

Paper for Consideration by TSMAD29/DIPWG7

New issues around S-64 and S-52 new editions

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Executive Summary:	This paper request publishing of clarifications for open issues detected during implementation of new editions of the S-52 and S-64 for an ECDIS.
Related Documents:	N/A.
Related Projects:	Recently published new editions of S-52 and S-64

Introduction / Background

1. So called "ECDIS anomalies" have been detected in the field and it has been judged that one of the reasons has been lack of exact instructions.
2. IHO has been working hard to publish new editions of the IHO ECDIS related standard addressing the ECDIS anomalies.
3. As usual we human beings are unable to predict and forecast every detail before one of us make full implementation. We at Furuno have been implementing the new editions for our ECDIS models. In this process we have found a few new issues which were not discussed during the development of the new editions for IHO ECDIS related standard.
4. Some of these new findings have been reported to IHO between TSMAD28/DIPWG6 and HSSC6 meetings. Some of these new findings have been too late for even HSSC6 meeting. This document is a collection of not yet handled new findings.

Analysis/Discussion

5. This document includes 12 issues. 4 of the issues request a change for S-52 – 3 of them are just fixes of obvious mistakes and 1 of them is a new issue available in practice but not noted during drafting. 4 of the issues are simple editorial mistakes in S-64 and the rest are various. Below is a summary of issues:
 - Issue 1: S-64 has not documented the IHO recommended method for attribute NATSUR. This may cause difficulties at type approval.
 - Issue 2: S-52 use unsuitable "text viewing group" for CURVEL. This cause illogical behaviour.
 - Issue 3: S-64 has a simple mistake in screen sample
 - Issue 4: S-64 has too simple test case for shared line geometry when line use centred symbol
 - Issue 5: S-64 do not include enough set up instructions to execute the test
 - Issue 6: S-64 has set up instructions which should be fixed for proper display rules for an ECDIS
 - Issue 7: S-52 includes a new summary table for detection of Navigational hazards. This table is different from traditional condition set by conditional procedure UDWHAZ
 - Issue 8: S-52 include point and line versions of LNDARE both for detection of Safety contour and Navigational hazard. Obviously they should be only in one detection method.
 - Issue 9: S-64 has simple errors in 3 screen sample for a sounding in dry side.
 - Issue 10: S-64 has simple typo for listing parameters used for screen samples
 - Issue 11: S-64 has simple typo as a result of copy-paste from another test
 - Issue 12: One and only new finding not yet addressed at all when drafting new S-52
6. Issues 1, 3, 5, 6, 7, 8, 9, 10 and 11 are like typos or clear mistakes for items which were discussed during drafting of new S-52 and S-64.
7. Issue 2 is addressing a clear anomaly in S-52 which was not noted nor discussed during drafting of new S-52.
8. Issue 4 is requesting better and more realistic test material in S.64 in order to help uniform implementation by all manufacturers.
9. Issue 12 is a new finding during implementation of the new edition. Origin of it is the split of single red highlight into separate red and yellow highlights. During the drafting the task force handled simple cases when red and yellow

highlights are isolated from each other and there was no discussion what to do if both conditions are met at the same location.

10. S-52 already includes a concept of “Shallow water dangers” which will show hazards within blue unsafe water. Reason for this is that most of the practical ENC charts miss enough depth contours so that the vessel could find suitable setting of the safety contour. Therefore the ECDIS shall be able to assist navigation through blue waters.

11. Issue 12 is similar to “Shallow water danger” issue. If one has activated detection of safety contour and navigational hazards ahead of the own vessel and one navigates through the blue water, then within the red highlight area for safety contour there are also navigational hazards. Same is true also for Route plan and Route monitoring if one has planned a route through the blue water.

12. Issue 12 is requesting that the S-52 should set the rule what to do in case of this parallel overlap of both detection of Safety contour and detection of Navigational hazard. Yellow Navigational hazard use no area filling while red Safety contour use transparent area filling. Based on presentation characteristics the possible alternatives are: a) red Safety contour mask yellow Navigational hazard, b) yellow Navigational hazard mask red Safety contour, c) yellow Navigational hazard is drawn over the red Safety contour.

13. As a solution for issue 12, this document proposes alternative c). The result is similar as for “Shallow water danger” concept.

Conclusions

14. All documented issues are true practical problems which require solutions.

Recommendations

15. It is recommended to accept the proposals as proposed.

Justification and Impacts

16. As a whole all issues in this document are small compared to the size of the new editions of S-52 and S-64.

17. IHO has already published S-52 and S-64, which is a testing standard for requirements of S-52. However IHO has set the “in force” date for Sep 2015. The related IEC standard is also not yet published – current estimate of publishing being either Sep 2015 or Nov 2015 (This document has no purpose to discuss what is best estimate for time schedule of the IEC).

18. There is still time until Sep 2015. TSMAD29/DIPWG7 meeting in Feb 2015 can agree with proposal and publish clarifications (S-52 Preslib ed 4.0.1 and S-64 ed 3.0.1). As a result everybody would still have many months to complete their related implementations and type approvals.

Action Required of TSMAD and/or DIPWG

The TDMAD and/or DIPWG are invited to:

- a) Discuss and agree the issues presented in this paper
- b) Publish clarifications S-52 Preslib ed 4.0.1 and S-64 ed 3.0.1

Annex – Description of new issues

Issue 1, Tests and screen samples ignore that presentation of attribute NATSUR could be either full name or abbreviation

Description

- Chapter 14.6.2 of S-52 PL ed. 4.0 specify "To reduce undue clutter in the ECDIS chart display, it is recommended that ECDIS manufacturers use the abbreviations of the NATSUR attribute."
- Above means that both presentation of full text "rock", "sand", "shells", etc. and abbreviations (for example: rock=R, sand=S, shells=Sh, etc) are legal
- Screen samples in the S-64 are based on full text
- Below is two sample pictures describing the issue. Right hand side "DOCUMENTATION" is from S-64 and left hand side (RESULT) is an example based on abbreviations



Related chapters of S-64

- Test 2.1.1 "Preparation and Power Up"
- Test 2.2.2 "Loading sequential update"
- Test 2.2.4 "Loading update of newer edition"
- Test 2.2.6 "Loading a re-issue of a data set"
- Test 2.2.8 "Rejection of automatic update"
- Test 3.7.4 a) "Display of data from another navigational purpose"

Related parts of S-52 PL

- Chapter 14.6.2

What to do

- Minimum solution
 - At least the S-64 should include a note for each affected screen sample that "Note: Screen sample is based on full text of NATSUR attribute. Alternatively NATSUR may be presented as abbreviation"
- Alternative solution
 - S-64 could include double screen samples. One with full text and second with abbreviations.

Issue 2, Suitable text viewing group for attribute current velocity used by current and tidal stream objects should be defined in S-52

Description

- Text viewing group for attribute current velocity (CURVEL) is 31 (=National language)
- Attribute CURVEL is used by objects Current – non gravitational (CURENT) and Tidal stream- Flood/Ebb (TS_FEB)
- Both new edition 4.0 and previous edition 3.4 are identical for this
- Current velocity has nothing to do with national language. So it seems that this is genuine not yet found ECDIS anomaly

Related chapters of S-64

- Current edition has no direct test and screen sample which is associated with this

Related parts of S-52 PL

- Chapters 14.4 “Text grouping” and 14.5 “ECDIS Text Group Implementation”
- Separate look-up-table files
- DAI-file

What to do

- For example text viewing group 30 is currently specified as N/A. It could be assigned for use of CURVEL. Result in the table available in **chapter 14.4** would be like below (changes presented as Tracked changes style)

30	<u>Na-Current velocity</u>	<u>CURVEL</u>
----	----------------------------	---------------

- After above change the table available in **chapter 14.5** would be like below (changes presented as Tracked changes style)

Text Group Layer	Name of Text group layer in the ECDIS	Text groups included
1	Important text	11
2	Other text	20-49, 0-10
2.1	Names	21, 26, 29
2.2	Light description	23
2.3	All other	0-10, 25, 27, 28, <u>30</u> , 32-49

- Changes to look-up-table files (changes presented as Tracked changes style)
 - S-52 PresLib Edition 4.0.0 Part I Appendix B Look-up Table Areas Plain Boundaries.docx
"TS_FEB","CAT_TS1ORIENT","SY(FLDSTR01,ORIENT);TE(%4.1f kn','CURVEL',3,1,2,'15110',1,-1,CHBLK,3034),"4","S","OTHER","33060"
"TS_FEB","CAT_TS2ORIENT","SY(EBBSTR01,ORIENT);TE(%4.1f kn','CURVEL',3,1,2,'15110',1,-1,CHBLK,3034),"4","S","OTHER","33060"
"TS_FEB","CAT_TS3ORIENT","SY(CURRENT01,ORIENT);TE(%4.1f kn','CURVEL',3,1,2,'15110',1,-1,CHBLK,3034),"4","S","OTHER","33060"
 - S-52 PresLib Edition 4.0.0 Part I Appendix C Look-up Table Areas Symbolized Boundaries.docx
"TS_FEB","CAT_TS1ORIENT","SY(FLDSTR01,ORIENT);TE(%4.1f kn','CURVEL',3,1,2,'15110',1,-1,CHBLK,3034),"4","S","OTHER","33060"
"TS_FEB","CAT_TS2ORIENT","SY(EBBSTR01,ORIENT);TE(%4.1f kn','CURVEL',3,1,2,'15110',1,-1,CHBLK,3034),"4","S","OTHER","33060"
"TS_FEB","CAT_TS3ORIENT","SY(CURRENT01,ORIENT);TE(%4.1f kn','CURVEL',3,1,2,'15110',1,-1,CHBLK,3034),"4","S","OTHER","33060"
 - S-52 PresLib Edition 4.0.0 Part I Appendix D Look-up Table Lines.docx
 -
 - S-52 PresLib Edition 4.0.0 Part I Appendix E Look-up Table Paper Chart Points.docx
"CURENT","ORIENTCURVEL","SY(CURRENT01,ORIENT);TE(%4.1f kn','CURVEL',3,1,2,'15110',1,-1,CHBLK,3034),"5","O","OTHER","33060"
"TS_FEB","CAT_TS1ORIENT","SY(FLDSTR01,ORIENT);TE(%4.1f kn','CURVEL',3,1,2,'15110',1,-1,CHBLK,3034),"4","O","OTHER","33060"
"TS_FEB","CAT_TS2ORIENT","SY(EBBSTR01,ORIENT);TE(%4.1f kn','CURVEL',3,1,2,'15110',1,-1,CHBLK,3034),"4","O","OTHER","33060"
"TS_FEB","CAT_TS3ORIENT","SY(CURRENT01,ORIENT);TE(%4.1f kn','CURVEL',3,1,2,'15110',1,-1,CHBLK,3034),"4","O","OTHER","33060"
 - S-52 PresLib Edition 4.0.0 Part I Appendix F Look-up Table Simplified Points.docx
"CURENT","ORIENTCURVEL","SY(CURRENT01,ORIENT);TE(%4.1f kn','CURVEL',3,1,2,'15110',1,-1,CHBLK,3034),"5","O","OTHER","33060"
"TS_FEB","CAT_TS1ORIENT","SY(FLDSTR01,ORIENT);TE(%4.1f kn','CURVEL',3,1,2,'15110',1,-1,CHBLK,3034),"4","O","OTHER","33060"
"TS_FEB","CAT_TS2ORIENT","SY(EBBSTR01,ORIENT);TE(%4.1f kn','CURVEL',3,1,2,'15110',1,-1,CHBLK,3034),"4","O","OTHER","33060"
"TS_FEB","CAT_TS3ORIENT","SY(CURRENT01,ORIENT);TE(%4.1f kn','CURVEL',3,1,2,'15110',1,-1,CHBLK,3034),"4","O","OTHER","33060"

- Changes to DAI-file (change indicated as black bold text style)

```

0001      500199
LUPT     40LU00199NILTS_FEBA00004SPLAIN_BOUNDARIES_
ATTC     15CAT_TS1_ORIENT_
INST     73SY (FLDSTR01,ORIENT);TE('%4.11f kn','CURVEL',3,1,2,'15110',1,-1,CHBLK,30)_
DISC     60THER_
LUCM     633060_
****     0
0001      500200
LUPT     40LU00200NILTS_FEBA00004SPLAIN_BOUNDARIES_
ATTC     15CAT_TS2_ORIENT_
INST     73SY (EBBSTR01,ORIENT);TE('%4.11f kn','CURVEL',3,1,2,'15110',1,-1,CHBLK,30)_
DISC     60THER_
LUCM     633060_
****     0
0001      500201
LUPT     40LU00201NILTS_FEBA00004SPLAIN_BOUNDARIES_
ATTC     15CAT_TS3_ORIENT_
INST     73SY (CURENT01,ORIENT);TE('%4.11f kn','CURVEL',3,1,2,'15110',1,-1,CHBLK,30)_
DISC     60THER_
LUCM     633060_
****     0

0001      500435
LUPT     45LU00435NILTS_FEBA00004SSYMBOLIZED_BOUNDARIES_
ATTC     15CAT_TS1_ORIENT_
INST     73SY (FLDSTR01,ORIENT);TE('%4.11f kn','CURVEL',3,1,2,'15110',1,-1,CHBLK,30)_
DISC     60THER_
LUCM     633060_
****     0
0001      500436
LUPT     45LU00436NILTS_FEBA00004SSYMBOLIZED_BOUNDARIES_
ATTC     15CAT_TS2_ORIENT_
INST     73SY (EBBSTR01,ORIENT);TE('%4.11f kn','CURVEL',3,1,2,'15110',1,-1,CHBLK,30)_
DISC     60THER_
LUCM     633060_
****     0
0001      500437
LUPT     45LU00437NILTS_FEBA00004SSYMBOLIZED_BOUNDARIES_
ATTC     15CAT_TS3_ORIENT_
INST     73SY (CURENT01,ORIENT);TE('%4.11f kn','CURVEL',3,1,2,'15110',1,-1,CHBLK,30)_
DISC     60THER_
LUCM     633060_
****     0

0001      500782
LUPT     34LU00782NILCURENTP00005OSIMPLIFIED
ATTC     14ORIENTCURVEL
INST     73SY (CURENT01,ORIENT);TE('%4.11f kn','CURVEL',3,1,2,'15110',1,-1,CHBLK,30)
DISC     60THER
LUCM     633060
****     0

0001      500941
LUPT     34LU00941NILTS_FEBP00004OSIMPLIFIED_
ATTC     15CAT_TS1_ORIENT_
INST     73SY (FLDSTR01,ORIENT);TE('%4.11f kn','CURVEL',3,1,2,'15110',1,-1,CHBLK,30)_
DISC     60THER_
LUCM     633060_
****     0
0001      500942
LUPT     34LU00942NILTS_FEBP00004OSIMPLIFIED_
ATTC     15CAT_TS2_ORIENT_
INST     73SY (EBBSTR01,ORIENT);TE('%4.11f kn','CURVEL',3,1,2,'15110',1,-1,CHBLK,30)_
DISC     60THER_
LUCM     633060_
****     0
0001      500943
LUPT     34LU00943NILTS_FEBP00004OSIMPLIFIED_
ATTC     15CAT_TS3_ORIENT_
INST     73SY (CURENT01,ORIENT);TE('%4.11f kn','CURVEL',3,1,2,'15110',1,-1,CHBLK,30)_
DISC     60THER_
LUCM     633060_
****     0

0001      501119
LUPT     35LU01119NILCURENTP00005OPAPER_CHART_
ATTC     14ORIENT_CURVEL_
INST     73SY (CURENT01,ORIENT);TE('%4.11f kn','CURVEL',3,1,2,'15110',1,-1,CHBLK,30)_
DISC     60THER_
LUCM     633060_
****     0

```

```
0001      501289
LUPT      35LU01289NILTS_FEBP00004OPAPER_CHART_
ATTC      15CAT_TS1_ORIENT_
INST      73SY (FLDSTR01,ORIENT);TE('%4.11f kn','CURVEL',3,1,2,'15110',1,-1,CHBLK,30)_
DISC      6OTHER_
LUCM      633060_
****      0
0001      501290
LUPT      35LU01290NILTS_FEBP00004OPAPER_CHART_
ATTC      15CAT_TS2_ORIENT_
INST      73SY (EBBSTR01,ORIENT);TE('%4.11f kn','CURVEL',3,1,2,'15110',1,-1,CHBLK,30)_
DISC      6OTHER_
LUCM      633060_
****      0
0001      501291
LUPT      35LU01291NILTS_FEBP00004OPAPER_CHART_
ATTC      15CAT_TS3_ORIENT_
INST      73SY (CURENT01,ORIENT);TE('%4.11f kn','CURVEL',3,1,2,'15110',1,-1,CHBLK,30)_
DISC      6OTHER_
LUCM      633060_
****      0
```

Issue 3, Error in screen sample for Test 3.3.7 Contour labels

Description

- Test set up is to use charts from test 2.2.1. However the screen sample in test 3.3.7 include an isolated danger which originates from chart updates from test 2.2.2

Related chapters of S-64

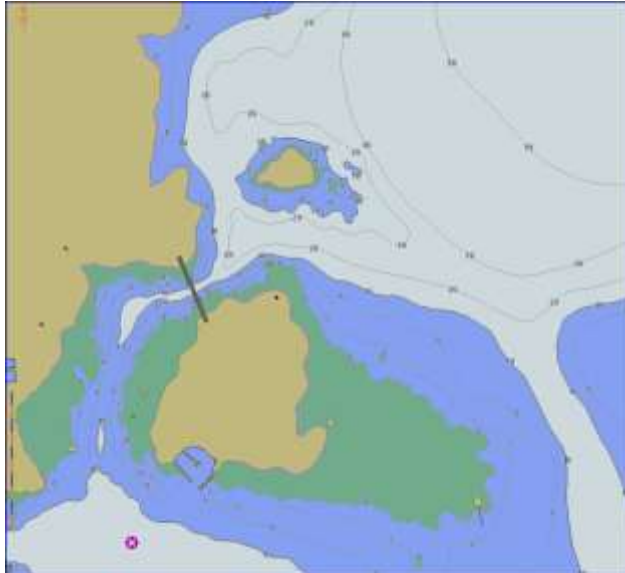
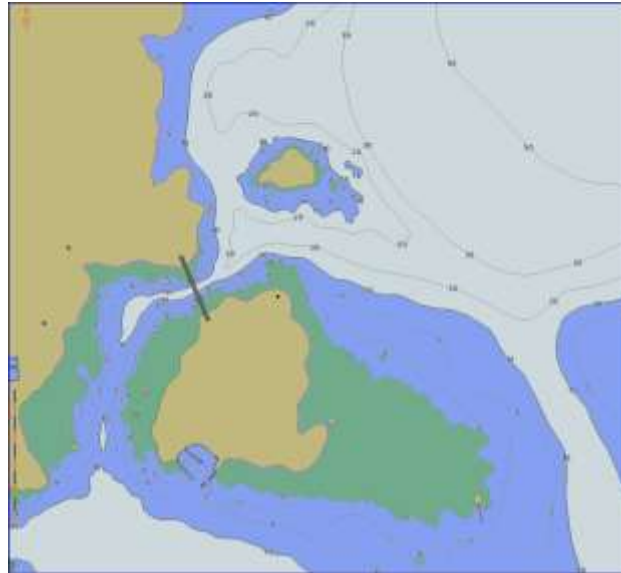
- Test 3.3.7 Contour labels

Related parts of S-52 PL

- None

What to do

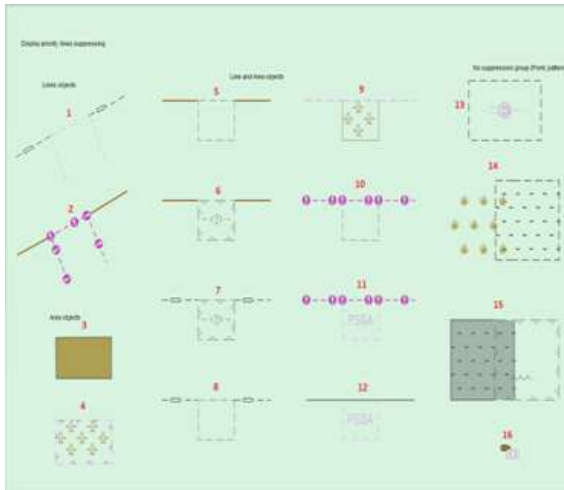
- Fix the screen samples as below:

Current test in S-64	Result after proposed change
	

Issue 4, Test 3.6.5 "Test display" of S-64 needs extension to check suppression by drawing priority properly

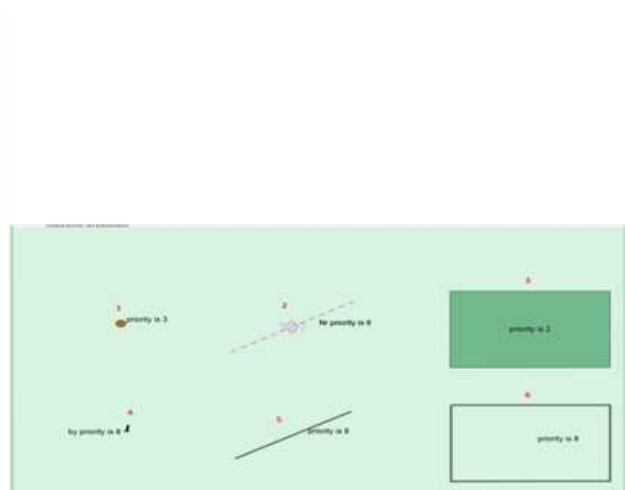
Description

- This test 3.6.5 is for testing proper implementation of drawing priority and suppression of drawing of lower priority. The test has 3 separate tests called 3-6-5 a), 3.6.5 b) and 3.6.5 c).
- Tests itself and associated screen samples are correct
- The problem is that this test is too simple. Test 3.6.3 is similar to test 3.6.5 – both test drawing priority and suppression. Basic target of test is different: Test 3.6.3 use lines with repeated symbols and test 3.6.5 use lines with a single centre symbol.
- Test geometries and test cases in test 3.6.3 are appropriate and adequate for the target of the test
- Test geometries and test cases in test 3.6.5 are too simple for the target of the test. Current test cases are based only on single lines shared for complete distance by 2 objects with different drawing priority. Adequate test cases should include also cases when 2 objects share only partially same lines.



Test 3.6.3 style

A line is partially shared by another



Test 3.6.5 style

Simple single line with total overlap

Related chapters of S-64

- Test 3.6.5 "Test display"

Related parts of S-52 PL

- None

What to do

- Test 3.6.5 should be extended. Current six test cases are enough, but they should be extended using test 3.6.3 as an example. For example lines could continue for different directions from the common part.

Current test in S-64	Result after proposed change

Issue 5, Error in Set up for Test 3.6.8.1 Unofficial data boundary display

Description

- The test is for boundary line between official and unofficial. This obviously requires both official and unofficial charts for the test.
- Test set up is to use charts from test 3.6.6 => 3.6.5 c) => 3.6.5 b) => 3.6.5 a) => 3.6.1. Result of this chain is to use chart 2J5X0001.000. This is the required unofficial chart.
- The set up misses instructions to load suitable official chart, for example GB4X0001.000.
- Another smaller issue in Set up is instruction "Non ENC borders = On". S-52 Preslib does not include a concept to select between On or Off for display of "Non ENC borders". Therefore this selection is misleading and should be removed from the Set up.

Related chapters of S-64

- Test 3.6.8.1 Unofficial data boundary display

Related parts of S-52 PL

- None

What to do

- Change the set up to be as below

As for test 3.6.6 and in addition load the following cell 3.3 Settings\ENC ROOT\GB4X0001.000;
Non ENC borders = On

Issue 6, Error in Set up for Test 3.6.8.2 Scale boundary display

Description

- The test is for boundary line between two scales. This obviously requires 2 charts with different compilation scales for the test.
- Test set up is to use charts from test 3.6.8.1 => 3.6.6 => 3.6.5 c) => 3.6.5 b) => 3.6.5 a) => 3.6.1. Result of this chain is to use chart 2J5X0001.000. This is one of the required charts.
- Next issue in Set up is instruction "Non ENC borders = Off". S-52 Preslib does not include a concept to select between On or Off for display of "Non ENC borders" – "Non ENC borders" are part of Display base. Therefore this selection is misleading and should be removed from the Set up.
- Now we must note that the fixed Set up for 3.6.8.1 include official chart GB4X0001.000 which is not suitable for this test as we want to test the scale boundary between equal charts and not to repeat test 3.6.8.1 for boundary between official and unofficial.
- The set up misses instructions to load a suitable chart with another compilation scale, for example 2J4X0001.000.
- Final issue is that S-52 ECDIS viewing group implementation does not include selector named "Scale borders". Correct name is "Chart scale boundaries".

Related chapters of S-64

- Test 3.6.8.2 Scale boundary display

Related parts of S-52 PL

- None

What to do

- Change the set up to be as below

As for test 3.6.6 ~~3.6.8.1~~ and in addition;

Load the following cell 3.6 Display priorities\ENC_ROOT\2J4X0001.000

Chart scale boundaries ~~Scale borders~~ = On

~~Non-ENC borders = Off~~

Issue 7, S-52 has different rule for detection of navigational hazard and display of isolated danger symbol

Description

- Display rule for isolated danger is an original S-52 Preslib rule from 1st edition. Simplified version of this rule is show special symbol when $\text{depth_value} \leq \text{safety_contour}$. This rule is part of conditional procedure UDWHAZ05 described in chapter 13.2.19.
- Rule for detection of navigational hazard is part of the new outspoken documentation created for new edition 4.0 of Preslib. Simplified version of this rule is detect hazard when $\text{depth_value} < \text{safety_contour}$. This rule is available in a table included in the chapter 10.5.9
- Difference of the rules is if state "equal" is included or excluded
- Screen samples in the test 5.0 of S-64 are based using same principle for both displaying isolated danger symbols and detection of navigational hazard. The used principle is " $\text{depth_value} \leq \text{safety_contour}$ " from traditional UDWHAZ
- Common sense is to use same rule for both. Obviously traditional UDWHAZ rule has long and successful history

Related chapters of S-64

- Test 5.0 "Detection and Notification of Navigational Hazards", total 20 screen samples

Related parts of S-52 PL

- Chapter 10.5.9 Detection and notification of navigational hazards
- Chapter 13.2.19 Conditional symbology procedure UDWHAZ05

What to do

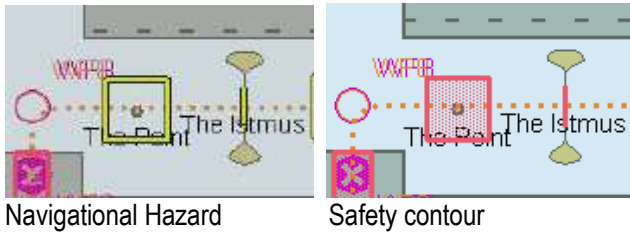
- Fix the table in chapter 10.5.9 of the S-52 Preslib ed 4.0 as below by adding equal signs (=):

OBSTRN	**DEPTH_VALUE \leq safety contour value	POINT, LINE, AREA
UWTROC	DEPTH_VALUE \leq safety contour value	POINT
WRECKS	DEPTH_VALUE \leq safety contour value	POINT, AREA
SOUNDG	EXPSOU=2 and VE3D subfield \leq safety contour value	POINT

Issue 8, S-52 has mismatch between detection of Safety contour and Navigation hazard rule for object LNDARE

Description

- Object LNDARE is listed both for detection of Navigational Hazard and Safety contour
- Applied geometry is different: for Navigational hazard Point and Line while for Safety contour Point, Line and Area
- All objects in detection of Safety contour cause grounding
- Object s in detection of Navigation Hazard have various reasons including collisions, groundings and difficult places to navigate
- Object LNDARE could be member of both rules, but obviously it should be detected only by one of the rules
- Below is a picture pair showing LNDARE detected either as Navigational Hazard or Safety contour



Related chapters of S-64

- Test 5.1 "Detection and Notification of Navigational Hazards – Basic test"

Related parts of S-52 PL

- Chapter 10.5.9 Detection and notification of navigational hazards
- Chapter 10.5.12 Detection of Safety contour

What to do

- We propose that LNDARE is only part of detection of Safety Contour
- If the proposal is accepted then the screen sample can stay. Otherwise all screen samples shall be fixed.
- Table in chapter 10.5.9 of S-52 Preslib should be fixed as below:

LITFLT		POINT
LITVES		POINT
LNDARE		POINT, LINE
LOGPON		POINT, AREA
OFSPLF		POINT, AREA

Issue 9, Error in screen samples for Test 5.1 Detection and Notification of Navigational Hazards – Basic test

Description

- Test 5.1 include a sounding value in dry side (-4.2m)
- This sounding value should be detected in all provided screen samples. However it seems that in the screen samples it is detected based on value +4.2m

Related chapters of S-64

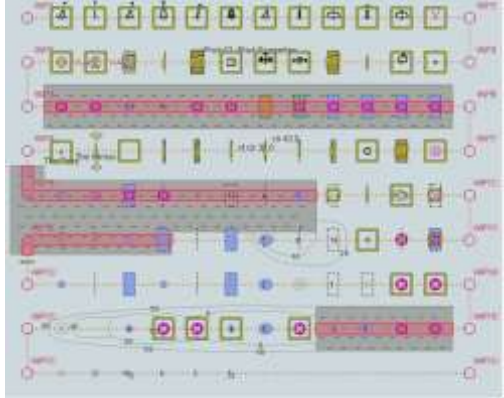
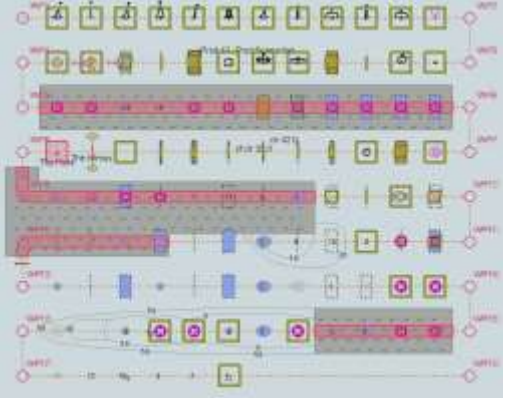
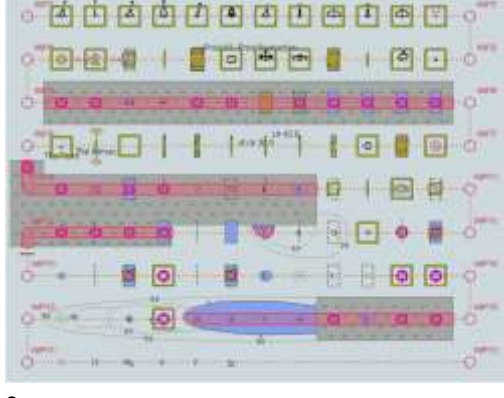
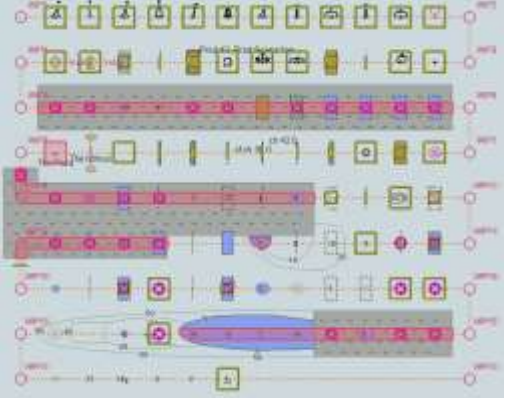
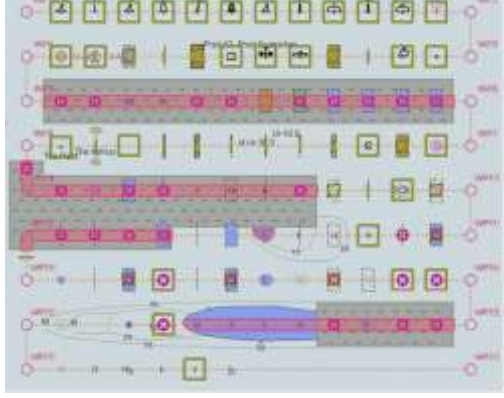
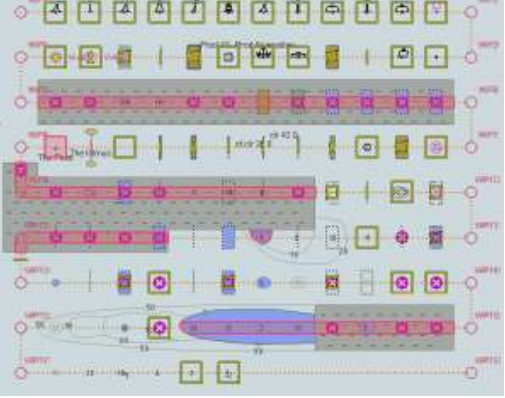
- Test 5.1 "Detection and Notification of Navigational Hazards – Basic test"

Related parts of S-52 PL

- None

What to do

- Fix the screen samples for 0m, 2m and 4m as below:

Current test in S-64	Result after proposed change (include also fix for issue 5)
 <p>0m</p>	
 <p>2m</p>	
 <p>4m</p>	

Issue 10, Typo on test description of Test 5.3 Detection and Notification of Navigational Hazards – Basic test Monitoring Mode

Description

- Test instruction request use of graphical plots available in Test 5.1
- Test instruction request use of listed safety contour values
- One of the listed safety contour values (41m) is not available in the graphical plots of the Test 5.1, while the graphical plots have one safety contour value (31m) which is not part of the listed safety contour for test 5.3
- This is looking like a typo – the intention was 31m

Related chapters of S-64

- Test 5.3 "Detection and Notification of Navigational Hazards – Basic test Monitoring mode"

Related parts of S-52 PL

- None

What to do

- Fix the text in test 5.3 as below:

This test is performed by loading the test cell AA3NAVHZ.000, sailing with a simulated ship over the test area, setting the and safety contour to the appropriate values (0m, 2m, 5m, 6m, 8m, 9m, 10m, 11m, 16m, 21m, 31m, ~~41m~~, 42m, 50m, 51m) and checking display against the graphical plots of test 5.1 (Route plan) corresponding to each set of safety contour settings

Issue 11, Typo on test description of Test 5.4 Detection and Notification of Navigational Hazards - Use of largest scale available Monitoring Mode

Description

- Test 5.4 is partially a copy-past of Test 5.2
- Test 5.2 check route planning mode and test 5.4 check route monitoring mode
- There seems to be a copy-paste style typo in Test 5.4 which still use "5.2" as "Test reference"
- There seems to be a copy-paste style typo in Test 5.4 which says "route planning" instead of "route monitoring"

Related chapters of S-64

- Test 5.4 "Detection and Notification of Navigational Hazards – Use of largest scale available Monitoring mode"

Related parts of S-52 PL

- None

What to do

- Fix the text in test 5.4 as below (2 separate places):

Test reference	5.4-5.2	IHO reference	S-52 10.5.9
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- 2) Situation ~~during~~ ~~after~~ route ~~monitoring~~ ~~planning~~. Alerts indicated from largest scale available for each location

Issue 12, Parallel graphical highlight for safety contour and navigational hazards

Description

- Previous edition 3.4 of Preslib had only a single red “danger highlight”
- New edition 4.0 of Preslib have two highlights: red “danger highlight” and yellow “indication highlight”
- Red version is used by detection of safety contour and yellow version is used by detection of navigational hazard
- In practice navigational hazards can be within areas subject for detection of safety contour. In this case we have a new issue not yet specified in the new edition 4.0 of the Preslib – what is drawing priority of red and yellow version
- Both red and yellow highlight can be applied to area, line and point geometries
- Common practical situation is that yellow highlight of area, line or point exists within red area highlight
- Also point and line type land areas may exist within areas subject for yellow highlight

Related chapters of S-64

- Test 5.0 "Detection and Notification of Navigational Hazards", total 20 screen samples
- Test 6.0 "Detection of areas for which special conditions exists", total 16 screen samples
- Test 7.0 "Detection and Notification of Safety Contour", Total 9 screen samples

Related parts of S-52 PL

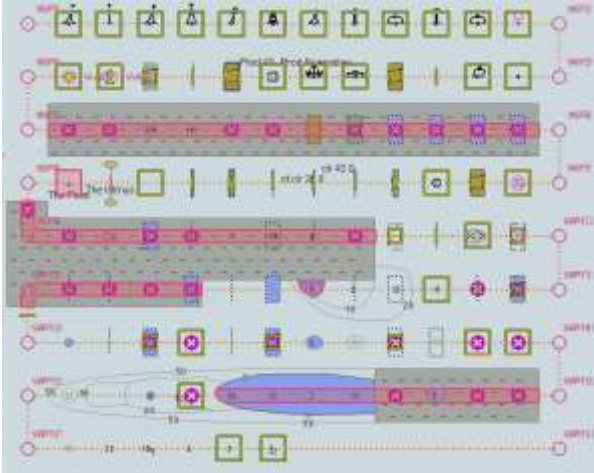
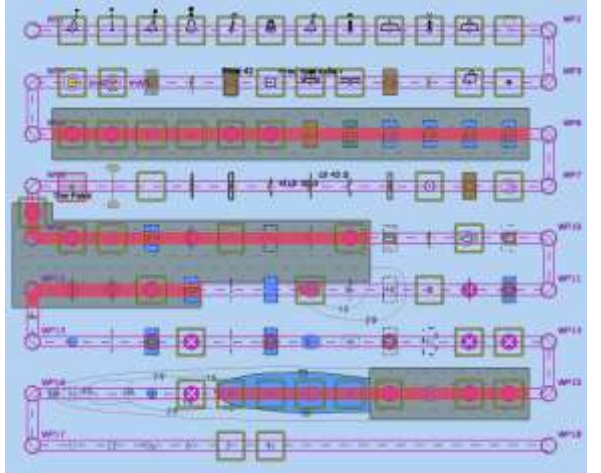
- Chapter 10.5.9 Detection and notification of navigational hazards
- Chapter 10.5.10 Detection of areas, for which special condition exists
- Chapter 10.5.12 Detection of safety contour

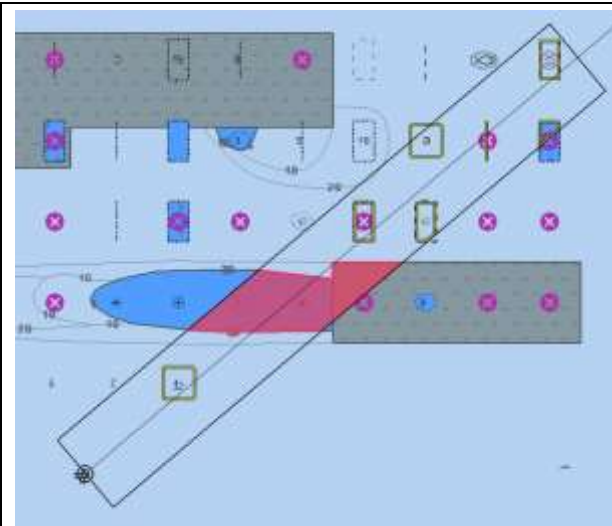
What to do

- Simple idea is to specify just drawing priority from lowest to highest: red area, yellow area, yellow line, red line, yellow point and red point

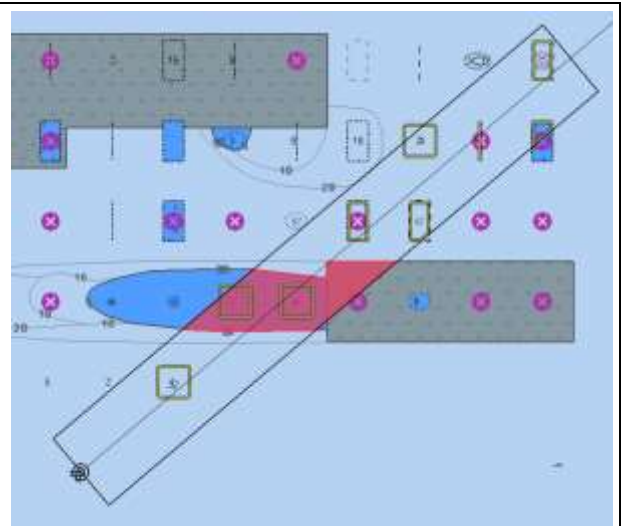
Note: In principle red is higher than yellow, but red area is lower than yellow area as the red area is with transparent area filling and yellow area is just boundary line without area filling.

- Next question is what to do with the area fill used inside the area highlight and inside the centre of point symbol. Simple idea is just that higher priority version suppress the area fill of the lower priority.
- Below are some examples of above rule (“Test 5.1, 4 meters” and “Test 7.3”)

Current test in S-64	Result after proposed change
 <p data-bbox="236 1910 518 1935">Current Test 5.1, 4 meters</p>	



Similar case as test 7.3, but performed over more complex chart area than in original test (More complex chart area is from Test 5.1)



Another similar case as test 7.3, but performed over more complex chart area than in original test (More complex chart area is from Test 2.1)

