
			DA 16.08.2006	
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **Number of berths for visitors**

Acronym: **vstber**

Code: ?

Attribute type: I

Definition:

number of berths for visitors

Remarks:

No remarks.

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Northern/ before SNPWG 6				SNPWG 6/ 29.06.2006
			DA 16.08.2006	
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **Pilot vessel**

Acronym: **pltvsl**

Code: ?

Attribute type: S

Definitions:

Description of the pilot vessel.

Remarks:

No remarks.

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Northern/ before SNPWG 6				SNPWG 6/ 29.06.2006
			DA 16.08.2006	
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **post office box**

Acronym: **postbx**

Code: ?

Attribute type: S

Definitions:

A number that identifies a postal delivery address at a local branch post office. (Adapted Websters Ninth New Collegiate Dictionary, 1983)

Remarks:

No remarks.

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Northern/ before SNPWG 6				SNPWG 6/ 29.06.2006
			DA 17.08.2006	
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: Category of Registration Data

Acronym: catrgd

Code: ?

Deleted: rgdata
Deleted: ????????

Attribute type: L

- 1 : according to IMO standard ship reporting system
- 2 : non IMO standard reporting data

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Northern/ November 06	<u>UK Jan 07</u>	<u>Think this could work. Value 1 implies rgdata must be populated; 2 implies that a non standard report is described somewhere. If type is List, this allows for both the standard form and any local amplification.</u>		
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **IMO Standard Registration Data**

Acronym: **rgdata**

Code: ?

Attribute type: **L**

Expected input:

ID	Meaning
1	: ALPHA Ship
2	: BRAVO Dates and time of event
3	: CHARLIE Position
4	: DELTA Position
5	: ECHO True course
6	: FOXTROT Speed in knots and tenth of knots
7	: GOLF Port of Departure
8	: HOTEL Date, time and point of entry system
9	: INDIA Destination and expected time of arrival
10	: JULIET Pilot
11	: KILO Date, time and point of exit from system
12	: LIMA Route information
13	: MIKE Radio
14	: NOVEMBER Time of next report
15	: OSCAR Maximum present static draught in meters
16	: PAPA Cargo on board
17	: QUEBEC Defects, damage, deficiencies or limitations
18	: ROMEO Description of pollution or dangerous goods lost
19	: SIERRA Weather conditions
20	: TANGO Ship's representative and/ or owner
21	: UNIFORM Ship size and type
22	: VICTOR Medical personnel
23	: WHISKEY Total number of persons on board
24	: XRAY Miscellaneous
25	: YANKEE request or relay to another system
26	: ZULU End of report

Deleted: latitude/longitude

Deleted: bearing/distance

Definitions:

Data according to the IMO standard ship reporting system.

1. Name, call sign or ship station identity, and flag.
2. A 6 digit group giving day of month (first two digits), hours and minutes (last four digits) (DDHHMM). If other than UTC state time zone used.
3. A 4 digit group giving latitude in degrees and minutes suffixed with N (north) or S (south) and a 5 digit giving longitude in degrees and minutes suffixed with E (east) or W (west); or

Deleted: Definition to be completed.

Deleted: D

Deleted: S

4. True bearing (first 3 digits) and distance (state distance) in nautical miles from a clearly identified landmark (state landmark).
5. A 3 digit group.
6. A 3 digit group.
7. Name of last port of call.
8. Entry time expressed as in (BRAVO) and into the entry position expressed as in (CHARLIE) or (DELTA).
9. Name of port and date time group expressed as in (BRAVO).
10. State whether a deep sea or local pilot is on board.
11. Exit time expressed as in (BRAVO) and exit position expressed as in (CHARLIE) or (DELTA).
12. Intended track.
13. State in full names of communications stations/frequencies guarded.
14. Date time group expressed as in (BRAVO).
15. 4 digit group giving meters and centimeters.
16. Cargo and brief details of any dangerous cargoes as well as harmful substances and gases that could endanger persons or the environment.
17. Brief detail of defects, damage, deficiencies or other limitations.
18. Brief details of type of pollution (oil, chemicals, etc) or dangerous goods lost overboard; position expressed as in (CHARLIE) or (DELTA).
19. Brief details of weather and sea conditions prevailing.
20. Details of name and particulars of ship's representative or owner or both for provision of information.
21. Details of length, breadth, tonnage, and type, etc., as required.
22. Doctor, physician's assistant, nurse, personnel without medical training.
23. State number.
24. Any other information as appropriate, (i.e., a detailed description of a planned operation, which may include: its duration; effective area; any restrictions to navigation; notification procedures for approaching vessels; in addition, for a towing operation; configuration, length of the tow, available horsepower, etc.; for a dredge or floating plant; configuration of pipeline, mooring configuration, number of assist vessels, etc).
25. Content of report.
26. No further information required.

- Deleted: and tenths of knots
- Deleted: 3
- Deleted: 4
- Deleted: 2
- Deleted: 3
- Deleted: 4
- Deleted: 2
- Deleted: 3
- Deleted: 4
- Deleted: and/
- Deleted: no medic
- Deleted: persons on board
- Deleted: .
- Deleted: [
- Deleted: :
- Deleted: :
- Deleted: .]
- Deleted: ??
- Deleted: ??

Remarks:

No remarks.

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Northern/ before SNPWG 6	Jens 11.Aug.	IMO ships Reporting system details implemented		SNPWG 6/ 29.06.2006
	Jens 11.Aug.	new deviation improves the possibility to fit requirements for all areas where IMO standard does not apply		

Deleted: ies

	DA 17.08.2006	Attribute type: L cannot work like this. We have the same problem with npsubject and I think we need a new attribute "challenge and response" type where responses are free text. The alternative is to make every item an attribute	Comment withdrawn. 16 Jan 07.	
	DA 24 Oct 06	Checked against IMO	Northern 9.Nov. 2006	
	Northern 9.Nov. 2006	Regdata is a problem. The described way of encoding this information is not sufficient to support local reporting systems. This information is normally give to the mariner and therefore rgdata has to be modelled in a completely different way. We are thinking that an UML model might be necessary. Initially we took the devision made on 11.Aug. out of the attribute and created a fragment of a further attribute "cat of regdata" presented above rgdata now.		

Deleted: (s)

	DA 16 Jan 07	As a simple first step, UK believes that this could be useful as it stands for those services which use the standard IMO definitions for reporting. rgdata would then list the information which the ship must provide but does not provide the information itself.	UKHO 16 Jan 07	
	18 Jan 07	Checked against IMO resolution A.851(20) for definition of Y and Z. Tweaked V.		
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **R/T Frequency**

Acronym: **rtfrqz**

Code: ?

Attribute type: S

Definitions:

The designated frequency for radiotelephone communication.

Deleted: and units

Indication:

Unit: _____ defined in the funit attribute of the M_UNIT meta object class, e.g. hertz (Hz)

Deleted: Expected input: ¶
'2182 kHz' or '235.25 mHz'¶

Comment [JM5]: A further unit for TSAMD

Resolution: 100

Format:

xxxxxxxxx

Example:

225400000 for a frequency of 225.4 MHz.
2182000 for frequency of 2182 kHz

Remarks:

For simplex communication one frequency is given; for duplex communication two frequencies are given.

Deleted: ¶

Deleted: Do we need (a) unit(s)?
Expected inputs etc???

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Northern/ before SNPWG 6				SNPWG 6/ 29.06.2006
	DA 22.08.2006	Definiton; expected input	DA 22.08.2006 Northern 9.Nov. 2006	

	<u>Northern 9.Nov. 2006</u>	<u>Deleted expected input, Inserted indication, format and example using the procedure with M. UNITS.</u>		
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: Street name and building number

Acronym: **strtnm**

Code: ?

Attribute type: S

Definitions:

The street name and building number to mark the location of s.th..

Remarks:

No remarks.

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Northern/ before SNPWG 6				SNPWG 6/ 29.06.2006
			DA 17.08.2006	
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: internet address

Acronym: **adrnet**

Code: ?

Attribute type: S

Definitions:

An address which identifies an internet site.

Remarks:

The address could be a website or an ftp site.

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Northern/ before SNPWG 6				SNPWG 6/ 29.06.2006
			DA 22.10.2006	
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: postal code

Acronym: **zipcod**

Code: ?

Attribute type: S

Definitions:

A number that identifies each postal delivery area. (Adapted Websters Ninth New Collegiate Dictionary, 1983)

Remarks:

No remarks.

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Northern/ before SNPWG 6				SNPWG 6/ 29.06.2006
			DA 17.08.2006	
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **additional address information**

Acronym: **adadin**

Code: ?

Attribute type: S

Definitions:

Can be e.g., office numbers, floors, etc. or a village

Example:

Room 5805, Silver Spring Metro Center 3,

Remarks:

No remarks.

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Northern/ before SNPWG 6				SNPWG 6/ 29.06.2006
			DA 16.08.2006	
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: country

Acronym: **contry**

Code: ?

Attribute type: S

Definitions:

The name of the Country.

Remarks:

No remarks.

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Northern/ before SNPWG 6				SNPWG 6/ 29.06.2006
			DA 16.08.2006 Northern 9.Nov. 2006	
	Northern 9.Nov. 2006	Do we have a language problem like city name? Is there a distinction with ADMARE?		
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **administrative division**

Acronym: **admdiv**

Code: ?

Attribute type: S

Definitions:

Can be e.g. a state, a province or a county.

Remarks:

No remarks.

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Northern/ before SNPWG 6				SNPWG 6/ 29.06.2006
			DA 16.08.2006 Northern 9.Nov. 2006	
	Northern 9.Nov. 2006	Where is the distinction with ADMARE?		
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **Category of vessel**

Acronym: **catvsl**

Code: ?

Attribute type: L

Expected input:

ID	Meaning	INT 1	M-4
1	: general cargo vessel		
2	: container vessel		
3	: tanker		
4	: sailing vessel		
5	: fishing vessel		
6	: special purpose vessel		
7	: man of war		
8	: submarine		
9	: high speed craft		
10	: bulk carrier		
11	: amphi plane		
12	: tug		
13	: pasenger vessel		
14	: ferry		
15	: boat		
16	: high speed craft		
17	: refrigerated cargo vessel		
18	: car carrier		
19	: gas carrier		
20	: project vessel		
21	: leisure craft		
22	: other		

Definitions:

general cargo vessel:
a vessel designed to carry general cargo

container vessel:
a vessel designed to carry ISO containers

tanker:
a vessel designed to carry bulk liquid

sailing vessel:
a vessel powered by wind

fishing vessel:
a vessel designed to catch or hunt fish

special purpose vessel:
a vessel designed for a special purose

man of war:
a vessel designed for the conduct of military operations

submarine vessel:
a vessel which is able to navigate below the surface

high speed craft:
a vessel which has a service speed which is much higher than most other vessels; in the order of 40 knots

bulk carrier:
a vessel designed to carry bulk solid material

amphi plane:
[A plane designed to land and take of from the water](#)

tug:
[a vessel designed to tow or push other vessels](#)

passenger vessel:
[a vessel designed to carry passengers; often a cruise ship](#)

ferry:
[a vessel crossing and re-crossing on fixed routes and schedules](#)

boat:
[small vessel for travelling over water powered by oars, sails or engine \(Oxford Dictionary of English\)](#)

refrigerated cargo vessel:
a vessel designed to carry refrigerated cargo

car carrier:
a vessel designed to carry motor vehicles in bulk.

gas carrier:
a vessel designed to carry gas, e.g. liquid petroleum gas, liquid natural gas

project vessel:
a vessel designed to carry out offshore construction

Deleted: nuclear power vessel:¶

leisure craft:
[a craft powered by sail or motor designed for leisure or racing](#)

Deleted: normally a small

other:
any other type of vessel

References:

Remarks:

[Aligned with AIS Mairiners Informastion Object \(MIO\) type A attribute ship type \(shptyp\) rows 1-16. IDs 17 -21 proposed by SNPWG High speed craft repeated at 9 and 16 in shptyp](#)

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Northern/ before				SNPWG 6/ 29.06.2006

SNPWG 6	DA 18.08.2006	Aligned with AIS attribute ship type shptyp; definitions and extended	Northern 9.Nov. 2006	
	Northern 9.Nov. 2006	changed definition for leisure craft; keeping the option to cover all size of leisure crafts		
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **Category of cargo**

acronym: **catcgo**

Code: ?

Attribute type: E

Expected input:

ID	Meaning	INT 1	M-4
1	: crude oil		
2	: oil product		
3	: containers		
4	: steel		
5	: grain		
6	: coal		
7	: chemicals		
8	: live animals		
9	: fruit and vegetables		
10	: liquid petroleum gas		
11	: liquid natural gas		
12	: other		

Deleted: bananas

Deleted: too many others to list

Definitions:

crude oil :

[oil in a natural or raw state; not yet processed or refined \(Oxford Dictionary of English 2nd Edition 2003\)](#)

oil products:

[oil which has been refined](#)

containers

[cargo containers conforming to ISO standards; usually 20 or 40 feet in length](#)

steel

[refined metallic mineral which has been derived from iron ore](#)

grain

[cultivated cereal, such as wheat, maize or rye, used as a food; \(derived from Oxford Dictionary of English 2nd Edition 2003\)](#)

coal

[combustible black or dark brown rock consisting chiefly of carbonized plant matter, found mainly in underground seams and used as fuels \(Oxford Dictionary of English 2nd Edition 2003\)](#)

chemicals

a distinct compound or substance, especially one which has been artificially prepared or purified (Oxford Dictionary of English 2nd Edition 2003); could transported as bulk solid or liquid.

live animals

livestock

fresh fruit or vegetables

perishable agricultural products normally transported at a temperature just above freezing to preserve condition

Deleted: bananas

liquid petroleum gas

light hydrocarbon material gaseous at normal temperatures and pressures. By-product of petroleum refining and oil production. Held at liquid state under pressure for transport and storage. Liquid petroleum gases include propane and butane (NP100 8th Edition 2004)

liquid natural gas

gas, predominantly methane, from oilfield sources. Held in liquid state at atmospheric pressure at a temperature of about -162°C for transport and storage (NP100 8th Edition 2004)

References:

????????????????

Deleted: other
too many others to list cargo not specified above

Remarks:

1. Mariners Information Object (MIO) in AIS context is not sufficiently specific.

Deleted: Align with

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Northern/ before SNPWG 6		<ul style="list-style-type: none"> saying that the list should be revisited and to be extended to HO's requirements BSH will collect only those adding which are containing definitions 		SNPWG 6/ 29.06.2006
	DA 18.08.2006	Definitions; researched AIS for cargo types: no joy.		

		<u>To be complete this list needs to become rigorously generic. Therefore descriptors such as: "crude oil", "oil products", "containers", "refrigerated", "livestock", "vehicles" OK; "grain", "steel", "coal", "bananas" are too specific.</u>	<u>Northern 9.Nov.2006</u>	
	<u>Northern 9.Nov.2006</u>	<u>We agree with the comments above; we providing a new more generic proposal how this information can be grouped.(((BSH))) Deleted "others" we can not provide an exclusion list. To be discussed on the next meeting in HRO</u>		
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

Deleted: ¶
This is an unending list and a fool's errand.

FEATURE OBJECT ATTRIBUTES

Attribute: **Maritime Mobile Service Identity (MMSI) Code**

Acronym: **mmsico**

Code: ?

Attribute type: [A](#)

Deleted: S

Definition:

The designated [9-digit](#) Maritime Mobile Service Identity (MMSI) Code of [a radio station either on a vessel or ashore.](#)

Deleted: the

Format:

[XXXXXXXX](#)

Example:

[366777490](#)

Remarks:

No remarks.

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Northern/ before SNPWG 6	DA 22.10.2006	Type; definiton; format; example	Northern 9.Nov.2006	SNPWG 6/ 29.06.2006
	Northern 9.Nov.200 6	agreed amended definition		
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: service access procedure

Acronym: svaprc

Code: ?

Deleted: dre

Attribute type: S

Indication:

Procedure explains how the mariner may access, e.g a service or facility.

Remarks:

This would always be a name of an external text file.

Deleted: at

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Northern/ before SNPWG 6				SNPWG 6/ 29.06.2006
	<u>Northern 9.Nov.200 6</u>	<u>Changed attribute name and acronym (((object list check)))</u>	<u>UK 17 Jan 07</u>	
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: Category of harbour facility
--

acronym: **CATHAF**

Code: **30**

Attribute type: L

Expected input:

ID	Meaning	INT 1	M-4
1	: RoRo-terminal	IF 50;	321.5;
2	: timber yard		
3	: ferry terminal		
4	: fishing harbour	IF 10;	320.1;
5	: yacht harbour/marina	IU 1.1;	320.2;
6	: naval base		
7	: tanker terminal		
8	: passenger terminal		
9	: shipyard		
10	: container terminal		
11	: bulk terminal		
12	: syncrolift		
13	: straddle carrier		
14	: <i>lay up vessels berth</i>		
15	: <i>wood products terminal</i>		
16	: <i>offshore industry support base</i>		
17	: <i>local authority/ port service support base</i>		
18	: <i>sea-plane terminal</i>		
19	: <i>general cargo terminal</i>		

Definitions:

A terminal provides facilities for handling particular forms of cargo (IHO Dictionary, S-32, 5th Edition, 5343).

- RoRo-terminal: a terminal for roll-on roll-off ferries.
- ferry terminal: a terminal for passenger and vehicle ferries.
- fishing harbour: a harbour with facilities for fishing boats.
- yacht harbour/marina: a harbour with facilities for small boats and yachts (IHO Dictionary, S-32, 5th Edition, 3095).
- naval base: a centre of operations for naval vessels (adapted from The Collins Dictionary).
- tanker terminal: a terminal for the bulk handling of liquid cargoes.
- passenger terminal: a terminal for the loading and unloading of passengers.
- shipyard: a place where ships are built or repaired (IHO Dictionary, S-32, 5th Edition, 4686).
- container terminal: a terminal for container ships.
- bulk terminal: a terminal for the handling of bulk materials such as iron ore, coal, etc.

syncrolift: a platform powered by synchronous electric motors used to lift vessels (larger than boats) in and out the water

straddle carrier: a wheeled vehicle designed to lift and carry containers or vessels within its own framework. It is used for moving, and sometimes stacking, shipping containers and vessels

lay up vessels berth: a berth where lay up vessels are stationed

wood products terminal a terminal for handling wood products

Offshore industry support base a base which provides support and load out facilities for offshore industry

local authority/ port service support base: a place where vessels from different authorities or port service vessels are stationed

sea-plane terminal a terminal for seaplanes

general cargo terminal a terminal for handling general cargo

Deleted: ??????????????????????

Deleted: ??????????????????????

Deleted: routine

Deleted: oil and gas

Deleted: ??????????????????????
???

Deleted: ??????????????????????
????

Remarks:

No remarks.

Value number 2 (timber yard) has been transferred to the attribute category of production area (CATPRA).

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Northern/ before SNPWG 6	<u>DA</u> <u>22.08.2006</u> <u>6</u>	<u>Definitions</u>	<u>DA</u> <u>22.08.2006</u> <u>Northern</u> <u>9.Nov. 2006</u>	
	<u>Northern</u> <u>9.Nov.</u> <u>2006</u>	<u>Changed definition for offshore industry</u> <u>New definitions are not sufficient enough</u>		
Submitted to Hydro register manager				Date

Submitted to Nav register manager	Date
-----------------------------------	------

FEATURE OBJECT ATTRIBUTES

Attribute: Category of rescue station
--

Acronym: **CATRSC**

Code: **55**

Attribute type: L

Expected input:

ID	Meaning	INT 1	M-4
1	: rescue station with lifeboat	IT 12;	493;
2	: rescue station with rocket	IT 12;	493;
3	: rescue station with lifeboat and rocket		
4	: refuge for shipwrecked mariners	IT 14; IQ 124;	456.4;
5	: refuge for intertidal area walkers	IT 14; IQ 124;	456.4;
6	: lifeboat lying at a mooring	IT 13;	493.2;
7	: aid radio station		
8	: first aid equipment		
9	: <i>Rescue seaplane</i>		
10	: <i>Rescue aircraft</i>		
11	: <i>helicopter</i>		
12	: <i>salvage tug</i>		

Definitions:

rescue station with lifeboat:

a place where equipment for saving life at sea is maintained; the type of lifeboat may vary from fast, long distance boats to inflatable inshore boats. (M-4)

rescue station with rocket:

rocket - a pyrotechnic projectile used for signalling or for life-saving purposes. (IHO Dictionary, S-32, 5th Edition, 4418)

refuge for ship-wrecked mariners:

shelter or protection from danger or distress at sea.

refuge for intertidal area walkers:

shelter or protection from danger in areas exposed to extreme and sudden tides or tidal streams.

lifeboat lying at a mooring:

a place where a lifeboat is moored ready for use.

aid radio station:

a radio station reserved for emergency situations, might also be a public telephone

first aid equipment:

a place where first aid equipment is available

rescue seaplane:

An aircraft which is able to land at sea to help people who are in danger at sea

rescue aircraft:

An aircraft which is used for search people who are in danger at sea, partly the aircraft can provide the people with some goods by dropping

helicopter:

a type of aircraft with large metal blades on top which turn around very

quickly to make it fly, a helicopter is able to transport some provision, to rescue people via rope winch, or to be a base for professional rescue teams

salvage tug: a tug who can tow or hold vessels in distress to avoid the loss of the vessel or environmental pollution

Remarks:

No remarks.

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Northern/ before SNPWG 6	DA 22.08.2006	<u>I believe that IDs 9 - 12 will not work. The object RSCSTA is geographic and is therefore somewhere that is charted. 9 – 12 are mobile.</u>	<u>Northern 9.Nov. 2006</u>	
	<u>Northern 9.Nov. 2006</u>	<u>We agree with the comments made about the new values, and we still of the opinion is not needed. The mariner will have no influence on what kind of rescue he will get. MRCC is the law.</u>		
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

**New attribute for (((deratting service)))) keeping vaccination under srvmmed
 The definitions given for derrating features are talking all from authorities
 vaccination is talking from service**

Attribute: **medical service**

Acronym: **srvmmed**

Code: ?

Attribute type: L

Expected input:

ID	Meaning	INT 1	M-4
1	: deratting		
2	: de-ratting certificate		
3	: de-ratting exemption certificate		
4	: crew vaccination		

Definitions:

- 1 The authority can perform an operation with a view to destruction of rats on board ships. (International Maritime Dictionary, Second edition 1961)
- 2 The authority will issue a de-ratting certificate after a successful deratting operation.
- 3 The authority is able to issue a de-ratting exemption certificate after checking that there is no indication for being rats on board of a ship.
- 4 Vaccination service is available.

Remarks:

No remarks.

Comment:

Hospital and health office are covered by obj BUISGL
 attr FUNCTN

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Northern/ before SNPWG 6			DA 22.08.2006	
	Northern 9.Nov.2006	Excluded derrating information in a separate attribute file. The vaccination has to be discussed.		

Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: Category of mooring/warping facility
--

Acronym: **CATMOR**

Code: **40**

Attribute type: E

Expected input:

ID	Meaning	INT 1	M-4
1	: dolphin	IF 20;	327.1;
2	: deviation dolphin	IF 21;	327.2;
3	: bollard		
4	: tie-up wall		
5	: post or pile	IF 22;	
6	: chain/wire/cable	IQ 42;	431.6;
7	: mooring buoy	IQ 40-43;	431.5;
8	: <i>ropes from ashore</i>		
9	: <i>automatic moorings</i>		

Definitions:

dolphin:	a post or group of posts, which may support a deck, used for mooring or warping a vessel. (IHO Dictionary, S-32, 5th Edition, 1433)
deviation dolphin:	a post or group of posts, which a vessel may swing around for compass adjustment.
bollard:	small shaped post, mounted on a wharf or dolphin used to secure ship's lines.
tie-up wall:	a tie-up wall is a section of wall designated for tying-up vessels awaiting transit. Bollards and mooring devices are available for both large and small ships.
post or pile:	a long heavy timber or section of steel, wood, concrete, etc., forced into the seabed to serve as a mooring facility. (IHO Dictionary, S-32, 5th Edition, 3840)
chain/wire/cable:	a connection between two independent objects e.g. a buoy and pile or between two buoys used as a mooring facility.
mooring buoy:	a buoy secured to the bottom by permanent moorings with means for mooring a vessel by use of its anchor chain or mooring lines. (IHO Dictionary, S-32, 5th Edition, 575)
<i>ropes from ashore:</i>	<i>a place where ropes for mooring a vessel given from ashore</i>
<i>automatic moorings:</i>	<i>Automatic mooring systems are remotely controlled and require no quayside personnel. The system and its performance are monitored and its status is reported to operations staff in real-time. There are different types of automatic mooring systems. (Source: http://www.tts-se.com/templates/Page.aspx?id=1334)</i>

Remarks:
No remarks.

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Northern/ before SNPWG 6			DA 22.08.2006	
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **Category of pilot boarding place**

Acronym: **CATPIL**

Code: **46**

Attribute type: **E**

Expected input:

ID	Meaning	INT 1	M-4
1	boarding by pilot cruising vessel	IT 1.1-3;	491.1;
2	boarding by helicopter	IT 1.4;	491.2;
3	pilot comes out from shore	IT 1.1-3;	491.1;

Definitions:

- 1—pilot boards from a cruising vessel.
- 2—pilot boards by helicopter which comes out from the shore.
- 3—pilot boards from a vessel which comes out from the shore on request.

Remarks:

No remarks.

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Northern/ before SNPWG-6	DA 22.08.200 6	No change from S-57 3.1. suggest delete page.		
	Northern 9.Nov.200 6	agree		
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **type of vs/cargo ((to be specified)))**

Acronym: _____ Code: ?

Attribute type: E

Expected input:

— ID — Meaning — INT 1 — M-4

Split into

- 1: — dimension
- 2: — type of vs/c
- 3: — cargo
- 4: — equipment

Definitions:

- 1 —
- 2 —

Remarks:

No remarks.

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Northern/ before SNPWG 6		Is more distinguishing requested???????? new and to be split up into more attributes		
	DA	Is this sufficiently covered by catvs and catego?		
	Northern 9.Nov200 6	Agreed and deleted		
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **Category of pilot**

Acronym: **catplt**

Code: ?

Attribute type: L

Expected input:

ID	Meaning
1:	pilot
2:	deep sea pilot
3:	harbour pilot
4:	bar pilot
5:	river pilot
6:	remote pilot
7:	local pilot
8:	citizen with sufficient local knowledge
9:	citizen with doubtful local knowledge
10:	company pilot
11:	pilot approved by government

- Deleted: deep sea pilot
- Deleted: company pd
- Deleted: pilot
- Deleted: pilot approved by government

Definitions:

1:	Pilot licenced to conduct vessels during approach from sea to a specified place which may be a handover place, an anchorage or alongside
2:	Pilot licenced to conduct vessels over extensive sea areas
3:	Pilot who is licenced to conduct vessels from a specified place, such as a handover area or anchorage into a harbour
4:	Pilot licensed to conduct vessels over a bar to or from a handover with a river pilot (for example as used in USA)
5:	Pilot licensed to conduct vessels from and to specified places, along the course of a river (for example as used in Rio Amazonas and Rio de La Plata)
6:	Pilotage is provided remotely from shore or other location remote from the vessel requiring pilotage
7:	A pilot with local knowledge but who does not hold a qualification as a pilot
8:	A pilot service carried out by a citizen with sufficient local knowledge
9:	A pilot service carried out by a citizen whose local knowledge is uncertain
10:	A pilot provided by a commercial company
11:	A pilot service carried out by pilots who are approved by government

- Deleted: no pilot is available
- Deleted: Pilot licenced to conduct vessels over extensive sea areas¶
- Deleted: the pilot service is carried out by a citizen with doubtful local knowledgePilot licenced to conduct vessels during approach from sea to a specified place which may be a handover place, an anchorage or alongside¶
- Deleted: Pilot who is licenced to conduct vessels from a specified place, such as a handover area or anchorage into a harbour.¶
- Deleted: the pilot service is carried out by a citizen with sufficient local knowledge¶
- Deleted: the pilot service is carried out by a pilot especially from the company for which the vessel is bound forr
- Deleted: the pilot service is carried out by a pilot who is approved by government

Remarks:

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Northern/ before SNPWG 6	DA 21.08.2006	Reorganised and extened list; amended definitions	Northern 9.Nov. 2006	
	Northern 9.Nov. 2006	We think the provided order has to be review once again. We propose to amend item 11 into "pilot which is not approved" which avoids to many works for the encoder.		
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **Category of pilot service**

acronym: **catpsv**

Code: ?

Attribute type: L

Expected input:

ID	Meaning	INT 1	M-4
1:	berth		
2:	unberth		
3:	anchor		
4:	move/shifting		
5:	Deep Sea pilotage		

Definitions:

- 1: A pilot who assists a vessel berthing.
- 2: A pilot who assists a vessel unberthing.
- 3: A pilot who assists a vessel anchoring.
- 4: A pilot who assists a vessel moving or shifting within the pilot district.
- 5: A pilot who assists a vessel sailing in deep water.

No remarks.

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Northern/ before SNPWG 6		Is more distinguishing requested???????? new and to be split up into more attributes		
			DA 17.08.2006	
	Northern 9.Nov.200 6	Do we need this attribute????? Look at cat of pilot		
	DA 13 Dec 06	Agree not required. 5 duplicated in catpil.		
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **Category of supply**

acronym: **catsup**

Code: ?

Attribute type: E

Deleted: L

Expected input:

- | | | | |
|----|---|-------|-----|
| ID | Meaning | INT 1 | M-4 |
| 1 | : fuel | | |
| 2 | : lubricants | | |
| 3 | : fresh water | | |
| 4 | : <u>General supplies and equipment for ships</u> | | |
| 5 | : supply of electric energy | | |
| 6 | : telephone connection | | |

Deleted: ship chandler

Definitions:

- 1 A material used to produce heat or power by burning. (Websters Ninth New Collegiate Dictionary, 1983).
- 2 A substance capable of reducing friction, heat, and wear when introduced as a film between solid surface. (Websters Ninth New Collegiate Dictionary, 1983).
- 3 Water to drink. (Websters Ninth New Collegiate Dictionary, 1983).
- 4 a new definition is needed !!!!!!!!!!!!!!!!!!!!!!! (Northern proposal) All goods needed on board to operate the vessel excluding those given in this list .
- 5 Usable power as electricity available from ashore. (Adapted Websters Ninth New Collegiate Dictionary, 1983).
- 6 A shore based connection for a telephone which can be used by ships crew.

Deleted: The quantities of goods or services offered for sale at a particular time or at one price for vessels. (Websters Ninth New Collegiate Dictionary, 1983). (((((must be checked))))))

Deleted: General supplies and equipment for ships (adapted from Oxford English Dictionary Edition 2 2003

Remarks:

The category of supply will not cover those for small craft facilities.

No remarks.

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Northern/ before SNPWG 6		Is more distinguishing requested???????? new and to be split up into more attributes		
	DA 17.08.2006	Definition	DA 17 Aug 2006 Northern 8.Nov.2006	

	Northern 8.Nov.2006	Changed attribute type to E (Enumerated). Otherwise qualim will cause concept discrepancies with other attributes within the object "supply" Definition has been changed, according to ID nr. 4 English has to be checked!		
	DA 11 Dec 06	E versus L to discuss. ID 4: A way forward as commonly seen in AMLs is to replace 4 with "Other", put it last, and move 5 and 6 up a line.		
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **Category of transport facilities**

acronym: **cattra**

Code: ?

Attribute type: L

Expected input:

ID	Meaning	INT 1	M-4
1:	tank road vehicle		
2:	tank boat		
3:	shore pipeline		
4:	suction pump vehicle		
5:	suction station		
6:	purifier installation		
7:	drum disposal		
8:	collecting tank		
9:	skip		
10:	dustbin		
11:	standard container		
12:	shore based pump		
13:	special connector		
14:	road vehicle		
15:	boat		

- Deleted: car
- Deleted: car
- Comment [JM6]: Seite: 82
How much the service costs
- Deleted: but we love the suck off idea))))))suck off station
- Deleted: (((((((the definition is to modified)))))) otherwise it will point to red districts escape firewall
- Deleted: bin liner
- Deleted: ISO
- Deleted: paper basket¶
- Deleted: Container¶
- Deleted: shore based pump
- Deleted: special connector
- Deleted: car
- Deleted: transporting
- Deleted: 3
- Deleted: shore based
- Comment [N20067]: Seite: 82
Könnte evtl. mit PIPELINE kollidieren. Hier geht es nicht um das Rohr an sich, sondern die Funktionalität. (Ent- und Versorgungsleitung)
- Deleted: pass from or as if from source to user
- Deleted: car
- Deleted: which is able
- Deleted: who is
- Deleted: liner for putting in waste
- Deleted: dust
- Deleted: putting in
- Deleted: normally 20 or 40 feet long,
- Deleted: . A basket for dirty paper
- Deleted: . Something such as a box or bowl that can used for keeping things
- Deleted: . . Pumps for carrying liquids a available from ashore

Definitions:

1:	A vehicle with , a large receptacle for holding, transporting, or storing liquids
2:	A boat fitted with tanks for carrying liquid in bulk
3:	A pipeline which supplies liquid, gas or occasionally solids in suspension, direct from shore tanks
4:	A vehicle which has the equipment to remove air from an enclosed space, so that a substance to be pumped, is sucked in
5:	A station which is able to remove air from an enclosed space, so that a substance to be pumped is sucked in.
6:	An installation which removes the dirty or unwanted parts from something
7:	The possibility to dispose waste into drums
8:	A tank for collecting waste
9:	A large transportable open-topped container for transporting waste (adapted from Oxford Dictionary of English 2nd Edition 2003)
10:	A small container for collecting waste
11:	A container of standard dimensions, that can be used for storage or transport
12:	Shore based pumps for transporting liquids from ship to shore or reverse
13:	Special connectors are required for connecting vessels pipe with shore based instalations

14: [Any vehicle such as a car, van or truck](#)

15: [Small vessel for travelling over water powered by oars, sails or engine \(Oxford Dictionary of English\)](#)

Deleted: Special connectors are required for connecting vessels pipe with shore based instalations

Remarks: This list attribute [contains](#) all presently known possibilities or facilities for carrying goods for supply or disposal.

Deleted: contents

No remarks.

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Northern/ before SNPWG 6	09.Aug. 2006/ Jens	amended ID 5 according to a proposal given by Mal		
	DA 17 Aug 2006	amended list and amended definitions	Northern 9.Nov. 2006	
	Northern 9.Nov. 2006	Amend definition for item 11		
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **Category of waste**

acronym: **catwas**

Code: ?

Attribute type: E

Expected input:

ID	Meaning	INT	M-4
1	:dirty ballast water		
2	:tank washing (slops)		
3	:oily mixtures containing chemicals		
4	:scale and sludge from tanker cleaning		
5	:oily bilge water		
6	:sludge form fuel oil purifier		
7	:Marpol II category A		
8	:Marpol II category B		
9	:Marpol II category C		
10	:Marpol II category D		
11	:Marpol V garbage		
12	:Marpol IV sewage		

Remarks: This list attribute contents all presently known possibilities of waste which can produce from a vessel or from a part of it.

No remarks.

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Northern/ before SNPWG 6				
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **Day of week**

acronym: **daywee** Code: ?

Attribute type: L

Expected input:

— ID — Meaning — INT 1 — M 4

- 1 : Monday
- 2 : Tuesday
- 3 : Wednesday
- 4 : Thursday
- 5 : Friday
- 6 : Saturday
- 7 : Sunday and Holiday

Definitions:

A Day of week as a day based on a 7 days week.

~~A special remark is given for a holiday, this day is a international or national day fixed by law on which people do not have to go to work or school (adapted from Longman Dictionary of Contemporary English, 1995)~~

Remarks:

No remarks.

made by: Jörg Hufenbach

4st check by:

final check by:

see **wkdywk** (western European Group)

FEATURE OBJECT ATTRIBUTES

Attribute: **Notice time**

Acronym: ntctim

Code: ?

Deleted: o

Deleted: i

Deleted: e

Attribute type: S

Definition:

The time to make preparations for something in advance. (Websters Ninth New Collegiate Dictionary, 1983)

References:
INT 1:

Indication:

Text string indicating "24 hours" or "3 working days". This may include "On leaving previous port" or "On passing reporting line XY".

Deleted: The 'prearr' should be encoded using 6 digits or give the distance from the place from where the prearrange is required.

Format:

Changes: N2202, N22

Deleted: ¶
¶ Change is done by an request, that sometimes a time in advance or a distance from a point is mentioned, to give a notice.¶
¶

Deleted: ¶
¶ made by: Jens Schröder-Fürstenberg

<u>Drafted by/ Date</u>	<u>Amended by/ Date</u>	<u>Amendment details</u>	<u>Checked by/ Date</u>	<u>Agreed by/ Date</u>
<u>Northern/ before SNPWG 6</u>		<u>Reinserted by DA 16.08.2006</u>		
	<u>11 Dec 06</u>	<u>Other examples in Indication.</u>		
<u>Submitted to Hydro register manager</u>				<u>Date</u>
<u>Submitted to Nav register manager</u>				<u>Date</u>

Deleted: 1st check by:¶
¶ final check by:¶
covered by information object notice¶

FEATURE OBJECT ATTRIBUTES(IHO

Attribute: **Maritime mobile service Identification Code/DSC number**

acronym: **numms** Code: ?

Attribute type: S

Expected input:

—ID — Meaning — INT 1 — M 4

Definitions:

A number assigned to connect shore-ship or ship-shore via wireless transmission. **(definition unclear)**

Remarks:

No remarks.

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Northern/ before SNPWG-6	<u>Northern 9.Nov. 2006</u>	<u>This is double deleted</u>		
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: Pilot request

acronym: **pltrqs** Code: ?

Attribute type: S

Expected input:

Definitions:

It should contain at least information about when, how, to whom a pilot request should be sent.

No remarks.

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Northern/ before SNPWG 6	DA 17.08.2006	Do not see the need for this attribute	Northern 9.Nov. 2006	
	Northern 9.Nov. 2006	We agree It is already covered by notice time, catpil and rgdata Attribute was deleted		
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **quantity limit**

acronym: **qualim** Code: ? Deleted: a

Attribute type: S

Expected input:

ID	Meaning	INT 1	M-4
----	---------	-------	-----

Definitions:

The limit of a determinate amount or number of an accompanying attribute content. (Adapted Websters Ninth New Collegiate Dictionary, 1983)

Remarks:

No remarks.

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Northern/ before SNPWG 6	DA17.08.2006	Needs more definition. We could have several types of waste. As currently drafted we associate a limit with a waste type.	Northern 9.Nov. 2006	
	Northern 9.Nov. 2006	We should not limit qualim to a specified type of goods.		
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: Quantity

Acronym: **quanti**

Code: ?

Attribute type: I

Indication:

A determinate amount or number of an accompanying attribute contents. (Adapted Websters Ninth New Collegiate Dictionary, 1983)

Remarks:

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Northern/ before SNPWG 6				
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: recommendations

Acronym: **rcmdts**

Code: ?

Attribute type: S

Indication:

the string encodes the file name of an external text file that contains official advice given to somebody, especially about what to do in English. (partly adapted from Longman Dictionary of Contemporary English, 1995)

Remarks:

The attribute 'recommendations' indicates that a file containing text extracted from relevant pilot books or navigational publications is available.

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Northern/ before SNPWG 6			DA 18.10.2006	
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: regulations

Acronym: **reglts**

Code: ?

Attribute type: S

Indication:

the string encodes the file name of an external text file that contains an official rule or order in English. (partly adapted from Longman Dictionary of Contemporary English, 1995)

Remarks:

The attribute 'regulations' indicates that a file containing text extracted from relevant pilot books or navigational publications is available.

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Northern/ before SNPWG 6			DA 18.08.2006	
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **restrictions description**

Acronym: **resdes**

Code: ?

Attribute type: S

Indication:

the string encodes the file name of an external text file that contains rules which limit or control what you can do or what is allowed to happen in English. (partly adapted from Longman Dictionary of Contemporary English, 1995)

Remarks:

The attribute 'restrictions description' indicates that a file containing text extracted from relevant pilot books or navigational publications is available.

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Northern/ before SNPWG 6			DA 17.08.2006	
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **Scheduled time**

Acronym: **sctim**

Code: ?

Attribute type: A

Definition:

(Indicates the time when s.th. will happen.)

References:

INT 1:

Indication:

The time should 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: 1988.

Format:

hhmmss (**mandatory**)

Example: 023045 2 hours and 30 minutes and 45 seconds

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Northern/ before SNPWG 6				
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **Status**

Acronym: **STATUS**

Code: **149**

Attribute type: L

Expected input:

ID	Meaning	INT 1	M-4
1	: permanent		
2	: occasional	IP 50;	473.2;
3	: recommended	IN 10;	431.1;
4	: not in use	IL 14, 44;	444.7;
5	: periodic/intermittent	IC 21; IQ 71;	353.3; 460.5;
6	: reserved	IN 12.9;	
7	: temporary	IP 54;	
8	: private	IQ 70;	
9	: mandatory		
10	: destroyed/ruined		
11	: extinguished		
12	: illuminated		
13	: historic		
14	: public		
15	: synchronized		
16	: watched		
17	: un-watched		
18	: existence doubtful		
19	: <i>on request</i>		
20	: <i>falling</i>		
21	: <i>rising</i>		
22	: <i>increasing</i>		
23	: <i>decreasing</i>		
24	: <i>strong</i>		
25	: <i>good</i>		
26	: <i>moderately</i>		
27	: <i>poor</i>		

Definitions:

permanent:	intended to last or function indefinitely. (The Concise Oxford Dictionary, 7th Edition)
occasional:	acting on special occasions; happening irregularly. (The Concise Oxford Dictionary, 7th Edition)
recommended:	presented as worthy of confidence, acceptance, use, etc. (The Macquarie Dictionary 1988)
not in use:	no longer used for the purpose intended; disused.
periodic/intermittent:	recurring at intervals. (The Concise Oxford Dictionary, 7th Edition)
reserved:	set apart for some specific use. (adapted from The Concise Oxford Dictionary, 7th Edition)
temporary:	meant to last only for a time. (The Concise Oxford Dictionary)

| private: not in public ownership or operation.

mandatory: compulsory; enforced. (The Concise Oxford Dictionary, 7th Edition)

extinguished: no longer illuminated.

illuminated: lit by floodlights, strip lights, etc.

historic: famous in history; of historical interest. (The Concise Oxford Dictionary, 7th Edition)

public: belonging to, available to, used or shared by, the community as a whole and not restricted to private use. (adapted from The New Shorter Oxford English Dictionary, 1993)

synchronized: occur at a time, coincide in point of time, be contemporary or simultaneous. (The New Shorter Oxford English Dictionary, 1993)

watched: looked at or observed over a period of time especially so as to be aware of any movement or change. (adapted from The New Shorter Oxford English Dictionary, 1993)

un-watched: usually automatic in operation, without any permanently-stationed personnel to superintend it. (adapted from IHO Dictionary, S-32, 5th Edition, 2814)

existence doubtful: an object that has been reported but has not been definitely determined to exist.

on request: *when you ask for it (Longman Dictionary of Contemporary English, 1995)*

drop away: *to become lower in level (Longman Dictionary of Contemporary English, 1995)*

rising: *to become higher in level (Longman Dictionary of Contemporary English, 1995)*

increase: *a rise in amount, number or degree (Longman Dictionary of Contemporary English, 1995)*

decreasing: *to go down to a lower level (Longman Dictionary of Contemporary English, 1995)*

strong: *not easily broken or destroyed (Longman Dictionary of Contemporary English, 1995)*

good: *in a satisfactory condition to use (Longman Dictionary of Contemporary English, 1995)*

moderately: *fairly but not very (Longman Dictionary of Contemporary English, 1995)*

poor: *not as good as it could be or should (Longman Dictionary of Contemporary English, 1995)*

Remarks:

No remarks.

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Northern/ before				

SNPWG 6				
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

|

FEATURE OBJECT ATTRIBUTES

Attribute: **Category of Maritime Safety Information (MSI)**

Acronym: **CATMSI**

Code: ??

Attribute type: L

Expected input:

ID	Meaning	INT 1	M-4
1	<u>Navigational Warning</u>		
2	<u>Meteorological warning</u>		
3	<u>Ice report</u>		
4	<u>SAR information</u>		
5	<u>Pirate attack warning</u>		
6	<u>Meteorological forecast</u>		
7	<u>Pilot service message</u>		
8	<u>AIS information</u>		
9	<u>LORAN message</u>		
10	<u>SATNAV message</u>		
11	<u>Gale warning</u>		
12	<u>Storm warning</u>		
13	<u>Tropical cyclone warning</u>		
14	<u>NAVAREA Warning</u>		
15	<u>Coastal Warning</u>		
16	<u>Local Warning</u>		
17	<u>Low water level warning/Negative tidal surge</u>		
18	<u>Icing warning</u>		

Deleted: . 19 : . 1

Definitions:

<u>Navigational Warning</u>	<u>A broadcast message containing urgent information relevant to safe navigation.</u>
<u>Meteorological warning</u>	<u>Warning for hard weather conditions</u>
<u>Ice report</u>	<u>Report of the ice situation and restrictions to shipping</u>
<u>SAR information</u>	<u>A broadcast message with information about an ongoing SAR-operation</u>
<u>Pirate attack warning</u>	
<u>Meteorological forecast</u>	
<u>Pilot service message</u>	
<u>AIS information</u>	
<u>LORAN message</u>	
<u>SATNAV message</u>	
<u>Gale warning</u>	<u>Warning for winds of Beaufort force 8 or 9</u>
<u>Storm warning</u>	<u>Warning for winds of Beaufort force 10 or over</u>
<u>Tropical cyclone warning</u>	<u>Warnings for hurricanes in the North Atlantic and eastern North Pacific, typhoons in the Western Pacific, cyclones in the Indian Ocean and cyclones of similar nature in other regions</u>

NAVAREA warning A navigational warning issued by the NAVAREA co-ordinator for the NAVAREA

Coastal warning A navigational warning promulgated by a national co-ordinator to cover a region.

Local warning A navigational warning which covers inshore waters, often within the limits of jurisdiction of a harbour or port authority

Low Water Level Warning

Icing warning Warning for accretion of ice on ships.

Remarks:

No remarks.

<u>Drafted by/ Date</u>	<u>Amended by/ Date</u>	<u>Amendment details</u>	<u>Checked by/ Date</u>	<u>Agreed by/ Date</u>
<u>Northern/ before SNPWG 7</u>				
<u>Submitted to Hydro register manager</u>				<u>Date</u>
<u>Submitted to Nav register manager</u>				<u>Date</u>

Western Part

FEATURE OBJECT ATTRIBUTES

Attribute: Category of calibration

Acronym: **catcal**

Code: ?

Attribute type: E

Expected input:

ID	Meaning	INT 1	M-4
1	: compass		
2	: position		
3	: speed		
4	: noise		
5	: radar		
6	: sonar		
7	: magnetism		
8	: radio direction-finding		
9	:		
10	:		

Definitions:

- compass: activity to calibrate compasses.
- position: activity to calibrate position finding equipment.
- speed: activity to measure the speed of vessels and to calibrate the log of vessels.
- radar: activity to calibrate radar equipment.
- sonar: activity to calibrate sonar equipment.
- magnetism: activity to calibrate magnetic signature of vessels.
- [radio direction-finding](#) activity to calibrate radio direction-finding equipment

Remarks:

Distinction: CATREA: 8 defines a degaussing range.

Comment:

As the result of introducing "magnetism" here, CATREA 8 would need to be revisited.

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Western/ before SNPWG 6				
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **Category of language**

Acronym: **catlgn**

Code: ?

Attribute type: E

Expected input:

ID	Meaning	INT 1	M-4
1	: official (national)		
2	: official (sub national)		
3	: other		
4	:		
5	:		
6	:		
7	:		
8	:		
9	:		
10	:		

Definitions:

official (national): an official language used at national level.
 Official (sub national): an official language used at a regional or lower level.
 other non-official.

Remarks:

No remarks.

Comment:

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Western/ before SNPWG 6				
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **Category of marine activity**

Acronym: **catmac**

Code: ?

Attribute type: E

Expected input:

ID	Meaning	INT 1	M-4
1	: concentration of merchant shipping		
2	: concentration of recreational vessels		
3	: concentration of fishing vessels		
4	: <u>concentration of military vessels</u>		
5	:		
6	:		
7	:		
8	:		
9	:		
10	:		

Definitions:

concentration of merchant shipping:
vessels whose primary purpose is to engage in commerce, including ferries.

concentration of recreational vessels:
powered or sailing vessels principally engaged in recreation, leisure, or sporting competition.

concentration of fishing vessels:
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.

concentration of military vessels
vessels principally engaged in military activities. This includes activities based on mandate of international organisations (e.g. UN).
The concentration is on areas others than military exercise areas.

Remarks:

No remarks.

Comment:

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Western/ before SNPWG 6			Jens <u>27.Nov.</u> <u>2006</u>	

	<u>Jens</u> <u>27.Nov.</u> <u>2006</u>	<u>added definition</u>		
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **Category of Nautical Publication area**

Acronym: **catnpu**

Code: ?

Attribute type: E

Structure:

ID	Meaning
1	: volume
2	: chapter
3	: section
4	: sub-section
5	:
6	:
7	:
8	:
9	:
10	:

Definitions:

volume	a volume covers the extent of the npuare .
chapter:	a geographic chapter covers the extent of the npuare .
section	a geographic section covers the extent of the npuare .
sub-section	a geographic sub-section covers the extent of the npuare .

Remarks:

No remarks.

Comment:

1. This is a new attribute for **npuare**.
2. See UML diagram with **npuare**.

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Western/ before SNPWG 6	DA16Oct06	Attribute type	Jens 27.Nov. 2006	
	Jens 27.Nov. 2006	see comments on npuare object		
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **Category of piracy or armed robbery risk area**

Acronym: **catpir**

Code: ?

Attribute type: E

Expected input:

ID	Meaning	INT 1	M-4
1	: IMO		
2	: IMB		
3	: National		
4	:		
5	:		
6	:		
7	:		
8	:		
9	:		
10	:		

Definitions:

IMO: an area reported by International Maritime Organization.
 IMB: an area reported by International Maritime Bureau Piracy Reporting Centre
 – Kuala Lumpur.
 national: an area reported by a national authority.

Remarks:

No remarks.

Comment:

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Western/ before SNPWG 6			Jens 27. Nov. 2006	
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **Category of production area**

Acronym: **CATPRA**

Code: **48**

Attribute type: E

Expected input:

ID	Meaning	INT 1	M-4
1	: quarry	IE 35.1-2;	367.1;
2	: mine	IE 36;	367.2;
3	: stockpile		
4	: power station area		
5	: refinery area		367;
6	: timber yard	IF 52;	328.2;
7	: factory area		
8	: tank farm		376.2;
9	: wind farm		
10	: slag heap/spoil heap		
11	: <u>current farm</u>		
12	: <u>oil field</u>		
13	: <u>natural gas field</u>		
14	: <u>wave energy field</u>		

Definitions:

quarry:	an excavation in solid rock from which building stone, limestone, etc. is removed.
mine:	an excavation in the earth for the purpose of extracting earth materials.
stockpile:	a reserve stock of material, equipment or other supplies.
power station area:	a stationary plant containing apparatus for large-scale conversion of some form of energy (hydraulic, steam, chemical, nuclear, etc.) into electrical energy.
refinery area:	a system of process units used to convert crude petroleum into fuels, lubricants and other petroleum-derived products.
timber yard:	a storage area for wood used for building, carpentry or joinery.
factory area:	a group of buildings where goods are manufactured.
tank farm:	an area in which a number of large-capacity storage tanks are located, generally used for crude oil or petroleum products.
wind farm:	an area in which numerous wind motors are located.
slag heap/spoil heap:	hill of refuse from a mine, industrial plant etc. on land (adapted from Concise Oxford Dictionary).
<u>current farm:</u>	<u>an area where electrical power is produced from the lateral movement of water.</u>
<u>oil field:</u>	<u>an area where oil and natural gas (normally as a by-product) are produced.</u>

natural gas field: an area where natural gas is produced.

wave energy field: an area where electrical power is produced from wave energy devices.

Remarks:

No remarks.

Comment:

The current enumerations need to be expanded to cover wider exploitation of the seabed and water column.

Think more about oil field and gas field. Use perhaps PRODC.T.

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Western/ before SNPWG 6			Jens 27. Nov. 2006	
	Jens 27. Nov. 2006	I love „current farm“ and „wave energy field“. „Gas and oil fields“ don't have a signature according to INT 1. It seems a collection of oil or gas production platforms indicates the existence of such a field.		
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **Controlling authority**

Acronym: **conath**

Code: ?

Attribute type: S

Definition:

The authority which exercises control of an area or facility.

Deleted: the

References:

Remarks:

No remarks

Comment:

Required particularly in the context of calibration areas but there may be other occasions where authorities exercise control over access or passage through an area.

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Western/ before SNPWG 6				
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **Development**

Acronym: **dvlpmt**

Code: ?

Attribute type: S

Definition:

A description of the development or the work in progress in the port.

Deleted: that is planned

Remarks:

Comment:

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Western/ before SNPWG 6			<u>Jens</u> <u>27. Nov.</u> <u>2006</u>	
	<u>Jens</u> <u>27. Nov.</u> <u>2006</u>	<u>we should not deal</u> <u>with the future: we</u> <u>should present the</u> <u>present on the ENC.</u>		
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

Attribute: **Diplomatic representation**

Acronym: **diplomaticRepresentation**

Code: ?

Deleted: r

Attribute type: [structured data type / information object]

Structure:

ID	Meaning	INT 1	M-4
1	: [Use SHOM's structure as a basis for a normalised structure]		
2	:		
3	:		
4	:		

Definitions:

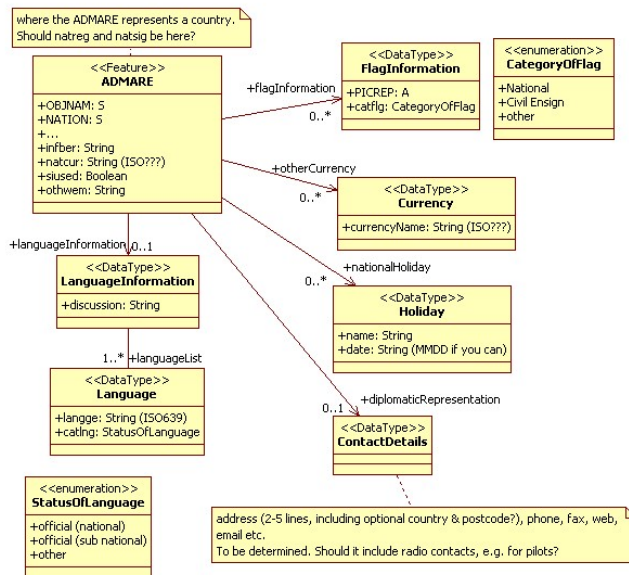
contact details: contact details of diplomatic representatives of the country producing the SD in S-100 common format for addresses.

Remarks:

Distinction:

Comment:

1. UML diagram for **ADMARE**.



Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Western/ before SNPWG 6	DJDA	Acronym	9 Oct 06 Jens 27. Nov. 2006	
	Jens 27. Nov. 2006	Please explain what attribute type it will be (do not understand the presented type) (information object in this section?)		
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **Flag information**

Acronym: [flagInformation](#)

Code: ?

Attribute type: [structured data type / information object]

Structure:

ID	Meaning	INT 1	M-4
1	: PICREP		
2	: category of flag		
3	:		
4	:		
5	:		

Definitions:

PICREP a picture of the flag.
category of flag: [indicates which type of flag this is]

Remarks:

No remarks.

Comment:

1. This is a new attribute for ADMARE
2. This is structured for S-100. See UML diagram for **ADMARE** at [diplomaticRepresentation](#).
3. The data is a file name which points to the flag graphic file.

Deleted: r

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Western/ before SNPWG 6	9 Oct 06	Added short acronym	Jens 27. Nov. 2006	
	Jens 27. Nov. 2006	Please explain what attribute type it will be (do not understand the presented type) (information object in this section?)		
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Western/ before SNPWG 6		<u>Please explain what attribute type it will be (do not understand the presented type.) (information object in this section?)</u>	<u>Jens 27. Nov. 2006</u>	
	<u>11 Dec 06</u>	<u>Moved to Information Object</u>		
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

Deleted: ¶

¶

Attribute: **headed text**¶

Acronym: . Code: ?¶

¶

Attribute type: [structured data type / information object]¶

¶

Structure:¶

¶

.ID . Meaning . type . INT 1 . M-4¶

¶

. 1 . : subject . npsubject . . ¶

. 2 . : text . formatted text . . ¶

. 3 . : language . string . . ¶

. 4 . : . . . ¶

¶

Definitions:¶

¶

npsubject . topic of the following text¶

text: . the text¶

language . encoded according to ISO 639-2 to allow more than one language to be used¶

¶

Remarks:¶

¶

No remarks.¶

¶

¶

¶

Comment: . ¶

¶

1. . This is a new attribute for **npuare**.¶

2. . This is structured for S-100. ¶

3. . See UML diagram for **npuare** at **npsubject**.¶

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Western/ before SNPWG 6	Jens 09.Aug.	added a comment		
	DJDA 10OCT 06	DELETED.		
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

Deleted: ¶
¶
¶

Attribute: **Information about berthing**¶

Acronym: **infber** . Code: ?¶

Attribute type: S¶

¶
¶
¶
¶

Definitions:¶

¶
General statements by national authorities about berthing, such as the distance off berths at which depths alongside are usually measured.¶

¶
¶

Remarks:¶

¶
¶
¶

Comment: Be realistic!; where do we have such information.

FEATURE OBJECT ATTRIBUTES

Attribute: **Language information**

Acronym: [languageInformation](#)

Code: ?

Attribute type: [S](#)

Deleted: [structured data type / information object]

Definition:

[This describes languages, alphabets and scripts in use.](#)

Deleted: **Structure:**
 ID . Meaning . INT 1 . M-4
 1 . : discussion: string .
 2 . : .
 3 . : .

Remarks:

Comment:

1. This is structured for S-100.
2. See UML diagram for **ADMARE** at [diplomaticRepresentation](#).

Deleted: [s](#)

Deleted: [r](#)

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Western/ before SNPWG 6	DJDA	Acronym and definition added	Jens 27. Nov. 2006	
	Jens 27. Nov. 2006	Please explain what attribute type it will be (do not understand the presented type) (information object in this section?) Where is the distinction with the attribute below?		
	DA 10Jan07	Attribute type defined as: S. Format corrected. Defintion refined.		
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

INFORMATION OBJECT ATTRIBUTES

Attribute: **Language**

Acronym:

Code: ?

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Western/ before SNPWG 6			Jens 27. Nov. 2006	
	Jens 27. Nov. 2006	Where is the distinction with the attribute above?		
	11 Dec 06	See following page.		
		Redrafted.		
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

Deleted: Attribute type: [structured data type / information object]

Structure:

- ID . . . Meaning . INT 1 . M-4
- 1 . . . langge: string (ISO 639) . . .
- 2 . . . cating . . .
- 3

Definitions:

- . . .

Remarks:

- . . .

Comment:

- 1 . . This is a new attribute for language information.
- 2 . . This is structured for S-100.

<#>See UML diagram for ADMARE at diprep..

INFORMATION OBJECT ATTRIBUTES

Attribute: **Language**

Acronym: **langge**

Code: ?

Attribute type: A

Indication:

Two letter Language code, according to ISO 639-1

Format:

xx

Remarks:

Comment [PMP8]: I believe ISO 639-1 would be sufficient. See <http://www.loc.gov/standards/iso639-2/faq.html>
Or RFC3066, which states two letter codes, falling back to three letter (ISO 639-2/T) if required?
Or just use 639-2/T and have three letter codes.

<u>Drafted by/ Date</u>	<u>Amended by/ Date</u>	<u>Amendment details</u>	<u>Checked by/ Date</u>	<u>Agreed by/ Date</u>
<u>Western/ before SNPWG 6</u>	<u>Peter / 2006-12-04</u>	<u>Previously only represented in a UML diagram.</u>		
	<u>11 Dec 06</u>	<u>This encodes a language. LanguageInformation allows amplifying information about language, scripts, systems of characters or alphabets if needed</u>		
	<u>Jens 29.01.2007</u>	<u>problems with Language information (2 pages above) raise. The Language information describes languages (where is the distinction to Language?)</u>		
<u>Submitted to Hydro register manager</u>				<u>Date</u>
<u>Submitted to Nav register manager</u>				<u>Date</u>

FEATURE OBJECT ATTRIBUTES

Attribute: **National currency**

Deleted: ¶

Acronym: **natcur**

Code: ?

Attribute type: S

Definitions:

[A system of money in general use in a particular country.](#)

Remarks:

Indication:

Encoded according to ISO 4217

Comment:

1. See UML diagram for **ADMARE** at **diprep**.

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Western/ before SNPWG 6	DJDA 11 oct 06	Added definition		
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **Holidays**

Acronym: [holday](#)

Code: ?

Attribute type: [structured data type / information object]

Structure:

ID	Meaning	INT 1	M-4
1	: name: S		
2	: date: MMDD or S		
3	:		
4	:		
5	:		
6	:		

Deleted: S or

Definitions:

[Name and date of national holidays](#) Days when service is not available

Remarks:

1. [This could include national holidays, maintenance days.](#)
2. [Where the specific date is fixed, it should be indicated; otherwise a generic description like "the first Saturday in the month" or "Chinese New Year" could be used.](#)

Distinction:

Comment:

1. This is a new attribute for **ADMARE** and [srvhrs](#)
2. This is structured for S-100.
3. It will be a repeating group.
4. See UML diagram for **ADMARE** at [diprep](#).

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Western/ before SNPWG 6	UK 16 Jan 07	Definition and remarks to accept Northern's idea of Exception		
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **Nautical Publication information subject**

Acronym: **npsubject**

Code: ?

Attribute type: E

Structure:

ID	Meaning
1	: introduction
2	: aids to navigation
3	: international regulations
4	: international signals
5	: navigational dangers and hazards
6	: national regulations
7	: national signals
8	: navigational charts
9	: traffic and operations
10	: maritime topography
11	: magnetic variation and anomalies
12	: currents, tidal streams and flow
13	: sea level and tides
14	: sea and swell
15	: sea water characteristics
16	: ice conditions
17	: climate and weather
18	: climatic information
19	: influence of weather conditions
<u>20</u>	<u>: adverse natural conditions</u>

Deleted: tables

Definitions:

introduction information which pertains to the whole area being described

These are discussions of the subject, which should include the details which following if applicable:

aids to navigation

lights: general remarks regarding reliability, visibility, responsible authorities, availability during certain seasons.
landmarks: remarks if caution is needed in areas of rapid development.
beacons: special systems in use.
daymarks: special definitions.
buoys: system of use and any divergences from IALA specifications. Full description of other systems; reliability of buoyage; removal at certain seasons.

international regulations

submarine cables and pipelines: avoidance and advice after fouling.
pollution: regulation for ships carrying Dangerous and Polluting goods.
traffic and surveillance: IMO ship's routing, main through routes and IMO adopted and non-IMO adopted Traffic Separation Schemes.

international signals:

signals of an unfamiliar nature
signals only affecting limited areas

navigational dangers and hazards:

coastal conditions: a description of conditions which may be hazardous; i.e. low lying coast, strong streams, likelihood of fog, volcanic activity resulting in reduced visibility or depth.

navigation amongst coral: hazards, precautions and techniques.

navigation amongst kelp: hazards, precautions and techniques.

floating hazards: logs or other debris.

ice, icebergs, icebreakers: the hazards and ice-breaking services available.

mine danger areas: a list of dangers due to currently existing and former mined areas.

piracy and armed robbery: general remarks on the threat drawn from reports of IMB piracy centre.

national regulations:

pollution:

approaching the coast:

ballast:

ports of public access:

port entry restrictions

closure of ports:

quarantine:

customs:

operations with ice-breakers:

protection of historic features:

protection of wild life:

Tanker Exclusion Zone (TEZ) (Canada)(S. Korea):

Designated Shipping Area (DSA)(Australia):

national signals:

traffic/bridge/lock:

tidal and water level:

dredging:

special:

ice:

storm and strong wind warnings:

navigational charts:

national charts: brief account of the state of charts and whether derived from old or modern data.

foreign charts: quality and availability of charts from the primary charting authority.

datums (horizontal and vertical): if there are differing datums in use by charting authorities in the area, differences are explained and values given.

depths in areas not using metres: definitions of various terms used and amplifying text.

traffic and operations:

traffic: includes ferries, hovercraft or high speed craft, deep draught vessels, leisure craft.

refuse burning at sea: burning of refuse in incinerators.

dumping: dumping of material at sea.

fishing: general remarks on fishing: type, concentrations, seasons and areas.

dangerous marine animals: general remarks.

exercise areas: information about firing practices and military exercises which are likely to take place; methods used to advise shipping.

maritime topography:

general remarks: an introduction.

seabed: information about structure, continental shelf and nature of seabed; sandwaves, submarine canyons, seamounts.

submarine springs: general statement if common in the area.

volcanic activity: susceptibility of the area

seismic activity: likelihood of tsunamis and earthquakes with reference to past occurrences of significance

landrise: rate and effect on depths.

magnetic variation and anomalies:

magnetic variation:
local magnetic anomalies:

currents, tidal stream and flow:

currents: general description of current circulation and seasonal changes.
tidal streams: general description.
flow: used when surface horizontal movement cannot be described separately under currents or tidal streams.

sea level and tides:

sea level: variations due to surges, winds, barometric pressure and other non tidal causes.
tides: general description of tides

sea and swell:

general summary of conditions
likelihood of abnormal waves:

sea water characteristics:

salinity.
density.
sea surface temperature.
colour and transparency.
bioluminescence.

ice conditions:

general remarks on seasons and dates when navigation is restricted by ice.
areas where icebergs may be encountered.
where necessary diagrams to show ice conditions.

climate and weather - a concise account of the conditions likely to be encountered at different seasons,- with diagrams if necessary, including:

general conditions and seasons:
pressure.
anticyclones.
depressions.
tropical storms.
fronts.
winds including open sea, coastal area, regional winds, seasonal winds, monsoons, trade winds, and variables.
gales.
cloud.
precipitation, including rain, hail and snow.
fog and visibility.
air temperature.
humidity.

Deleted: P

climatic information:

meta data including: station number; station name; height; time period when data was collected.
the information in a file to give a general impression of the climatic conditions by showing average conditions over several years from observations at selected World Meteorological Organisation observation stations.
remarks on the data.
comparison between shore observations and conditions likely to be encountered at sea.

Deleted: tables

Deleted: the tables: . to give a general impression of the climatic conditions by showing average conditions over several years from observations at selected observation stations.¶

influence of weather conditions:

wind.
falling air pressure.
rising air pressure.
rainy season.
dry season.
onshore wind.
offshore wind.
falling wind.

Deleted: diagram indicating location of stations.¶

Adverse natural conditions:

wind.

poor visibility.
streams.
difficult tidal streams.
sea and swell.
ice.

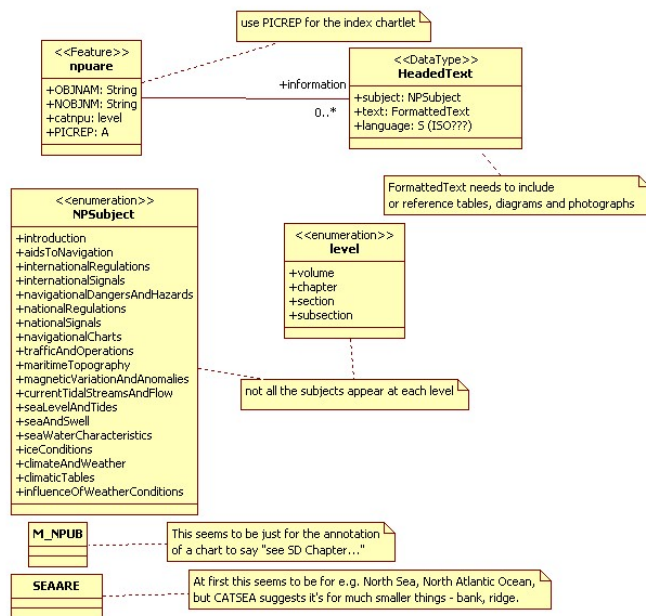
Remarks:

No remarks.

Comment:

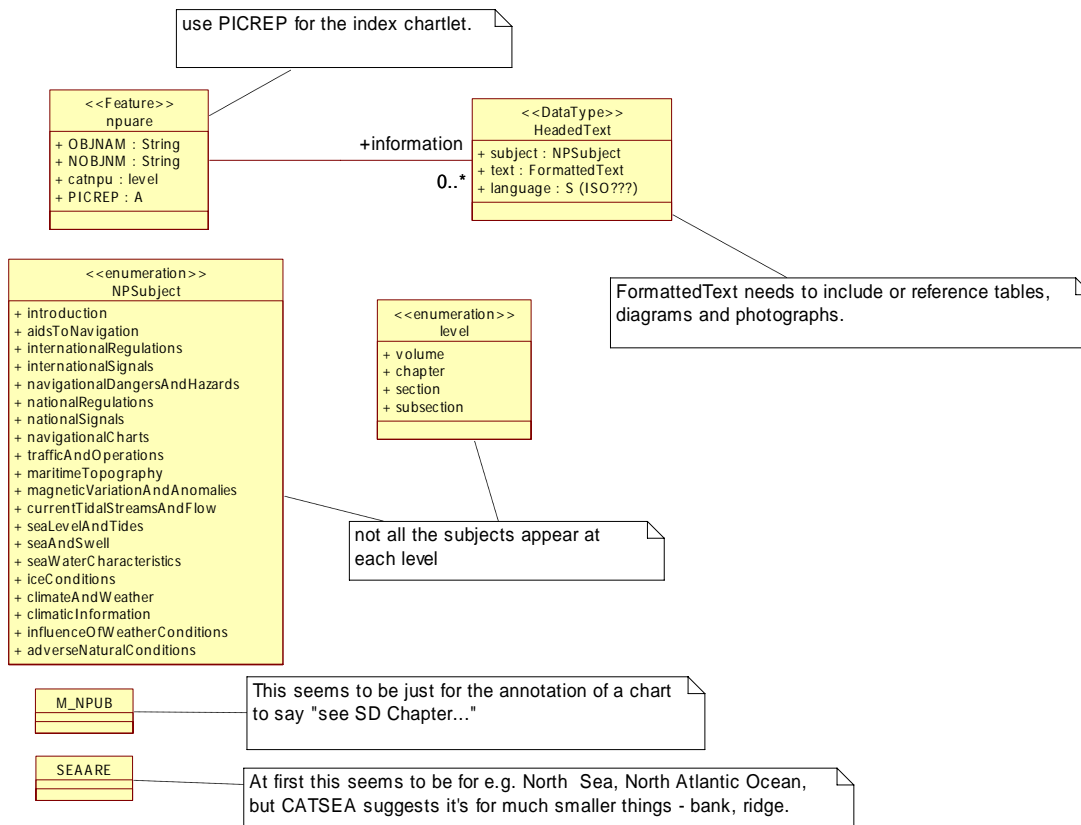
1. This is a new attribute for **npuare**.

Delete diagram immediately below drafted at WEG meeting in Brest 27 Apr 06 and replace by revised diagram dated 4 Dec 06 below.



Delete diagram above drafted at WEG meeting in Brest 27 Apr 06 and replace by revised diagram dated 4 Dec 06 below.

Diagram dated 4 Dec 06



Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Western/ before SNPWG 6			<u>Jens</u> <u>27. Nov.</u> <u>2006</u>	
	<u>Jens</u> <u>27. Nov.</u> <u>2006</u>	<u>good to get an overview about information in NPs, needed for ENC???</u>		

	DA 11 Dec 06	Diagram amended to add (earlier editing error) adverseNaturalConditions and to replace "climaticTables" by "climaticInformation". Diagram indicating location of tables deleted – Will be in product specification.		
Submitted to Hydro register manager			Date	
Submitted to Nav register manager			Date	

... [1]

FEATURE OBJECT ATTRIBUTES

Deleted: -----Page Break-----

Attribute: **Other currency**

Acronym: [otherCurrency](#)

Code: ?

Attribute type: [structured data type / information object]

Structure:

ID	Meaning	INT 1	M-4
1	: currency name: String encoded according to ISO 4217		
2	:		
3	:		

Definitions:

[Currency is a system of money in general use in a particular country. This is required when currencies other than the national currency are in common use.](#)

Remarks:

Distinction: [National currency.](#)

Comment:

1. This is a new attribute for **ADMARE**.
2. This is in a structured attribute so that it can be repeated.
3. See UML diagram for **ADMARE** at **diprep**.

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Western/ before SNPWG 6	DJDA 11 Oct 06	Acronym; Definition	Jens 28.Nov. 2006	
	Jens 28.Nov. 2006	Other from what? Did we defined a reference currency? Currency is enough to descibe the information.		
	DJDA 9 Jan 07	See National currency natcur. Definition improved.		
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **Other weights and measures used**

Acronym: **othwem**

Code: ?

Attribute type: S

Definitions:

A discussion of the non-metric weights and measures used in this country.

Remarks:

Distinction:

Comment:

1. This is a new attribute for **ADMARE**.

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Western/ before SNPWG 6			Jens <u>27. Nov.</u> 2006	
	Jens <u>27. Nov.</u> 2006	<u>which weights and measures are used. I would recommend to define a further „ UNIT“ attribute or to amend the definition. Same problem like otherCurrency is to be noticed.</u>		
	<u>9 Jan 07</u>	<u>OK. This is needed to amplify what happens when the siused =2 (SI units not used)</u>		
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **Population**

Acronym: **popnbr**

Code: ?

Attribute type: A

Indication:

The population of the port and the year for which the population is provided, (often the year of a census) are to be encoded in a formatted string.

Format:

CCYY,number

Remarks:

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Western/ before SNPWG 6				
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **Port regulations**

Acronym: **prtreg**

Code: ?

Attribute type: [structured data type / information object]

Structure:

ID	Meaning	INT 1	M-4
1	: quarantine: formatted text		
2	: customs: formatted text		
3	:		
4	:		
5	:		
6	:		
7	:		
8	:		
9	:		
10	:		

Deleted: an association to 0 or more medical requirements

Definitions:

quarantine: regulations which pertain to quarantine.
 customs and excise: regulations which pertain to customs and excise.

Deleted: notice for medical requirements: this is a repeating group which identifies what the medical requirement is and provides the notice for it.¶

Remarks:

Distinction:

Comment:

Comment [D9]: Medical requirements are handled by Agents not Ports. Item deleted.

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Western/	DA12 Oct 06	Medreq deleted:	Jens 28. Nov. 2006	

Deleted: ¶

<<DataType>>
Regulation

+quarantine: FormattedText
 +customs: FormattedText

before SNPWG 6	Jens 28. Nov. 2006	Is quarantine more related to medical service? Why not using guidance for encoding these attribute features? I afraid a further endless list will be a result of keeping this attribute alive.		
	DA 11Dec 06	I do not think quarantine is really medical service. I see it as a medical requirement or regulation imposed by the port or state. I think guidance could work for this. Please see comments in guidance. However it does seem to be an Information Object which is associated with a geographic object like an anchorage, port, harbour, waterway, etc. UML model deleted.		
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: [Security level](#)

Acronym: **securityLevel**

Code: ?

Attribute type: [E](#)

Expected input:

ID Meaning IMO ISPS Code 2003 Edition

- 1 : [Security level 1](#)
- 2 : [Security level 2](#)
- 3 : [Security level 3](#)

Definitions:

[Security level 1](#)

[Security level 1](#) means the level for which minimum appropriate protective security measures shall be maintained at all times.

[Security level 2](#)

[Security level 2](#) means 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.

[Security level 3](#)

[Security level 3](#) means 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.

Remarks:

[No remarks.](#)

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
DJDA 12 Oct 06			Jens 27.Nov. 2006	
	Jens 28.Nov. 2006	definitions structured	DA 11 Dec 06	
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **SI System (Système International)** used

Acronym: **siused**

Code: ?

Attribute type: **E**

Deleted: I
Deleted: [Boolean]

Expected input:

ID	Meaning	INT 1	M-4
----	---------	-------	-----

- 1 : SI units are used
- 2 : SI units not used

Deleted: Y
Deleted: N

Definitions:

System of metric measures consisting of seven basic units which are METRE, KILOGRAMME, SECOND, AMPERE, Kelvin, MOLE and CANDELA (Hydrographic Dictionary, Part I, No. 32, Fifth Edition, 1994, Nr. 5270

Remarks:

Distinction: **MUNITS, DUNITS, HUNITS**

Deleted: .

Comment:

- This is a new attribute for **ADMARE**.
- See UML diagram for **ADMARE** at **diprep**..

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Western/ before SNPWG 6	<u>09. Aug.</u>	<u>Added definition, distinction and designed the headline workable for those who are not familiar with abbreviations of an abbreviation</u> <u>Input changed from Boolean to Integer</u>		
	<u>DA 12Oct 06</u>	<u>Amended Attribute Type</u>	<u>Jens 28. Nov. 2006</u>	
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **Transport facilities**

Acronym: **trptfc**

Code: ?

Attribute type: [structured data type / information object]

Structure:

ID	Meaning	INT 1	M-4
1	: airport: string		
2	: railway: string		
3	: inland waterway: Boolean		
4	: road: string		
5	: An association to 0 or more nearby AIRARE (existing airport object) when that object is relevant for this subject.		
6	:		
7	:		
8	:		
9	:		
10	:		

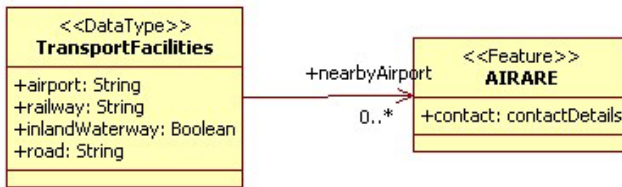
Definitions:

airport:	name and position of the nearest major airport
railway:	quality of connections
inland waterway:	whether connection to hinterland by canal or river transport is possible
road:	quality of connections

Deleted: an indication of

Deleted: to hinterland

Remarks:



Comment:

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Western/ before	DA12Oct06	Definition	Jens 27. Nov. 2006	

SNPWG 6	<u>Jens 27. Nov. 2006</u>	<u>I am confused. String, boolean, association???? Ägypten?, Bahnhof?, Rembrandt?, 1880? It will be necessary to bring the information „in line“</u>		
	<u>11 Dec 06</u>	<u>Agreed. If needed at all, should be split into 4 or more different attributes: one each for air, rail, road, inland waterway – but then what?</u>		
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **Volume of traffic**

Acronym: **traffc**

Code:

Attribute type: A

Definition:

The annual volume of traffic, expressed as number of vessels, deadweight tonnage and passengers handled by a port, separated by a comma.

Deleted: □
 Deleted: □
 Deleted: The sequence of times occupied by intervals of light and eclipse for all □light characteristics□ except for occulting where the sequence of times is occupied by intervals of eclipse and light.¶

Indication:

- number of vessels: the annual number of ship visits to a port. If one vessel visits twelve times the expected input is 12.
- deadweight tonnage: the total annual deadweight tonnage of cargo handled by the port.
- number of passengers: the total number of passengers handled by the port.

Format:

XXXXXX,XXXXXXXX,XXXXXX

Example:

002134,11785000,008800

The above example encodes 2134 ship visits, 11785000 deadweight tons and 8800 passengers.

Deleted: ,
 Deleted: ,
 Deleted: ,

Remarks:

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Western/ before SNPWG 6			DA12Oct06	
	Jens 28. Nov. 2006	Are you sure that we should not extend to billion deadweight tons?		
	11 Dec 06	That is why I prefer words not numbers. Commas deleted to prevent ambiguity.		
	Jens 29.01. 07	David, Golden words! Your argument is brilliant.		
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **Working hours of day**

Acronym: **wkhrdy**

Code: ?

Attribute type: A

Definition:

The working hours of the day for the port or service.

Indication:

Encoded using the ISO 8601:1988 basic format for periods of time identified by start and end. That is, the first four characters indicate the start time of the working day. The second group of four characters, after the divider (/), indicate the end time of the working day. This is assumed to be in local time; if it is in UTC, a Z is added.

Deleted: The first four characters indicate the start time of the working day. The second four characters indicate the end time of the working day. The last character indicates if the time is shown in UTM (U) or local time L.

Format:

Local time: hhmm/hhmm
UTC times: hhmm/hhmmZ

Deleted: HHMMHHMML . (Hours and minutes, mandatory); UTM or Local time (mandatory)

Remarks:

Distinction: ▼

Deleted: srvtim

Deleted: Comment: the distinction works only if we keep the attribute **srvtim** alive. (see object **Port area**)¶

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
DA 16.08.2006	<u>Jens</u> <u>28. Nov.</u> <u>2006</u>	<u>the comment written in italics is wrong because the attribute srvtim does not exist in all three lists</u>		
	<u>DA</u> <u>11 Dec 06</u>	<u>Agreed. Also spotted by us. Deleted distinction and comment.</u>	<u>DA 11 Dec</u> <u>06</u>	
	<u>PP 18Jan</u> <u>07</u>	<u>Indication and Format standardised</u>		
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

Deleted: ¶

FEATURE OBJECT ATTRIBUTES

Attribute: **Working days of week**

Acronym: **wkdywk**

Code: ?

Attribute type: L

Expected input:

ID	Meaning	INT 1	M-4
1	: monday		
2	: tuesday		
3	: wednesday		
4	: thursday		
5	: friday		
6	: saturday		
7	: sunday		
8	:		
9	:		
10	:		

Definitions:

This defines the working days of the week for the port or service.

Remarks:

Distinction: ▼

- Deleted: srvtim
- Deleted: .
- Deleted: *the distinction works only if we keep the attribute **srvtim** alive. (see object Port area)*

Comment: ▼

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Western/ before SNPWG 6	Jens 09.Aug.	added distinction		
	Jens 28. Nov. 2006	the comment written in italics is wrong because the attribute srvtim does not exist in all three lists		
	DA 11 Dec 06	Agreed. Deleted distinction and comment.	DA 11 Dec 06	

Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: Category of land region

Acronym: **CATLND**

Code: **34**

Attribute type: L

Expected input:

ID	Meaning	INT 1	M-4
1	: fen		
2	: marsh	IC 33;	312.2;
3	: moor/bog		
4	: heathland		
5	: mountain range		
6	: lowlands		
7	: canyon lands		
8	: paddy field		
9	: agricultural land		
10	: savanna/grassland		
11	: parkland		
12	: swamp	IC 33;	312.2;
13	: landslide		
14	: lava flow	IC 26;	355;
15	: salt pan	IC 24;	353.7;
16	: moraine		
17	: crater		
18	: cave		
19	: rock column or pinnacle		
20	: cay		
21	: <u>mountain</u>		
22	: <u>waterfall</u>		
23	: <u>island</u>		
24	: <u>islet</u>		

Definitions:

- fen: a type of bog, especially a low-lying area, wholly or partly covered with water and dominated by grasslike plants, grasses, sedges and reeds. (The New Encyclopaedia Britannica, 15th Edition 1991)
- marsh: an area of wet, often spongy ground that is subject to frequent flooding or tidal inundations, but not considered to be continually under water. It is characterized by the growth of non woody plants and by the lack of trees. (Nautical Chart Manual, US National Oceanic and Atmospheric Administration - NOAA, 1992).
- moor/bog: wet spongy ground consisting of decaying vegetation, which retains stagnant water, too soft to bear the weight of any heavy body.(IHO Dictionary, S-32, 5th Edition, 504)
- heathland: a tract of wasteland; peat bog, usually covered by a low scrubby growth, but may have scattered small open water holes. (Nautical Chart Manual, US National Oceanic and Atmospheric Administration - NOAA, 1992)

mountain range:	a series of connected and aligned mountains or mountain ridges. (US National Oceanic and Atmospheric Administration - NOAA, 1992).
lowlands:	low and relatively level land at a lower elevation than adjoining areas. (US National Oceanic and Atmospheric Administration - NOAA, 1992)
canyon lands:	a relatively narrow, deep depression with steep sides, the bottom of which generally has a continuous slope. (IHO Dictionary, S-32, 5th Edition, 638)
paddy field:	a piece of land set aside for crops which are periodically flooded (e.g. rice paddy).
agricultural land:	areas used for cultivation of the soil, the breeding of livestock etc. and general farming.
savanna/grassland:	a large area of relatively flat natural pasture.
parkland:	a piece of ground kept for ornament and/or recreation or maintained in its natural state as a public property or area. (Websters New Collegiate Dictionary 1975)
swamp:	an area of spongy land saturated with water. It may have a shallow covering of water, usually with a considerable amount of vegetation appearing above the surface. (IHO Dictionary, S-32, 5th Edition, 5240)
landslide:	(or landslip). The sliding down of a mass of land on a mountain or cliff-side; land which has so fallen. (IHO Dictionary, S-32, 5th Edition, 2646)
lava flow:	the substance that results from the cooling of molten rock. (adapted IHO Dictionary, S-32, 5th Edition, 2680)
saltpan:	shallow pools of brackish water used for the natural evaporation of sea water to obtain salt. (IHO Dictionary, S-32, 5th Edition, 4494)
moraine:	any accumulation of loose material deposited by a glacier. (Marine Chart Manual, US National Oceanic and Atmospheric Administration - NOAA, 1992)
crater:	bowl-shaped cavity, at the summit or on the side of a volcano.(IHO Dictionary, S-32, 5th Edition, 1115) Also a hole formed by the impact of a meteor. (Nautical Chart Manual, US National Oceanic and Atmospheric Administration - NOAA, 1992).
cave:	a natural subterranean chamber or series of chambers open to the earths surface. (Digital Geographic Information Standard - DIGEST)
rock column or pinnacle:	any high tower or spire-shaped pillar of rock, alone or cresting a summit. (IHO Dictionary, S-32, 5th Edition, 3852)
cay:	a small insular feature usually with scant vegetation; usually of sand or coral. Often applied to smaller coral shoals. (UKHO – The Mariners Handbook).
<u>mountain:</u>	<u>a large natural elevation of the earth's surface rising abruptly from the surrounding level. (Oxford Dictionary of English). [see also IHO dictionary definition]</u>
<u>waterfall:</u>	<u>a cascade of water falling from a height, formed when a river or stream flows over a precipice or steep incline (Oxford Dictionary of English).</u>
<u>island:</u>	<u>a piece of land surrounded by water.</u>
<u>islet:</u>	<u>a small island. (Oxford Dictionary of English).</u>

Remarks:

The attribute `category of land region` encodes general terms for describing landscapes.

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Western/ before SNPWG 6				
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

Attribute: **Category of service area**

Acronym: **catsvc**

Code: ??

Attribute type: L

Expected input:

- | ID | Meaning |
|----|-------------------------------|
| 1 | : LORAN |
| 2 | : DGPS |
| 3 | : coast radar station |
| 4 | : coast radio station |
| 5 | : RACON |
| 6 | : AIS as an aid to navigation |
| 7 | : |
| 8 | : |
| 9 | : |
| 10 | : |
| 11 | : |

Definitions:

- | | |
|-----------------------------|------------------------------|
| loran: | LORAN |
| dgps: | DGPS |
| coast radar station | coast radar station |
| coast radio station: | coast radio station |
| RACON | Radar beacon |
| AIS as an aid to navigation | AIS as an aid to navigations |

Remarks:

1. The attribute **catsvc** encodes the category of service that is available in the **svcare**.

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Western/ before SNPWG 6			<u>Jens</u> <u>28. Nov.</u> <u>2006</u>	

Deleted: ¶
¶
¶

Deleted: <#>We need to find a way to link this to the Reference Number, ID number or MMSI number which identifies the service.¶

	Jens 28. Nov. 2006	I see to link RefNumber, ID number etc. some of the attribute IDs arecovered by other object/attribute constructions; see also my comments on object file		
	UK 17 Jan 07	Agree. Remarks 2 deleted.		
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

Attribute: **International number of a light**

Acronym: **litnum**

Code: ?

Attribute type: S

Definition:

The International number of a light.

References:

INT 1: not specified;

M-4: not specified;

Remarks:

No remarks.

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Western/ before SNPWG 6				
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

Attribute: **Light elevation**

Acronym: **ltelev**

Code: ??

Attribute type: F

Definition:

The vertical distance between the focal plane of the light and Mean High Water Springs or Mean Higher High Water, whichever is given in Tide Tables. However, charted elevations of lights are sometimes referred to Mean Sea Level but the height datum is always clearly annotated on charts.

[Adapted from Admiralty List of Lights and Fog Signals](#)

Minimum Value: 0

References:

INT 1: IC 10-13; IH 20;
M-4: 352.1-2; 302.2; 405;

Indication:

Unit: defined in the HUNI subfield of the DSPM record or in the HUNITS attribute of the M_UNIT meta object class, e.g. metre (m)
Resolution: 0.1 m or 0.1 ft

Format:

xxx.x

Example:

47 for an elevation of 47 metres

Remarks:

This attribute is required because **HEIGHT** is the "highest point of the object, measured from a specified vertical datum," and **ELEVATION** is "the altitude of the ground level of an object measured from a specified vertical datum".

Deleted: [Probably not used for floating lights.]¶

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Western/ before SNPWG 6			<u>Jens</u> <u>28. Nov.</u> <u>2006</u>	

	<u>Jens</u> <u>28. Nov.</u> <u>2006</u>	<u>„HEIGHT“ in object</u> <u>„LIGHTS“</u> I wonder how they could produce ENC because the chart presents only the elevation of focal plane above datum; light and in the seldom circumstances the elevation of the building. Seems that the combination <u>„LIGHTS/HEIGHT“ works.</u>		
		<u>This is a limitation of the charting view of the world. NPs take more care and give more detail.</u>		
Submitted to Hydro register manager			Date	
Submitted to Nav register manager			Date	

Comment [N210410]: Seite: 106 S57 App. B.1 Page A.13 gives no sufficient answer, pages A 69, A 70 neither

Comment [N210411]: Seite: 106 INT 1 P16 Examples

Comment [N210412]: Seite: 106 S57 App. B.1 Page A.73, because the vertical extension of a light is limited

Deleted: ¶

Attribute: **Nature of construction**

Acronym: **NATCON**

Code: **112**

Attribute type: L

Expected input:

ID	Meaning	INT 1	M-4
1	: masonry	IF 4.3;	322.1;
2	: concreted	IF 4.3;	322.1;
3	: loose boulders	IF 4.2;	322.1;
4	: hard surfaced	ID 11;	365.2;
5	: unsurfaced	ID 12;	365.3;
6	: wooden		
7	: metal		
8	: glass reinforced plastic (GRP)		
9	: painted	IQ 101;	456.2;
10	: <u>framework</u>		

Definitions:

masonry:	constructed of brick or stone.
concreted:	constructed of concrete, a material made of sand and gravel that is united by cement into a hardened mass used for roads, foundations, etc. (adapted from the Illustrated Contemporary Dictionary, Encyclopaedic Edition, 1978)
loose boulders:	constructed from large stones or blocks of concrete, often placed loosely for protection against waves or water turbulence.
hard surface:	constructed with a surface of hard material, usually a term applied to roads surfaced with asphalt or concrete.
unsurfaced:	constructed with no extra protection, usually a term applied to roads not surfaced with a hard material.
wooden:	constructed from wood.
metal:	constructed from metal.
glass reinforced plastic (GRP):	constructed from a plastic material strengthened with fibres of glass.
painted:	the application of paint to some other construction or natural feature.
<u>framework:</u>	<u>constructed from a lattice framework of, often diagonal, intersecting struts.</u>

Remarks:

No remarks.

Drafted by/	Amended by/	Amendment details	Checked by/	Agreed by/ Date
-------------	-------------	-------------------	-------------	-----------------

Date	Date		Date	
Western/ before SNPWG 6				
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES – ENVRNMT

Attribute: **RACON reference**

Acronym: rtpref

Code: ?

Deleted: racnum

Attribute type: S

Definition:

The reference number or name of a RACON.

Deleted: number

References:

Deleted:

INT 1: not specified;

Deleted: the

M-4: not specified;

Remarks:

No remarks.

Comment:

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Western/ before SNPWG 6	DA 16Oct06	Title; acronym; definition		
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES – ENVRNMT

Attribute: **weather impedes entry**

Acronym: **weimen**

Code: ?

Attribute type: S

Definition:

A description of weather which might impede entry to a port.

References:

INT 1: not specified;

M-4: not specified;

Remarks:

Distinction: .

Comment:

Deleted: ¶
 Expected input:¶
 ¶
 ID : Meaning : INT 1 : M-4¶
 ¶
 1 : weather which impedes entry
 or berthing ... ¶
 2 : ... ¶
 3 : ... ¶
 4 : ... ¶
 5 : ... ¶
 6 : ... ¶
 7 : ... ¶
 8 : ... ¶
 9 : ... ¶
 10 : ... ¶
 ¶
 Definitions:¶

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Western/ before SNPWG 6			Jens 28. Nov. 2006	
	Jens 28. Nov. 2006	It there a way to combine with the attribute below? Both are dealing with guidances in fact of present weather situation		
	Da 11 Dec 06	They began together but we split them to simplify the structure. guidance might work. In case not, format corrected		
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

... [2]

Attribute: **weather risk remaining**

Acronym: **wearsk**

Code: ?

Attribute type: S

Definition:

A description of weather which could effect a vessel remaining safely moored or anchored.

References:

INT 1: not specified;

M-4: not specified;

Remarks:

Distinction: .

Comment:

Deleted: Expected input:

ID . Meaning . INT 1 . M-4

1 . weather which could effect a vessel remaining safely moored or anchored

2 . . .

3 . . .

4 . . .

5 . . .

6 . . .

7 . . .

8 . . .

9 . . .

10 . . .

Definitions:

. . .

. . .

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
Western/ before SNPWG 6			Jens 28. Nov. 2006	
	Jens 28. Nov. 2006	It there a way to combine with the attribute above?		
	Da 11 Dec 06	I think guidance might be a better way forward. In case not, format corrected		
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

Americas Page

FEATURE OBJECT ATTRIBUTES

Attribute: **Holding quality**

Acronym: **holqua**

Code: ?

Attribute type: L

Expected input:

ID	Meaning	INT 1	M-4
1	: good	Not Specified	Not Specified
2	: moderate	Not Specified	Not Specified
3	: poor_or_bad	Not Specified	Not Specified

Definitions:

[good:](#) [holding ground which grips the anchor and chain cable well.](#)
[moderate:](#) [holding ground which grips the anchor and chain cable moderately.](#)
[bad:](#) [holding ground which grips the anchor and chain cable badly.](#)

Remarks:

No remarks.

Deleted: Good:¶
 ¶
 Moderate:¶
 ¶
 Poor:¶

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
America/ before SNPWG 6	DA 16Oct06	Definition	Jens 28. Nov. 2006	
	Jens 28. Nov. 2006	Does the proposed definition destroy all other IDs?		
	DA 11 Jan 07	Compared with Americas version.		
	DA 12 Jan 07	Re Jens 28 Nov – Definitions redrafted		
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **Grade of sloping ground**

Acronym: **grdslo**

Code: ?

Deleted: 55

Attribute type: L

Expected input:

ID	Meaning	INT 1	M-4
1	steep	Not Specified	Not Specified
2	gentle	Not Specified	Not Specified

Deleted: i

Definitions:

steep: slope greater than 45°.
gentle: slope less than 45°.

Deleted: 1. . greater than 45°
 2. less than 45°

Remarks:

No remarks.

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
America/ before SNPWG 6	DA 12Jan07	Compared with Americas; Definition		
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **Project depth**

Acronym: **prjdep**

Code: ?

Attribute type: F

Definition:

Federal Project Depth: The design dredging depth of a channel constructed by the U.S. Army Corps of Engineers; the project depth may or may not be the goal of maintenance dredging after completion of the channel. For this reason federal project depth must not be confused with controlling depth.

References:

INT 1: not specified;

M-4: not specified;

Indication:

Unit: [defined in the DUNI subfield of the DSPM record or in the DUNITs attribute of the M_UNIT meta object class, e.g. metre \(m\)](#)

Resolution: [0.1 m or 0.1 fm or 0.1 ft](#)

Format:

[xxxxx.x](#)

Example:

[00050.5](#) for a project depth of 50.5 ft, **fm** or **m**.

Remarks:

No remarks.

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
America/ before SNPWG 6	DA 16Oct06	Added Indication, Format and Example	Jens 27. Nov. 2006	
	Jens27Nov06	extended example		
	DA 11Jan 07	Compared with Americas version. No change. Example made to fit format		
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **Period between dredging**

Acronym: **prddrg**

Code: ?

Attribute type: F

Definition:

Number of days between the proposed dredging schedule.

References:

INT 1: not specified;

M-4: not specified;

Remarks:

No remarks.

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
America/ before SNPWG 6	DA 12Jan07	Formatting.		
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: Siltat

Acronym: **siltat**

Code: ?

Attribute type: I

Expected input:

ID	Meaning	INT 1	M-4
1	: quick		
2	: moderate		
3	: slow		

Definitions:

- | 1 [Discuss in SNPWG7](#)
- 2
- 3

Remarks:

No remarks.

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
America/ before SNPWG 6	Da12Jan07	Compared with Americas version. Added comment in Definiton 1		
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **Category of slope**

Acronym: **CATSLO**

Attribute Type: E

Deleted: Code: 64 Category of slope
CATSLO 64 ¶
¶

Expected input:

1	: cutting	ID 14;	363.2;
2	: embankment	ID 15;	364.1;
3	: dune	IC 8;	312.3;
4	: hill		
5	: pingo		
6	: cliff	IC 3;	312.1;
7	: scree		
8	: cuesta		
9	: dale		
10	: dell		
11	: escarpment		
12	: glen		
13	: gully		
14	: hill		
15	: knoll		
16	: mountain		
17	: ridge		
18	: scarp		
19	: terrace		
20	: vale		
21	: valley		
22	: watershed		

Definitions:

<u>cutting:</u>	<u>an excavation through high ground for a road, canal, etc.</u>
<u>embankment:</u>	<u>an artificial elevation constructed from earth, stone, etc. carrying a road, railway or similar or serving to dam water.</u>
<u>dune:</u>	<u>a mound, ridge or hill of drifted material on the sea coast or in a desert. (adapted from IHO Dictionary, S-32, 5th Edition, 1496)</u>
<u>hill:</u>	<u>a small isolated elevation, smaller than a mountain. (IHO Dictionary, S-32, 5th Edition, 2262)</u>
<u>pingo:</u>	<u>a dome-shaped hill formed in a permafrost area when the hydrostatic pressure of freezing ground water causes the upheaval of a layer of frozen ground. (Encyclopaedia Britannica Mycroopaedia, 15th Edition)</u>
<u>cliff:</u>	<u>land rising abruptly for a considerable distance above the water or surrounding land. (IHO Dictionary, S-32, 5th Edition, 829)</u>
<u>scree:</u>	<u>rocky debris on the side or at the foot of a mountain forming a steep stony slope.</u>

cuesta: a ridge with a gentle slope on one side and a cliff on the other.

dale: an open river valley (in a hilly area)

dell: a small secluded wooded valley.

escarpment: a steep slope or long cliff that results from erosion or faulting and separates two relatively level areas of differing elevations. A steep slope in front of a fortification.

glen: a small, secluded valley.

gully: a deep ditch or channel cut in the earth by running water.

hill: a well-defined natural elevation smaller than a mountain.

knoll: a small rounded hill or mound; a hillock.

mountain: A natural elevation of the earth's surface having considerable mass, generally steep sides, and a height greater than that of a hill.

ridge: A long narrow chain of hills or mountains.

scarp: a long steep slope or cliff at the edge of a plateau or ridge; usually formed by erosion.

terrace: A raised bank of earth having vertical or sloping sides and a flat top

valley: An elongated lowland between ranges of mountains, hills, or other uplands, often having a river or stream running along the bottom.

watershed: A ridge of high land dividing two areas that are drained by different river systems.

Deleted: ¶
 <#>cutting¶
 <#>embankment¶
 <#>dune: ¶
 <#>hill¶
 <#>pingo: ¶
 <#>cliff: ¶
 <#>scree: ¶
 <#>cuesta¶
 <#>dale¶
 <#>dell¶
 <#>escarpment¶
 <#>glen¶
 <#>gully¶
 <#>hill¶
 <#>knoll¶
 <#>mountain¶
 <#>ridge¶
 <#>scarp ¶
 <#>terrace¶
 <#>vale¶
 <#>valley¶
 <#>watershed¶
 ¶
 Definitions:¶
 <#>cutting: an excavation through high ground for a road, canal, etc. ¶
 <#>embankment: an artificial elevation constructed from earth, stone, etc. carrying a road, railway or similar or serving to dam water. ¶
 <#>dune: a mound, ridge or hill of drifted material on the sea coast or in a desert. (adapted from IHO Dictionary, S-32, 5th Edition, 1496) ¶
 <#>hill: a small isolated elevation, smaller than a mountain. (IHO Dictionary, S-32, 5th Edition, 2262) ¶
 <#>pingo: a dome-shaped hill formed in a permafrost area when the hydrostatic pressure of freezing ground water causes the upheaval of a layer of frozen ground. (Encyclopaedia Britannica Mycropaedia, 15th Edition) ¶
 <#>cliff: land rising abruptly for a considerable distance above the water or surrounding land. (IHO Dictionary, S-32, 5th Edition, 829) ¶
 <#>scree: rocky debris on the side or at the foot of a mountain forming a steep stony slope.¶
 <#>cuesta: A ridge with a gentle slope on one side and a cliff on the other.¶
 <#>dale: an open river valley (in a hilly area)¶
 <#>dell: A small secluded wooded valley.¶
 <#>escarpment: A steep slope or long cliff that results from erosion or faulting and separates two relatively level areas of differing elevations. A steep slope in front of a fortification. ¶
 <#>glen: A small, secluded valley.¶
 <#>gully: A deep ditch or channel cut in the earth by running water.¶
 <#>hill: A well-defined natural elevation smaller than a mountain.¶
 <#>knoll: A small rounded hill or mound; a hillock.¶
 <#>mountain: A natural elevation... [3]

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
America/ before SNPWG 6	DA11Jan07	Formatting. Double underline for items 8 - 21		
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: **Category of vegetation**

Acronym: **CATVEG**

Code: ?

Deleted: catveg

Attribute type: L

Expected input:

ID	Meaning	INT 1	M-4
1	: grass		
2	: paddy field		
3	: bush		
4	: deciduous wood		
5	: coniferous wood		
6	: wood in general (inc mixed wood)	IC 30;	354.1;
7	: mangroves	IC 32;	312.4;
8	: park		
9	: parkland		
10	: mixed crops		
11	: reed		
12	: moss		
13	: tree in general	IC 31;	354.2;
14	: evergreen tree	IC 31.2;	354.2;
15	: coniferous tree	IC 31.3;	354.2;
16	: palm tree	IC 31.4;	354.2;
17	: nipa palm tree	IC 31.5;	354.2;
18	: casuarina tree	IC 31.6;	354.2;
19	: eucalypt tree	IC 31.8;	354.2;
20	: deciduous tree	IC 31.1;	354.2;
21	: mangrove tree	IC 32;	312.4;
22	: filao tree	IC 31.7;	354.2;
23	: tundra		
24	: taiga/boreal		
25	: grassland		
26	: deciduous forest		
27	: chaparral		
28	: desert		
29	: desert-scrub		
30	: rainforest		
31	: alpine		

```

Deleted: ¶
<#>grass: ¶
<#>bush: ¶
<#>deciduous wood: ¶
<#>coniferous wood: ¶
<#>wood in general (including mixed
wood): ¶
<#>mangroves: ¶
<#>mixed crops: ¶
<#>reed: ¶
<#>moss: ¶
<#>tree in general: ¶
<#>evergreen tree: ¶
<#>coniferous tree: ¶
<#>palm tree: ¶
<#>nipa palm tree: ¶
<#>casuarina tree: ¶
<#>eucalypt tree: ¶
<#>deciduous tree: ¶
<#>mangrove tree: ¶
<#>filao tree: ¶
<#>tundra: ¶
<#>taiga/boreal: ¶
<#>grassland: ¶
<#>deciduous forest: ¶
<#>chaparral: ¶
<#>desert: ¶
<#>desert-scrub: ¶
<#>savanna: ¶
<#>rainforest: ¶
<#>alpine: ¶
    
```

Definitions:

grass: [vegetation belonging to a group of plants with green blades that are eaten by cattle, sheep, etc. \(The Concise Oxford Dictionary\)](#)

bush: [a shrub or clump of shrubs with stems of moderate length. \(The Concise Oxford Dictionary\)](#)

deciduous wood: [a wood with trees that shed their leaves annually. \(Bundesamt für Seeschifffahrt und Hydrographie, Germany\)](#)

coniferous wood: a wood with evergreen trees of a group usually bearing cones, including yews, cedars and redwoods. (Bundesamt für Seeschifffahrt und Hydrographie, Germany).

wood in general (including mixed wood): growing trees densely occupying a tract of land. (The Concise Oxford Dictionary)

mangroves: one of several genera of tropical trees or shrubs which produce many prop roots and grow along low lying coasts into shallow water. (IHO Dictionary, S-32, 5th Edition, 3064)

mixed crops: a mixture of arable crops.

reed: any of various water or marsh plants with a firm stem. (The Concise Oxford Dictionary)

moss: any small cryptogamous plant of the class Musci, growing in dense clusters on the surface of the ground in bogs, on trees, stones, etc. (The Concise Oxford Dictionary)

tree in general: a woody perennial plant, having a self supporting main stem or trunk.

evergreen tree: a tree which keeps its foliage all year round.

coniferous tree: a cone-bearing, needle-leaved or scale-leaved evergreen tree. (adapted from The New Encyclopaedia Britannica, 15th Edition 1991)

palm tree: a tropical or sub-tropical tree, shrub or vine having a tall, unbranched, columnar trunk. The trunk is crowned by a tuft or large, pleated fan or feather shaped leaves with stout sheathing and often prickly petioles (stalks), the persistent bases of which frequently clothe the trunk. (adapted from The New Encyclopaedia Britannica, 15th Edition 1991)

nipa palm tree: (also called Nypa palm) a rare palm tree with regular branching involving equal or sub-equal division of the apex that results in forking. (adapted from The New Encyclopaedia Britannica, 15th Edition 1991)

casuarina tree: (also called beefwood, Australian pine, ironwood, she-oak, swamp oak, whistling pine) a tree characterized by slender, green, often drooping branches that are deeply grooved and that bear, at intervals, whorls of fine leaves. (adapted from The New Encyclopaedia Britannica, 15th Edition 1991)

eucalypt tree: an instance of a large genus of mostly very large trees (90 metres). (adapted from The New Encyclopaedia Britannica, 15th Edition 1991)

deciduous tree: a tree which sheds its foliage for part of the year (generally in winter).

mangrove tree: one of several genera of tropical trees or shrubs which produce many prop roots and grow along low lying coasts in to shallow waters. (IHO Dictionary, S-32, 5th Edition, 3064)

filao tree: a variety of tropical or sub-tropical tree.

tundra: a treeless area between the icecap and the tree line of Arctic regions, having a permanently frozen subsoil and supporting low-growing vegetation such as lichens, mosses, and stunted shrubs.

taiga/boreal: a subarctic, evergreen coniferous forest of northern Eurasia located just south of the tundra and dominated by firs and spruces.

grassland: an area, such as a prairie or meadow, of grass or grasslike vegetation.

deciduous forest: a type of forest characterized by trees that seasonally shed their leaves

chaparral: a biome characterized by hot dry summers and cool moist winters and dominated by a dense growth of mostly small-leaved evergreen shrubs, as that found in the foothills of California

desert: a dry, often sandy region of little rainfall, extreme temperatures, and sparse vegetation

desert-scrub: shrubs are the dominant growth. They may be evergreen or deciduous; typically have small leaves; and frequently have spines or thorns and/or aromatic oils

savanna: a flat grassland of tropical or subtropical regions.

rainforest: a dense evergreen forest occupying a tropical region with an annual rainfall of at least 2.5 meters (100 inches).

alpine: the alpine biome is a tough place for plants to live. Most plants are small groundcover plants, which grow and reproduce slowly.

Deleted: <#>**grass:** vegetation belonging to a group of plants with green blades that are eaten by cattle, sheep, etc. (The Concise Oxford Dictionary) ¶

<#>**bush:** a shrub or clump of shrubs with stems of moderate length. (The Concise Oxford Dictionary) ¶

<#>**deciduous wood:** a wood with trees that shed their leaves annually. (Bundesamt für Seeschifffahrt und Hydrographie, Germany) ¶

<#>**coniferous wood:** a wood with evergreen trees of a group usually bearing cones, including yews, cedars and redwoods. (Bundesamt für Seeschifffahrt und Hydrographie, Germany) ¶

<#>**wood in general (including mixed wood):** growing trees densely occupying a tract of land. (The Concise Oxford Dictionary) ¶

<#>**mangroves:** one of several genera of tropical trees or shrubs which produce many prop roots and grow along low lying coasts into shallow water. (IHO Dictionary, S-32, 5th Edition, 3064) ¶

<#>**mixed crops:** a mixture of arable crops. ¶

<#>**reed:** any of various water or marsh plants with a firm stem. (The Concise Oxford Dictionary) ¶

<#>**moss:** any small cryptogamous plant of the class Musci, growing in dense clusters on the surface of the ground in bogs, on trees, stones, etc. (The Concise Oxford Dictionary) ¶

<#>**tree in general:** a woody perennial plant, having a self supporting main stem or trunk. ¶

<#>**evergreen tree:** a tree which keeps its foliage all year round. ¶

<#>**coniferous tree:** a cone-bearing, needle-leaved or scale-leaved evergreen tree. (adapted from The New Encyclopaedia Britannica, 15th Edition 1991) ¶

<#>**palm tree:** a tropical or subtropical tree, shrub or vine having a tall, unbranched, columnar trunk. The trunk is crowned by a tuft or large, pleated fan or feather shaped leaves with stout sheathing and often prickly petioles (stalks), the persistent bases of which frequently clothe the trunk. (adapted from The New Encyclopaedia Britannica, 15th Edition 1991) ¶

<#>**nipa palm tree:** (also called Nypa palm) a rare palm tree with regular branching involving equal or sub-equal division of the apex that results in forking. (adapted from The New Encyclopaedia Britannica, 15th Edition 1991) ¶

<#>**casuarina tree:** (also called beefwood, Australian pine, ironwood, she-oak, swamp oak, whistling pine) a tree characterized by slender, green, often drooping branches that ar (... [4])

Remarks:

No remarks.

Drafted by/ Date	Amended by/ Date	Amendment details	Checked by/ Date	Agreed by/ Date
America/ before SNPWG 6	DA12Jan07	Reformatted. This builds on the current CATVEG. The current enumerators must remain. New items added below 22 (filao tree). See also CATLND which already has savanna; removed from here. I think "grassland" and "mangrove tree" are repeats of 1 and 6. Do we really need deciduous tree, wood and forest? Could we just live with "deciduous"?		
Submitted to Hydro register manager				Date
Submitted to Nav register manager				Date

FEATURE OBJECT ATTRIBUTES

Attribute: [Category of Mountain and Glacial Landforms](#)

Acronym: [catmgf](#)

Code: ?

Attribute type: E

Expected input:

ID	Meaning	INT 1	M-4
1	: arête		
2	: cirque		
3	: crevasse		
4	: dirt cone		
5	: drumlin		
6	: esker		
7	: glacial valley		
8	: glacial horn		
9	: glacier		
10	: hanging valley		
11	: kame		
12	: kame delta		
13	: kettle		
14	: moraine		
15	: mountain		
16	: outwash		
17	: outwash plain		
18	: pingo		
19	: valley		
20	:		
21	:		
22	:		
23	:		
24	:		

Definitions:

[arête](#): [sharp topographic ridge that separates cirques on a mountain that is or has been glaciated.](#)

[cirque](#): [a deep steep-walled basin on a mountain usually forming the blunt end of a valley.](#)

[crevasse](#): [a crack or fissure in a glacier or snow field.](#)

[dirt cone](#): [a cone-shaped formation of ice that is covered by dirt.](#)

[drumlin](#): [an elongated whale-shaped hill formed by glacial action.](#)

- esker: long, winding ridges of stratified sand and gravel.
- glacial valley: a U-shaped valley is one formed by the process of glaciation. They have a characteristic U-shape, with steep, straight sides, and a flat bottom.
- glacial horn: pyramidal peak that forms when several cirques erode a mountain from three or more sides.
- glacier: a large long lasting accumulation of snow and ice that develops on land. Most glaciers flow along topographic gradients because of their weight and gravity.
- hanging valley: a secondary valley that enters a main valley at an elevation well above the main valley's floor. These features are result of past erosion caused by alpine glaciers. Hanging valleys are often the site of spectacular waterfalls.
- kame: a steep conical hill composed of glaciofluvial materials. This feature forms when glacial crevasses are filled with deposits from sediment filled meltwater.
- kame delta: a long flat ridge composed of glaciofluvial sediment. This feature forms along the margin of a valley glacier where the glacial ice meets the valley's slope. Sediment is deposited by laterally flowing meltwater streams.
- kettle: depression found in glacial deposits. Created when a piece of ice from a retreating glacier becomes embedded in soft glacial till or glacial drift deposits. Many are filled with water to form a small lake or pond.
- moraine: a hill of glacial till deposited directly by a glacier.
- mountain: a mass of land considerably higher than its surroundings and of greater altitude than a hill.
- outwash: glaciofluvial sediments deposited by meltwater streams at the edge of a glacier.
- outwash plain: a flat or gentle sloping surface of glaciofluvial sediments deposited by meltwater streams at the edge of a glacier. Usually found in close spatial association with moraines.
- pingo: a large conical mound that contains an ice core. This feature can be up to 60 to 70 meters in height. Form in regions of permafrost. Common in the Mackenzie Delta region of Canada.
- valley: a linear depression in the landscape that slopes down to a stream, lake or the ocean. Formed by water and/or ice erosion.

Remarks:

No remarks.

<u>Drafted by/ Date</u>	<u>Amended by/ Date</u>	<u>Amendment details</u>	<u>Checked by/ Date</u>	<u>Agreed by/ Date</u>
America/ before SNPWG 6	DA 11Jan07	Formatting. Renumbered from 8. Pingo also occurs in CATSLO; do we need to repeat?		
Submitted to Hydro register manager				Date

Submitted to Nav register manager	Date
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FEATURE OBJECT ATTRIBUTES

Attribute: **Category of Coastal Landforms**

Acronym: **catcst**

Code: ?

Attribute type: E

Expected input:

ID	Meaning	INT 1	M-4
1	: arch		
2	: barrier island		
3	: beach		
4	: raised beach		
5	: boondock		
6	: cape		
7	: cave		
8	: cliff		
9	: coast		
10	: dune		
11	: estuary		
12	: headland		
13	: ria		
14	: cape salt marsh		
15	: spit		
16	: stack		
17	: tombolo		
18	: wave cut platform		
19	: fjord		
20	:		
21	:		

Definitions:

arch: a rocky landform where erosion has formed a natural passageway underneath.

barrier island: long, narrow islands of sand and/or gravel that are usually aligned parallel to the shore of some coasts.

beach: the terrestrial interface area in between land and a water body where there are accumulations of unconsolidated sediments like sand and gravel. These deposits are laid down by the action of breaking waves.

raised beach: a beach which has been raised by earth movement to form a narrow coastal plain.

boondock: a slight rise in elevation found in vegetated sandy landscapes. Wind action on sand causes erosion on unvegetated terrain and deposition on the vegetated terrain which gradually rise in elevation becoming low mounds perhaps 5 feet above the surrounding country.

cape: a headland, a more or less pointed piece of land jutting out into the sea.

cave: a natural cavity or recess that is roughly positioned horizontally to the surface of the Earth.

cliff: a tall steep rock face.

coast: the line that separates a land surface from an ocean or sea.

dune: terrestrial deposit of sand that resembles a mound or ridge that was formed from aeolian processes.

estuary: somewhat enclosed coastal area at the mouth of a river where nutrient rich fresh water meets with salty ocean water.

headland: a strip of land that juts seaward from the coastline. This feature normally bordered by a cliff.

ria: an extensively carved out coast with conspicuous headlands and deep re-entrants.

salt marsh: coastal wetland ecosystem that is inundated for some period of time by seawater. Plants that exist in this community have special adaptation to survive in the presence of high salinities in their immediate environment.

spit: a long and narrow accumulation of sand and/or gravel that projects into a body of ocean water. These features form as the result of the deposition of sediments by longshore drift.

stack: a rocky inlet or pillar near to a coastline which has been isolated by the erosive action of the waves.

tombolo: a coastal feature that forms when a belt sand and/or gravel is deposited between an island and the mainland. This feature is above sea-level for most of the time.

wave cut platform: a flat or slightly sloping bedrock surface that forms in the tidal zone. Caused by wave erosion.

fjord: a glacial valley or glacial trough found along the coast that is now filled with a mixture of fresh water and seawater.

Remarks:

No remarks.

<u>Drafted by/ Date</u>	<u>Amended by/ Date</u>	<u>Amendment details</u>	<u>Checked by/ Date</u>	<u>Agreed by/ Date</u>
<u>America/ before SNPWG 6</u>	<u>DA 11Jan07</u>	<u>Formatting. – Renumbered from 10</u>		
<u>Submitted to Hydro register manager</u>				<u>Date</u>
<u>Submitted to Nav register manager</u>				<u>Date</u>

FEATURE OBJECT ATTRIBUTES

Attribute: **Category of Volcanic Landforms**

Acronym: **catvol**

Code: ?

Attribute type: E

Expected input:

ID	Meaning	INT 1	M-4
1	: crater		
2	: caldera		
3	: cinder cone		
4	: geyser		
5	: lava dome		
6	: lava flow		
7	: lava plain		
8	: ocean ridge		
9	: oceanic trench		
10	: vent		
11	: butte		
12	:		
13	:		

Definitions:

crater: [circular depression in the ground surface created by volcanic activity or asteroid impact.](#)

caldera: [a large circular depression in a volcano.](#)

cinder cone: [a small volcano, between 100 and 400 meters tall, made up of exploded rock blasted out of a central vent at a high velocity.](#)

geyser: [most geysers are hot springs that episodically erupt fountains of scalding water and steam.](#)

lava dome: [lava domes are rounded, steep-sided mounds built by very viscous magma, usually either dacite or rhyolite. Such magmas are typically too viscous \(resistant to flow\) to move far from the vent before cooling and crystallizing. Adapted from USCG photo glossary](#)

lava flow: [stream of lava flowing from a volcanic vent.](#)

lava plain: [a lava plain, or lava field, is an expanse of land where lava is flowing. Wikipedia.](#)

ocean ridge: [a mid-ocean ridge or mid-oceanic ridge is an underwater mountain range, formed by plate tectonics. Wikipedia.](#)

oceanic trench: [deep depression found at the edge of the ocean floor. Represents area of tectonic plate subduction.](#)

vent: vents are openings in the Earth's crust from which molten rock and volcanic gases escape onto the ground or into the atmosphere. Vents may consist of a single circular-shaped structure, a large elongate fissure and fracture, or a tiny ground crack. USCG photo glossary.

butte: a butte is an isolated hill with steep sides and a small flat top, smaller than mesas and plateaus. Wikipedia

Remarks:

No remarks.

<u>Drafted by/ Date</u>	<u>Amended by/ Date</u>	<u>Amendment details</u>	<u>Checked by/ Date</u>	<u>Agreed by/ Date</u>
America/ before SNPWG 6	DA 11Jan07	Formatting: added definitions.		
<u>Submitted to Hydro register manager</u>				<u>Date</u>
<u>Submitted to Nav register manager</u>				<u>Date</u>

FEATURE OBJECT ATTRIBUTES

Attribute: **Category of Fluvial Landforms**

Acronym: **catflu**

Code: ?

Attribute type: E

Expected input:

ID Meaning INT 1 M-4

- 1 : bar
- 2 : basin
- 3 : beach
- 4 : gully
- 5 : levee
- 6 : meander
- 7 : oasis
- 8 : ox-bow lake
- 9 : pool
- 10 : riffle
- 11 : spring
- 12 : stream
- 13 : stream terrace
- 14 : swamp
- 15 : salt marsh
- 16 : valley
- 17 : creek
- 18 : delta
- 19 :
- 20 :
- 21 :
- 22 :

Definitions:

bar: coarse grained deposit of sediment from a stream or ocean currents.

basin: a topographic rock structure whose shape is concave downwards.

beach: the terrestrial interface area in between land and a water body where there are accumulations of unconsolidated sediments like sand and gravel. These deposits are laid down by the action of breaking waves.

gully: a gully is a landform created by running water eroding sharply into a hillside.
[Wikipedia](#)

- levee: the terrestrial interface area in between land and a water body where there are accumulations of unconsolidated sediments like sand and gravel. These deposits are laid down by the action of breaking waves.
- meander: sinuous shaped stream channel. Usually found in streams flowing over a very shallow elevation grade.
- oasis: a fertile spot in a desert or wasteland, made so by the presence of water.
- ox-bow lake: is portion of abandoned stream channel filled with stagnant water and cut off from the rest of the stream. Oxbow lakes are created when meanders are cut off from the rest of the channel because of lateral stream erosion.
- pool: scoured depression found on the bed of streams.
- riffle: bar deposit found on the bed of streams.
- spring: a natural flow of water from the sub-surface to the surface. Usually occurs when the water table intersects the Earth's surface.
- stream: a long narrow channel of water that flows as a function of gravity and elevation across the Earth's surface.
- stream terrace: one of a series of level surfaces on a stream valley flanking and parallel to a stream channel and above the stream level, representing the uneroded remnant of an abandoned flood plain or stream bed.
- swamp: a seasonally flooded bottomland with more woody plants than a marsh and better drainage than a bog.
- salt marsh: coastal wetland ecosystem that is inundated for some period of time by seawater.
- valley: a linear depression in the landscape that slopes down to a stream, lake or the ocean.
- creek: a small stream, often a shallow or intermittent tributary to a river.
- delta: large deposit of alluvial sediment located at the mouth of a stream where it enters a body of standing water.

Remarks:

No remarks.

<u>Drafted by/ Date</u>	<u>Amended by/ Date</u>	<u>Amendment details</u>	<u>Checked by/ Date</u>	<u>Agreed by/ Date</u>
<u>America/ before SNPWG 6</u>	<u>DA 11Jan07</u>	<u>Formatting. Gully definition.</u>		
<u>Submitted to Hydro register manager</u>				<u>Date</u>
<u>Submitted to Nav register manager</u>				<u>Date</u>

Attribute: **Blank**

Acronym: **absdrf**

Code: ?

Attribute type: S

Expected input:

ID	Meaning	INT 1	M-4
1	:		
2	:		
3	:		
4	:		
5	:		
6	:		

Definitions:

skjfaliwuefiwafe:
aöoirqijgawijgääewpg

Indication:

Unit: kjhuhgaurgh
Resolution: 0.3 kjaw

Format:

xxx.xxxx

Example:

laögoijgon

Remarks:

öuefhgbv

Distinction: _____

cutting

embankment

dune:

hill

pingo:

cliff:

scree:

cuesta

dale

dell

escarpment

glen

gully

hill

knoll

mountain

ridge

scarp

terrace

vale

valley

watershed

Definitions:

cutting: an excavation through high ground for a road, canal, etc.

embankment: an artificial elevation constructed from earth, stone, etc. carrying a road, railway or similar or serving to dam water.

dune: a mound, ridge or hill of drifted material on the sea coast or in a desert.
(adapted from IHO Dictionary, S-32, 5th Edition, 1496)

hill: a small isolated elevation, smaller than a mountain. (IHO Dictionary, S-32, 5th Edition, 2262)

pingo: a dome-shaped hill formed in a permafrost area when the hydrostatic pressure of freezing ground water causes the upheaval of a layer of frozen ground.
(Encyclopaedia Britannica Mycroopaedia, 15th Edition)

cliff: land rising abruptly for a considerable distance above the water or surrounding land. (IHO Dictionary, S-32, 5th Edition, 829)

scree: rocky debris on the side or at the foot of a mountain forming a steep stony slope.

cuesta: A ridge with a gentle slope on one side and a cliff on the other.

dale: an open river valley (in a hilly area)

dell: A small secluded wooded valley.

escarpment: A steep slope or long cliff that results from erosion or faulting and separates two relatively level areas of differing elevations. A steep slope in front of a fortification.

glen: A small, secluded valley.

gully: A deep ditch or channel cut in the earth by running water.

hill: A well-defined natural elevation smaller than a mountain.

knoll: A small rounded hill or mound; a hillock.

mountain: A natural elevation of the earth's surface having considerable mass, generally steep sides, and a height greater than that of a hill.

ridge: A long narrow chain of hills or mountains.

scarp: a long steep slope or cliff at the edge of a plateau or ridge; usually formed by erosion.

terrace: A raised bank of earth having vertical or sloping sides and a flat top

valley: An elongated lowland between ranges of mountains, hills, or other uplands, often having a river or stream running along the bottom.

watershed: A ridge of high land dividing two areas that are drained by different river systems.

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grass: vegetation belonging to a group of plants with green blades that are eaten by cattle, sheep, etc. (The Concise Oxford Dictionary)

bush: a shrub or clump of shrubs with stems of moderate length. (The Concise Oxford Dictionary)

deciduous wood: a wood with trees that shed their leaves annually. (Bundesamt für Seeschifffahrt und Hydrographie, Germany)

coniferous wood: a wood with evergreen trees of a group usually bearing cones, including yews, cedars and redwoods. (Bundesamt für Seeschifffahrt und Hydrographie, Germany)

wood in general (including mixed wood): growing trees densely occupying a tract of land. (The Concise Oxford Dictionary)

mangroves: one of several genera of tropical trees or shrubs which produce many prop roots and grow along low lying coasts into shallow water. (IHO Dictionary, S-32, 5th Edition, 3064)

mixed crops: a mixture of arable crops.

reed: any of various water or marsh plants with a firm stem. (The Concise Oxford Dictionary)

moss: any small cryptogamous plant of the class Musci, growing in dense clusters on the surface of the ground in bogs, on trees, stones, etc. (The Concise Oxford Dictionary)

tree in general: a woody perennial plant, having a self supporting main stem or trunk.

evergreen tree: a tree which keeps its foliage all year round.

coniferous tree: a cone-bearing, needle-leaved or scale-leaved evergreen tree. (adapted from The New Encyclopaedia Britannica, 15th Edition 1991)

palm tree: a tropical or sub-tropical tree, shrub or vine having a tall, unbranched, columnar trunk. The trunk is crowned by a tuft or large, pleated fan or feather shaped leaves with stout sheathing and often prickly petioles (stalks), the persistent bases of which frequently clothe the trunk. (adapted from The New Encyclopaedia Britannica, 15th Edition 1991)

nipa palm tree: (also called Nypa palm) a rare palm tree with regular branching involving equal or sub-equal division of the apex that results in forking. (adapted from The New Encyclopaedia Britannica, 15th Edition 1991)

casuarina tree: (also called beefwood, Australian pine, ironwood, she-oak, swamp oak, whistling pine) a tree characterized by slender, green, often drooping branches that are deeply grooved and that bear, at intervals, whorls of fine leaves. (adapted from The New Encyclopaedia Britannica, 15th Edition 1991)

eucalypt tree: an instance of a large genus of mostly very large trees (90 metres). (adapted from The New Encyclopaedia Britannica, 15th Edition 1991)

deciduous tree: a tree which sheds its foliage for part of the year (generally in winter).

mangrove tree: one of several genera of tropical trees or shrubs which produce many prop roots and grow along low lying coasts in to shallow waters. (IHO Dictionary, S-32, 5th Edition, 3064)

filao tree: a variety of tropical or sub-tropical tree.

tundra: A treeless area between the icecap and the tree line of Arctic regions, having a permanently frozen subsoil and supporting low-growing vegetation such as lichens, mosses, and stunted shrubs.

taiga/boreal: A subarctic, evergreen coniferous forest of northern Eurasia located just south of the tundra and dominated by firs and spruces.

grassland: An area, such as a prairie or meadow, of grass or grasslike vegetation.

deciduous forest: a type of forest characterized by trees that seasonally shed their leaves

chaparral: A biome characterized by hot dry summers and cool moist winters and dominated by a dense growth of mostly small-leaved evergreen shrubs, as that found in the foothills of California

desert: A dry, often sandy region of little rainfall, extreme temperatures, and sparse vegetation

desert-scrub: Shrubs are the dominant growth. They may be evergreen or deciduous; typically have small leaves; and frequently have spines or thorns and/or aromatic oils

savanna: A flat grassland of tropical or subtropical regions.

rainforest: A dense evergreen forest occupying a tropical region with an annual rainfall of at least 2.5 meters (100 inches).

alpine: The alpine biome is a tough place for plants to live. Most plants are small groundcover plants, which grow and reproduce slowly.