

Advances in the Development of New S-101 Symbology

KHOA



International Hydrographic Organization

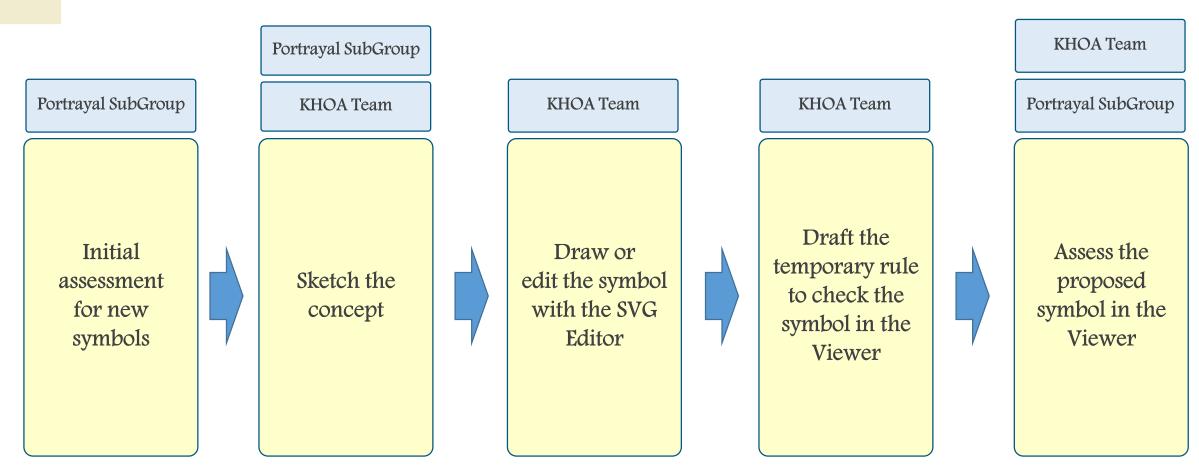
- Development of New S-101 Symbology
 - Subgroup made initial assessment and provided the proposed way forward
 - The number of new symbols was 83 (increased later)
 - KHOA was tasked to draft about 47 symbols but 14 of them could be drafted before the S-101PT meeting.

					Initial assessment by AS and JW		subVG members' comments				
						Impact on Portrayal			er tree waster	ine at the top of with totalin	
					Needs symbology	YES Needs Rule					
		S-101 (term	Remodelled	Comments			Jeff W.	2 oraviA	Proposed way forward	Sylvia S. (DE)	Final Recommendations and Task alloca
2021, BOYSPNS, 2colorsviq (BuoySpecidPurposeGeneal) scategorySpecidPurposeMark contain - New Damper Marking) - added in FC		S-101 Hern Buoy New Durster Markins	CATSPM = 27 (BOYSP9)	Comments This is a work-around in 5-57. Architecture from the 5-57 BCYSSP object should transfer directly to the Buoylives Congress flashing feature. Producing authorities will need to assess converted Booylives/Congressflashing features for possible instances of convenient of BCYSSP with CATSSPM - 27 that are not new danger markly beausy. Will need to be convenient of BCYSSP with CATSSPM - 27 that are not new danger markly beausy.	Asia	Rule has been created (BusylmergencyWeekMeeking) but seless to Smith Basyl's period	Agree the need to be symboolsed, however can this use existing busy symbolosation rules, or does it need a dedicated symbol?	Propose nee symbology for 'simplified symbols'. Symbols could be as per SSELUT for BOYSP but instead of using yellow rifl colour only, use helf yellow and helf blue (HSSLT) sylithed vertically.	KHDA to develop near busy symbol as proposed by Alvaro and present prototype to S101978 in Nov/Osc. 2021.	Agree.	Allocate prototyping to KHOA and NIWC
2021_SEACIRASSavq (WendKelp)	*	Seurgrans	CAWED = 3	Rofer to CATWED entry in the "S-S" tolds. Suggest that new symbology is considered for S-101.	Yes, -1 recommend it displays, using WeedKelp instructions.	Yes - Seegrass rule does not work	W: OK		NIWC to update rule us proposed.	Sq in the area? Or take the symbol for used? For the mariner it is difficult to see the difference. Noted	Allocate prototyping to KHOA and NIWC - Same ins than Weed but replacing the symbol with something of (preferably using single not double, lines for the lea
2021_SISTATU2_01.svq (SignalStationTraffic)	SST	Segnad Station Traffic			Yes - Surface Reconnect use of SISTAT02 centered symbol with no symbolised boundary.	Pule wishs (SignalStationTraffic). Surface is a new quometry type not previously used in 5-57, forest symbology has been requaled from 5-57 object SISTAT.		AS -1s. Surface a resistic sponsetric primitive for this type of Seature?? If you, then the question is vely condition on our to share the same lensity? If you accept further on a wide sponsetre presented in their ownful dispets to boundary using a fairt magnetic (CPACF) disabled less. To differentiate from Signal Station Traffic it may be sorth answering SSTATUS symbol (SSTATUS), to read SST.	To be discussed by saleWG	sarface for a station is not realistic.	Allocate prototyping to KHOA and NIWC - Point sym SISTAT02 symbol but with SST instead of SS. Surface discussion to DCEG WG
2021_SISTATU3_01.xvq (SepradStationWarring)	SSM	Signal Station Warning			Yes - Surface Recommed use of SISTATU2 centered symbol with no symbolised boundary.	Pole wish: (SignalStationWarning): Safator is a men quarrentry hype not previously used in 5-57. Point symbology has been required from 5-57 object SISTAW.		AS -1s. Surface a redular quarrestric primitive for this type of feature? If yes, then the quantion is only conduit the sourt to show the send brishy? If see except Surface is a void quarrentic primitive I their is suited depart as boundary using a fact magnetic (CMMCP) disabled loss. To differentiate from Signed Station Winning, it may be worth creating a new symbol (based on SCATIC) that most SWM.	To be discussed by saleWG	surface for a station is not realistic.	Allocate prototyping to KHOA and NIWC - Point sym SISTAT02 symbol but with SSW instead of SS. Surfac discussion to DCEG WG
2021_VessellrellieServiceAreasorel (VessellrellieServiceArea)		Vinasid Truffic Service Arms		While race in S-101, the feature may be exceeded using ADMAID in S-ST. Producting authorities will need to assess converted AdministrationAna features for possible amendment to Vessel InefficienceArea. Will need to be considered for S-101 portrayal.	Sarlica	Rule has been crusted (Versel Indiffiction/codens) has relies to Rose geometry (I) and excludes the saw of health (Lavy) symbol Then's a suggestion (that i support) to use this stabled magnetic line IRICO is colour. Sell to be confirmed if a control symbol is majured or not, thends formul participal magnetic line.	JW: OK		KHCA to prototype nee ine style as, per masses lent in quescal but with everity spaced (as per Deep Water route) three letter acronym (VFS). Other options, welcomed. Present options, © \$30978 in Nov.Cac. XXII.	Ация.	Allocate prototyping to KHOA
2021_PNe_LINEardSURFACEseril (PNe)	N.	Area of Piles (Category of Pile)		No consisting enumerate in S-57. Needs to be considered for ECDIS potrayal, noting new allowable geometric primitives.	Sartica	Rule has been created (Piles) fast it only deals with Point quometry (as the vais the only allowable quometry in S-S7).	M: OK	Only applicable to Surfaces.	KHOA to prototype new Sarface style using evenly spaced and slightly large (3mm D) PLPNT02 patterns and dashed CHGRD boundary. Other options (including the use of test PLES (as per PSSAREOS)) welcomed. Present	looking forward to saving this	Allocate prototyping to KHOA and NIWC
2011.MARCHOLOGIC /2011.INAMEDILION Discognossificione-Difference (Marko) markol designificações (Cd = 11		CDPM Marks. Hanegadernal - Syshem Off	CALLY = 16	No combine extraction in S.C. Needs to be considered to SCEE extract (S).	Scaline - Funds now servicelus - Season and servicelus - Season	After Nariquition-Alpanon Officials and approximate the second of the se	Mr. OK		SMODA to promoting an user syndrollogy as recommended of other syndrom. SMODA to promoting control, and SMODA to the control of the syndrom and state of the syndrom and syndr	In it an overlap with an "X" or "X" the further planned "Oracle So non- mediative disclosed, and report information is sufficient.	Allocate prototyping to KHCA and NIWC + involve suBMC for discussion on new books an attribute for
2021_Moinefflect.org (LightSectored)	111 deg Aero Oc W 22m25AA	[Directional Character]	CAID! = 16	Refer to CATUT entries in the "S-5" table. For S-5" to S-101 convenion, CATUT = 16 will map to moin/Effect = True.	957	Supposed consister is new symbols in 5-301. Hence is a line classic continuous Morses dellac (MET - 5-33) and other directioned lights for paper clasts. Consider that with exposed quiphind displays a new symbol should be approximated.		AS - Agrees a distinctive race symbol should be investigated.	KHOA to prototype new symbology and present options. @ \$101978 in FloryOsc. XID1.	(DISPER)	Allocate prototyping to KHCIA
	<u>. </u>	Production Plant (Category of Production Area)		No correlating enumerate in S-57. Needs to be considered for ECDIS potrayal (use existing symbol?).	MS - Point symbology only	For some syndrology use current default PICARE rule. Point syndrology default rule currently displays quiery syndrol . Buly rost appropriate for the purpose.		AS -1 think is should be treated as category 7 - factory area. There are other categories, that default to PRONSSE despite not being the best representation; if we do something different for "houlaction fleet we may need to do the same for the other categories	Proctoupal sade WG to efficiency.	Agree with Alvero.	Allocate rule update to NIWC (allocate same symicategoryOf ProductionPlan 7).
021_Pile_LINEandSURFACE.cml	- 7	Pling (Category of Ple)		No correlating enumerate in S-57. Needs to be considered for ECDS potrayal, noting new allowable geometric primitives.	MS (for new alternative quometric primitive curve).	Neve altrauble quarmetric primitive for feature (Ne in S-101 - neve portrayal rule required.		Only applicable to Curves.	KHOA to prototype new Curve style using everly spaced and slightly larger (limm D) PILINYTO2 patterns and dashed CHGRD lewoork. Other options.	D lank	Allocate prototyping to KHOA
2021_Tankfarmsvq 4으로 수정한 성품 : 무개용성 표종 REA 데무리 작벽(CHCRD)로 표종	(-65)	Tark Farm (Category of Offshore Production Area)	CATPRA = 8	Interior to the OffshoreProductionNews Seature only. Suggest that this should be considered for ECDES portrayal.	NO	NO - Rule OffshowProductionArm masts and synthology as religionalist of the category.		AS - Existing rule cases restricted area (insepenta triamples, along the boundary equantion mark eithin marpenta circle as the centred symbol). My vise is that a neingable area containing numerous devices atomage tanks (physical obstructions) should be depleted in proye colony (CHARD) and not marpenta	Destroyed subWG to discuss. If accepted, KHOA to prototype new symbology as recommended. Other options welcomed. Present options @	Saw correspond for voied faints area	Allocate prototyping to KHOA and NIWC - If REST populated then use Rule RESTRNO1. If RESTRN is not p then: Surface; similar to Marine farm areas but with a



PROCEDURE AND TOOL

International Hydrographic Organization Procedure to develop S-101 new symbols

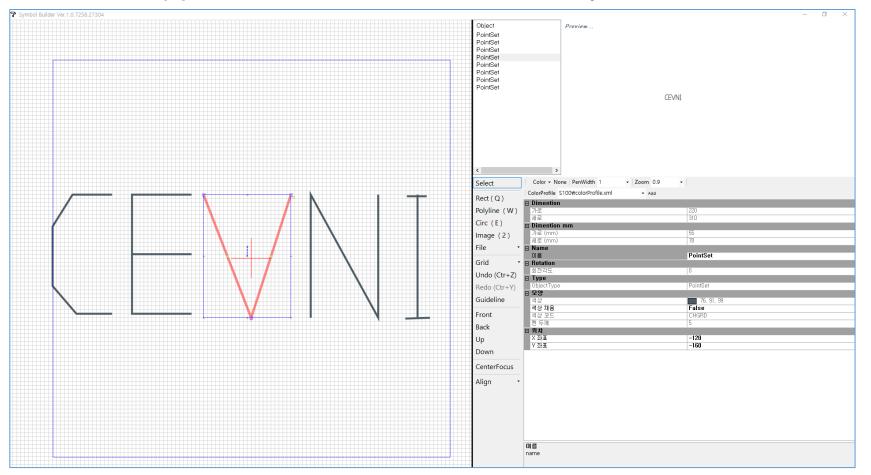




PROCEDURE AND TOOL

International Hydrographic Organization

- S-100 SVG Editor
 - KHOA developed the S-100 SVG Editor to support S-100 test bed system
 - The tool supports to draft and edit SVG Symbols.

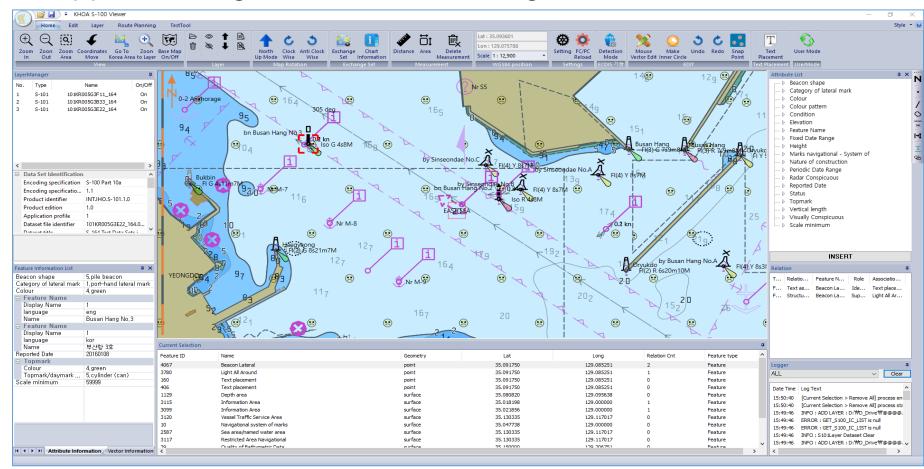




PROCEDURE AND TOOL

International Hydrographic Organization

- KHOA S-100 Viewer with editing function
 - Load the S-101 TDS and display based on the PC
 - Support editing the TDS and adding native feature instance





International Hydrographic Organization

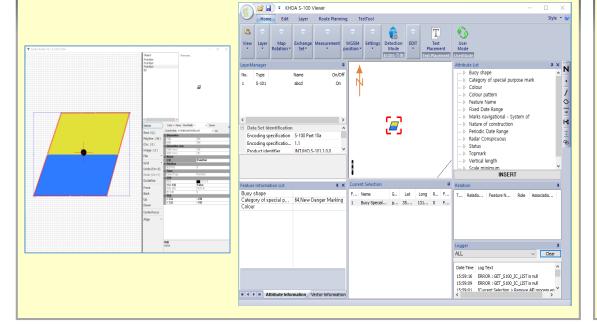
Buoy New Danger Marking

Initial assessment for new symbols

Propose new symbology for 'simplified symbols'. Symbols could be as per S-52 LUT for BOYSPP but instead of using yellow infill colour only, use half yellow and half blue (RESBL?) splitted vertically

Remarks

Need to define new feature and rule for this symbol Proposed symbol could be improved with comments from PortSub



Seagrass

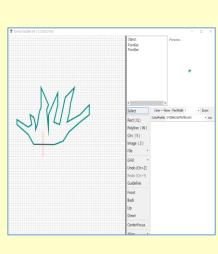
Initial assessment for new symbols

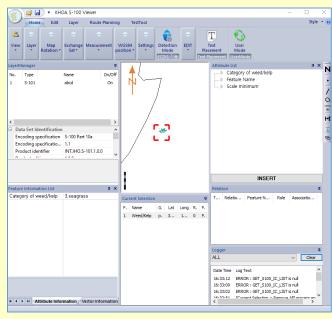
Same instructions than Weed but replacing the symbol with something similar to (preferably using single not double, lines for the leaves)



Remarks

Proposed image is so complex, tried to draw similar symbol Proposed symbol could be improved with comments from PortSub







International Hydrographic Organization

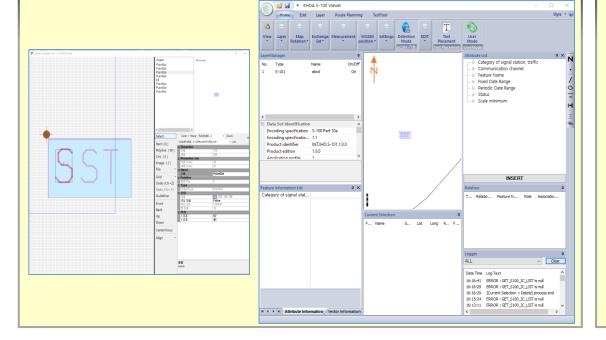
Signal Station Traffic

<u>Initial assessment for new symbols</u>

Point symbol. Use SISTATO2 symbol but with SST instead of SS.

Remarks

Proposed symbol could be improved with comments from PortSub



Signal Station Warning

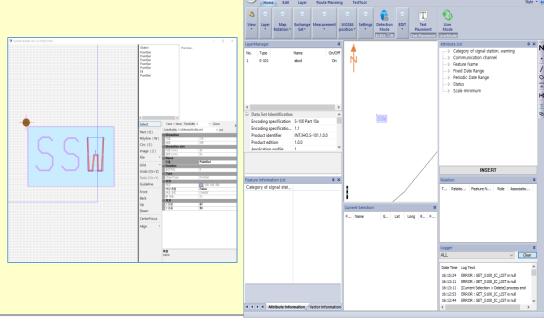
Initial assessment for new symbols

Point symbol: Use SISTATO2 symbol but with SSW instead of SS.

Remarks

Proposed symbol could be improved with comments from PortSub

₩ F KHOA S-100 Viewe



International Hydrographic Organization

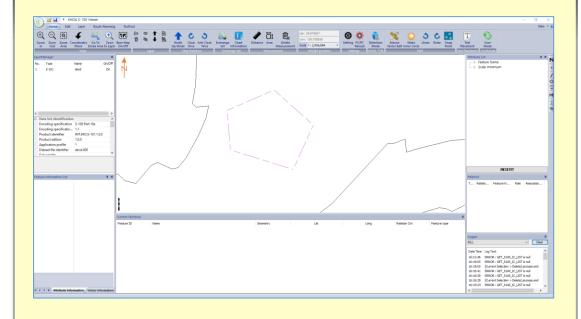
Vessel Traffic Service Area

Initial assessment for new symbols

KHOA to prototype new line style: as per marine limit in general but with evenly spaced (as per Deep Water route) three letter acronym (VTS). Other options welcomed

Remarks

New line style was proposed Proposed symbol could be improved with comments from PortSub



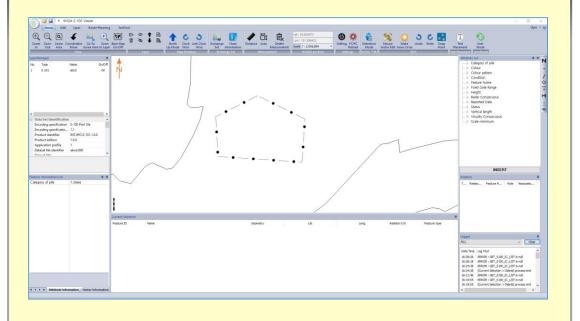
Area of Piles [Category of Pile]

Initial assessment for new symbols

KHOA to prototype new Surface style using evenly spaced and slightly larger (3mm D) PILPNT02 patterns and dashed CHGRD boundary. Other options (including the use of text 'PILES' (as per PSSARE01))

Remarks

New line style was proposed Proposed symbol could be improved with comments from PortSub





International Hydrographic Organization

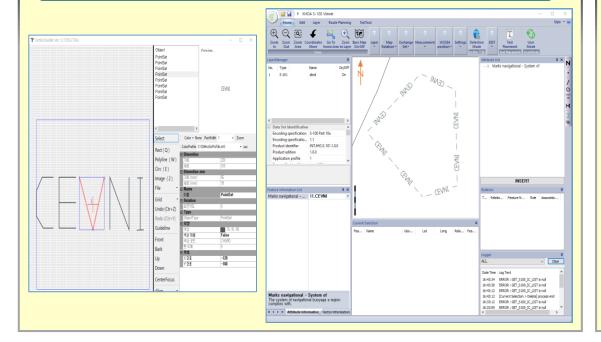
CEVNI [Marks Navigational - System Of]

Initial assessment for new symbols

KHOA to prototype new symbology as recommended. Needs new symbology – Recommend variation of LC(MARSYS51) but replacing the A and B letters with the text CEVNI spaced every 50–60 mm

Remarks

New complex line symbol was proposed Proposed symbol could be improved with comments from PortSub

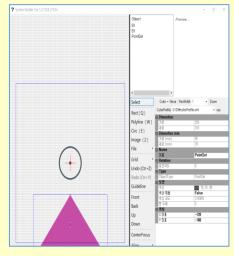


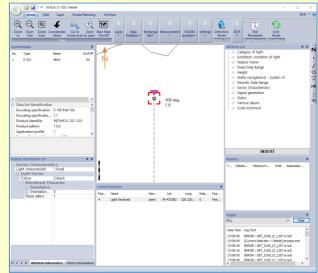
Moiré Effect [Directional Character]

Initial assessment for new symbols

Suggest consider a new symbol in S-101. there is a clear distinction between Moire effect (INT1 - P 31) and other directional lights for paper charts. Consider that with improved graphical displays a new symbol should be investigated

Remarks







International Hydrographic Organization

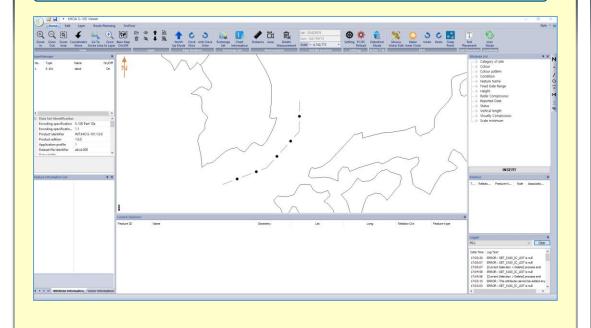
Piling [Category of Pile]

Initial assessment for new symbols

KHOA to prototype new Curve style using evenly spaced and slightly larger (3mm D) PILPNTO2 patterns and dashed CHGRD linework

Remarks

New complex line symbol was proposed Proposed symbol could be improved with comments from PortSub

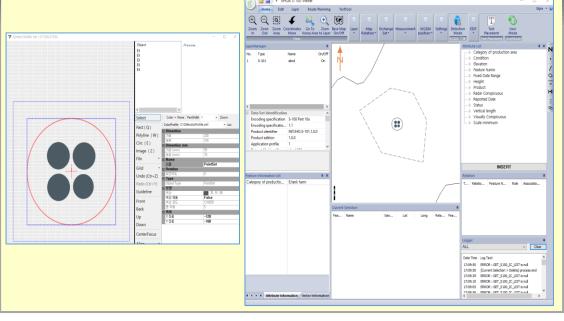


Tank Farm [Category of Offshore Production Area]

Initial assessment for new symbols

similar to Marine farm areas but with an area pattern made of TNKFRM01. symbols in CHGRD colour

Remarks





International Hydrographic Organization

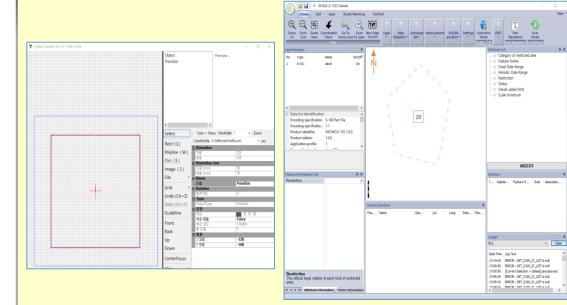
Vessel Speed Limit

<u>Initial assessment for new symbols</u>

Include Inland ENC symbol NMKREG06A to default Restricted Area Navigational feature portrayal

Remarks

Proposed symbol could be improved with comments from PortSub

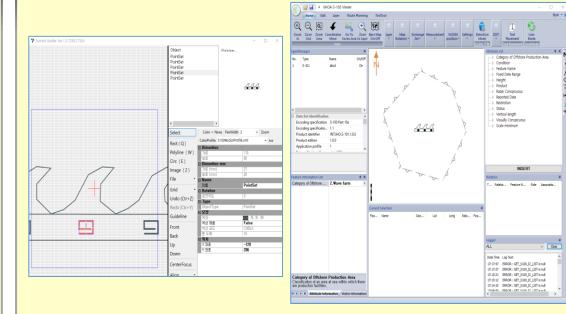


Wave Farm [Category of Offshore Production Area]

Initial assessment for new symbols

Develop New 'underwater current turbine' symbol (as per INT1 L6) in CHGRD colour but depicting circle using danger line instead of continuous line. Surface: similar to Marine farm areas but with an area pattern made of the new 'current turbines' symbols.

Remarks





International Hydrographic Organization

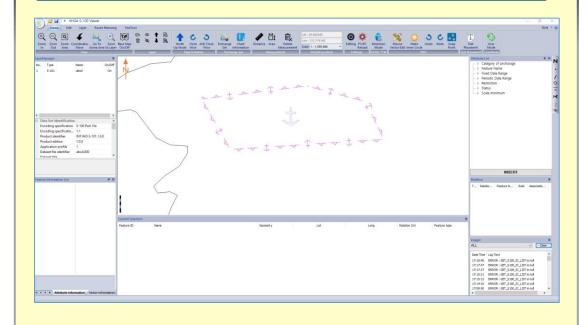
Anchorage areas

Initial assessment for new symbols

to create a new complex line symbol based on the existing complex line style but, instead of having all the anchor symbols pointing to the same side of the line, make a pattern that alternates their orientation

Remarks

Proposed symbol could be improved with comments from PortSub

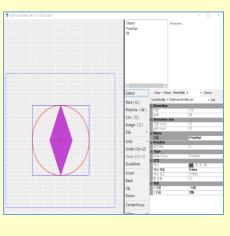


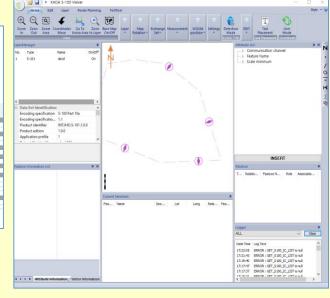
Pilotage distirct

Initial assessment for new symbols

Usecomplex line made of SY(PILBOP02) in CHMGF colour and LS(dash, 1, CHMGF)

Remarks







International Hydrographic Organization

• Proposed S-101 new symbols

N	S-101 Item	Proposed symbol	Notes	
1	Buoy New Danger Marking		2021_BOYSPP45_2color.svg (BuoySpecialPurposeGeneral) feature.categoryOfSpecialPurposeMark contain [64 - New Danger Marking] - added in FC	
2	Seagrass	MAT	2021_SEAGRASS.svg (WeedKelp)	
3	Signal Station Traffic	SST	2021_SISTAT02_01.svg (SignalStationTraffic)	
4	Signal Station Warning	SSW	2021_SISTAT03_01.svg (SignalStationWarning)	
5	Vessel Traffic Service Area		2021_VesselTrafficServiceArea.xml (VesselTrafficServiceArea)	
6	Area of Piles [Category of Pile		2021_Pile_LINEandSURFACE.xml (Pile)	
7	CEVNI [Marks Navigational - System Of]	INV3) INV3)	2021_MARSYS52.xml / 2021_EMMARS03.svg (NavigationalSystemOfMarks) marksNavigationalSystemOf = 11	

N	S-101 Item	Proposed symbol	Notes
8	Moiré Effect [Directional Character]	111 deg Aero Oc W 22m25M	2021_MoireEffect.svg (LightSectored)
9	Piling [Category of Pile]	·	2021_Pile_LINEandSURFACE.xml (Pile)
10	Tank Farm [Category of Offshore Production Area]	(33)	2021_TankFarm.svg (ProductionStorageArea)
11	Vessel Speed Limit	20 +	2021_speed_limit.svg + speedLimit (text instruction) (RestrictedAreaNavigational) vesselSpeedLimit/speedLimit
12	Wave Farm [Category of Offshore Production Area]		2021_WaveFarm.svg (OffshoreProductionArea)
13	Anchorage areas		# line style : 2021_ACHARE51.xml # SYMBOL(Line) : 2021_EMACHAR2.svg, EMACHAR1.svg (AnchorageArea)
14	Pilotage distirct	⊕ ⊕	PILBOP02.svg 2021_PilotageDistrict.xml