

Paper for Consideration by ENCWG3**S-52 Presentation Library Issues**

Submitted by:	Chersoft
Executive Summary:	There are a number of issues with the screen shots of ECDIS Chart 1 contained within S-52 Preslib 4.0.2. It is suggested that at least some of the screenshots in the S-52 Part 1 doc have not been generated from the ENC chart 1 transmittal released alongside it.
Related Documents:	S-52 PresLib 4.0.2, ECDIS Chart 1
Related Projects:	

Introduction / Background

During the review of S-52 Presentation Library 4.0.2 Clarifications Chersoft have identified a number of issues that need to be resolved.

Analysis/Discussion

Screenshots from S-52 PresLib Ed 4.0.2 Part I.pdf [Clarifications to July 2017]

ECDIS SYMBOLS


Information about chart display (A,B)	Information about chart display (A,B)	Natural and man-made features (C,D,E)	Port features (F)
Depths, currents, etc. (H,I)	Seaped, obstructions, pipelines, etc. (J, K, L)	Traffic routes (M) 090 deg	Special areas (N) Nr A
Aids and services (R,S,T)	Buoys and beacons (O)	Topmarks (Q)	Colour test diagram
Approved new object symbols			

CherSoft Screenshots

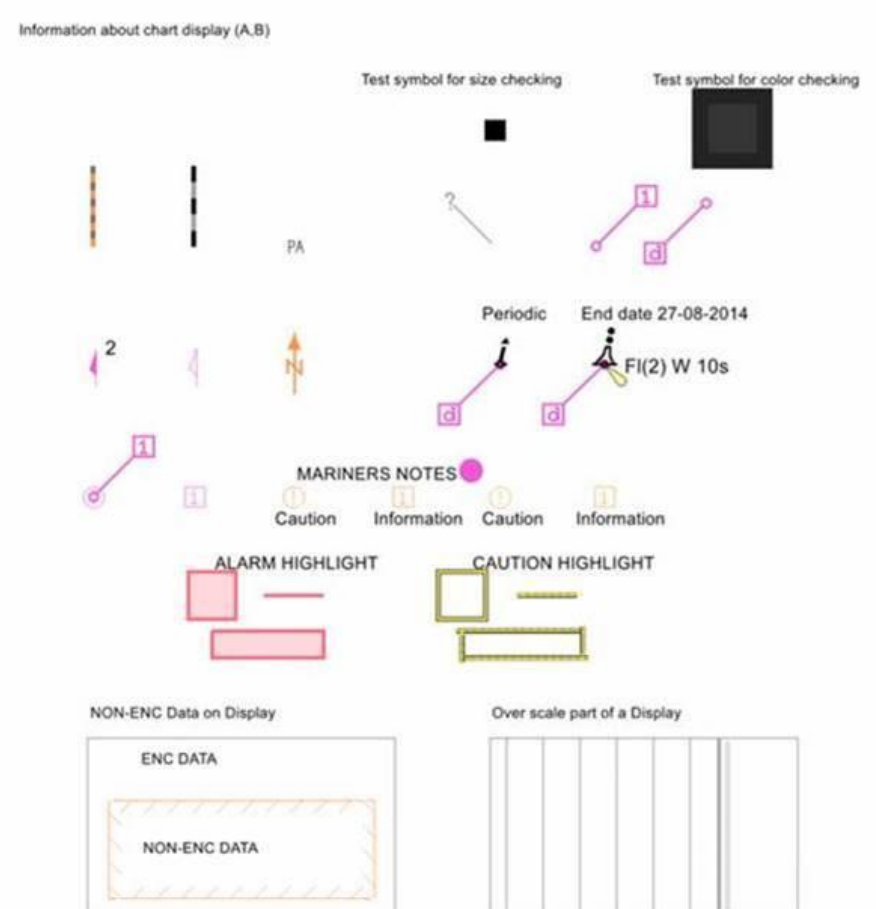
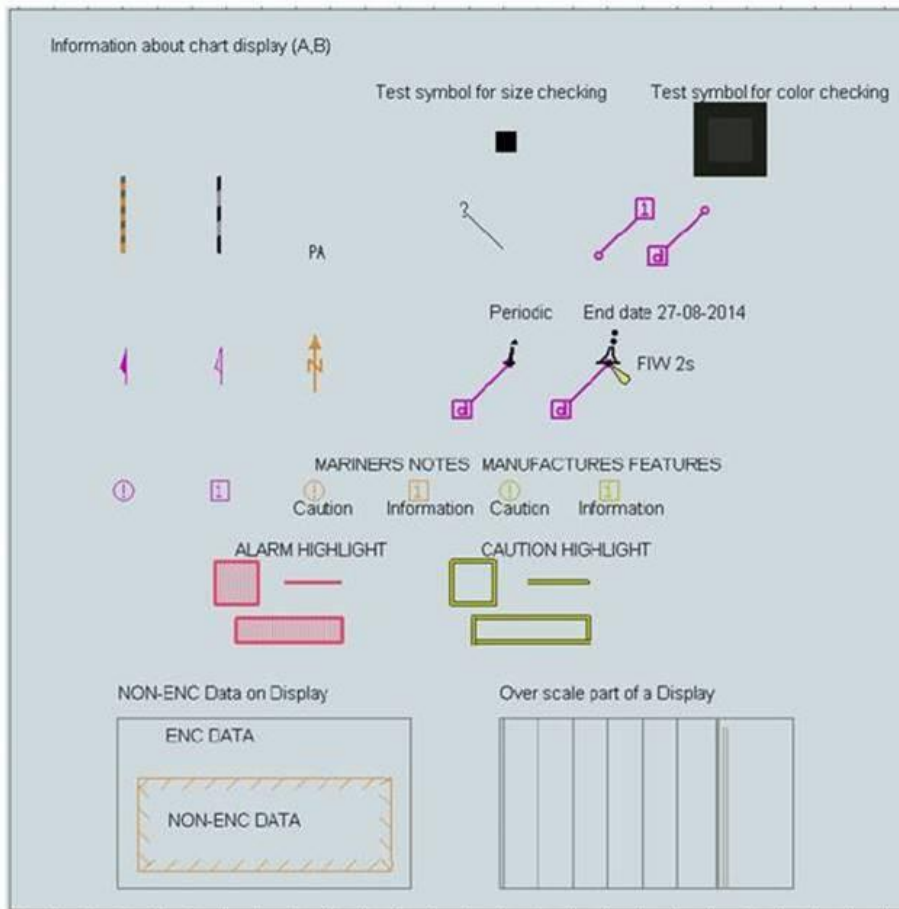
ECDIS SYMBOLS

Information about chart display (A,B)	Information about chart display (A,B)	Natural and man-made features (C,D,E)	Port features (F)
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The main issue we have with this cell (AA4C1XMS) is the presence of a M_QUAL feature with CATZOC=3 which covers the whole cell **apart** from the top left dashed rectangle shown in the *Depths, currents, etc.* tile. This dashed rectangle is also a M_QUAL feature but with CATZOC=1. This feature was not present in the transmittal issued with 4.0.1 of the presentation library which I think is what these S-52 screenshots were generated with as the CATZOC=3 feature is not shown, but the CATZOC=1 feature is. There isn't a standard display setting to allow you to draw certain M_QUAL features but not others based on CATZOC value.

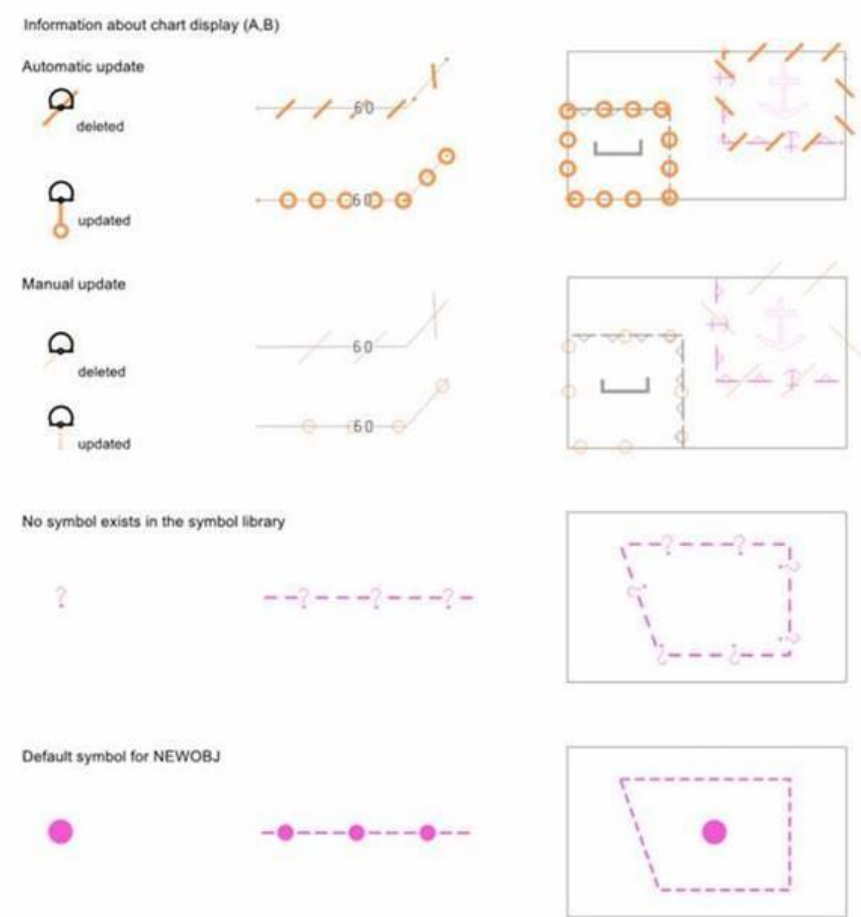
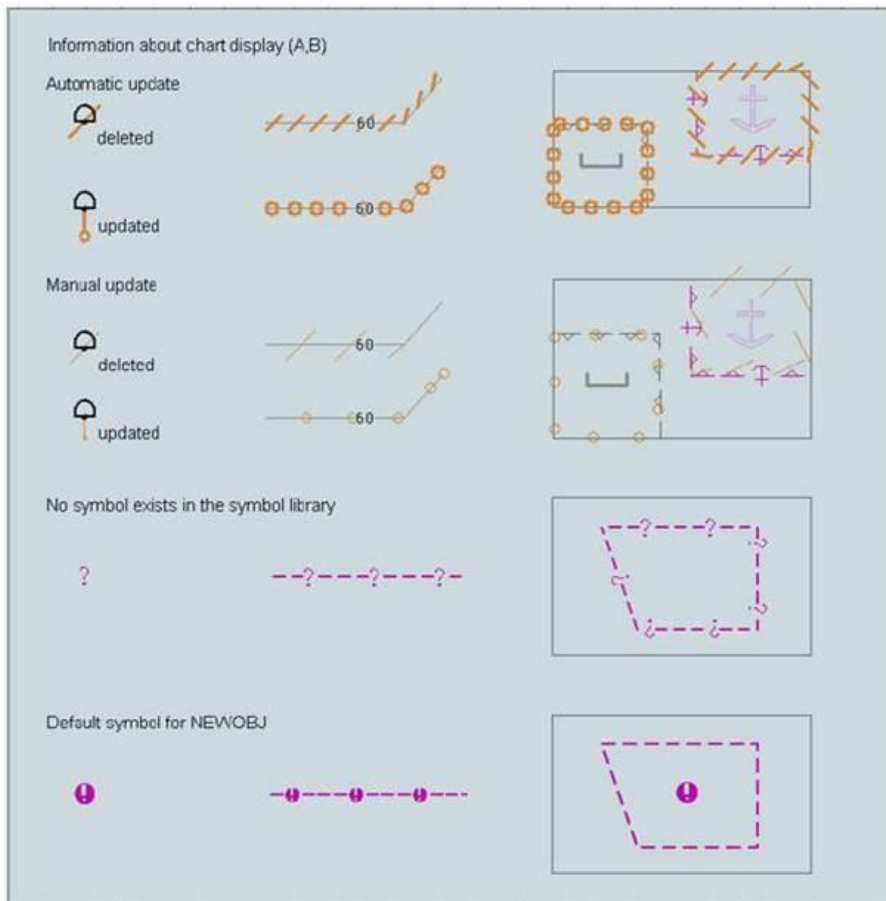
In the CherSoft code, we've turned off the viewing group for M_QUAL. If we turn it on, we get the "asterisks in triangle" symbol  drawn all over the cell.

Note : a similar M_QUAL CATZOC=3 (or 4) feature is included with the other cells in the 4.0.2 Chart 1 transmittal, so I'll not mention it each time.



The FIW 2s light characteristic shown in the S-52 screenshot is wrong – it’s actually FI(2) W 10s in the 4.0.2 transmittal.

You might also notice we are not drawing “MANUFACTURES FEATURES”. In the 4.0.2 transmittal, this text is actually “MANUFACTURE’S FEATURES” on the SYMINS attribute of NEWOBJ feature 1810 4127995502 00939. However, this apostrophe causes an issue. The full SYMINS attribute is **TX('MANUFACTURE’S FEATURES',3,2,2,'14109',0,0,CHBLK,11)**. I think most software will struggle to parse this correctly, as the single quotation mark used for the apostrophe is not escaped.

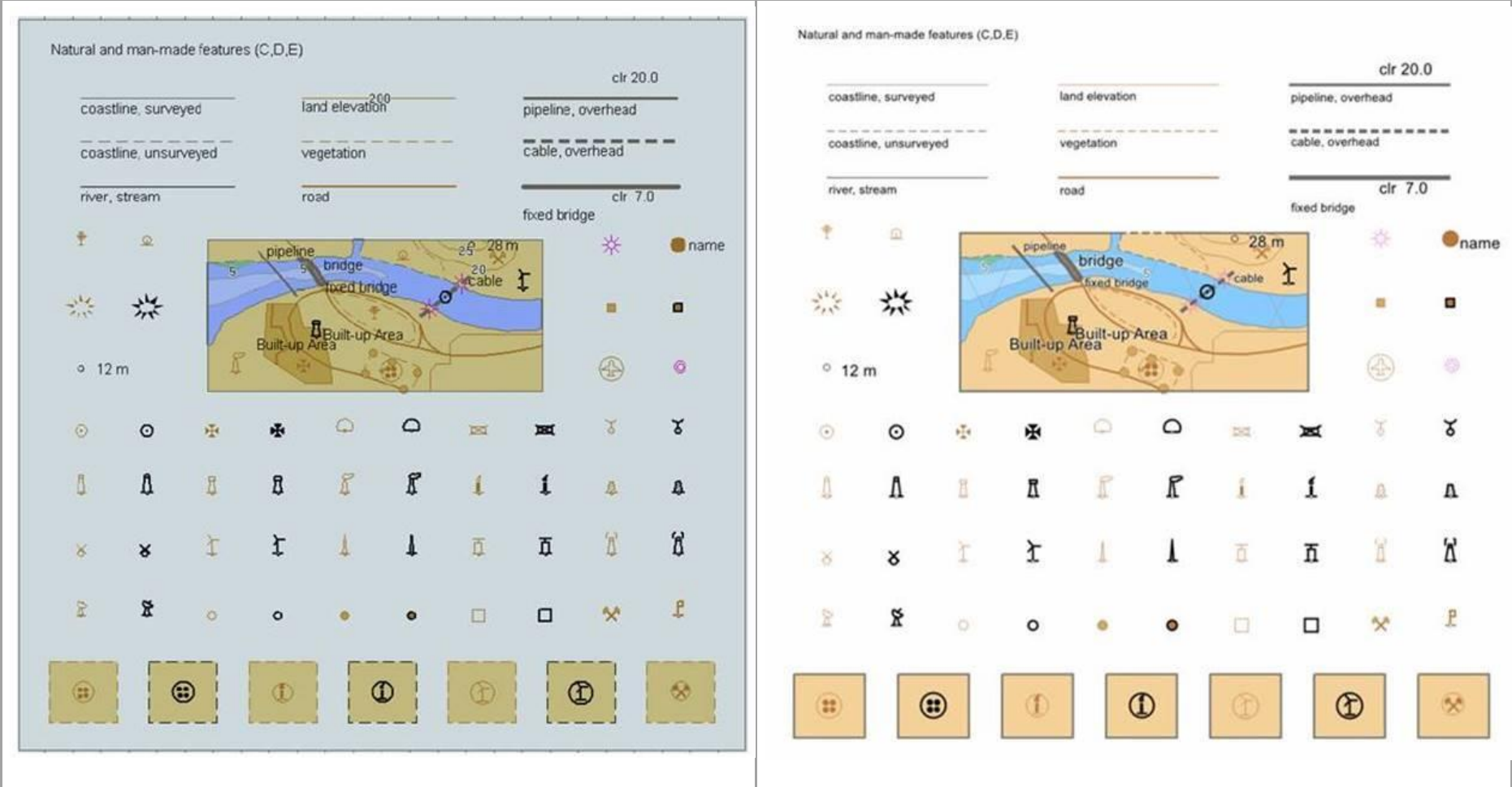


For the CherSoft screenshot, we had to turn Text Group “Value of: magnetic variation; swept depth” off, otherwise swept depths are displayed. This was not necessary for the 4.0.1 transmittal.

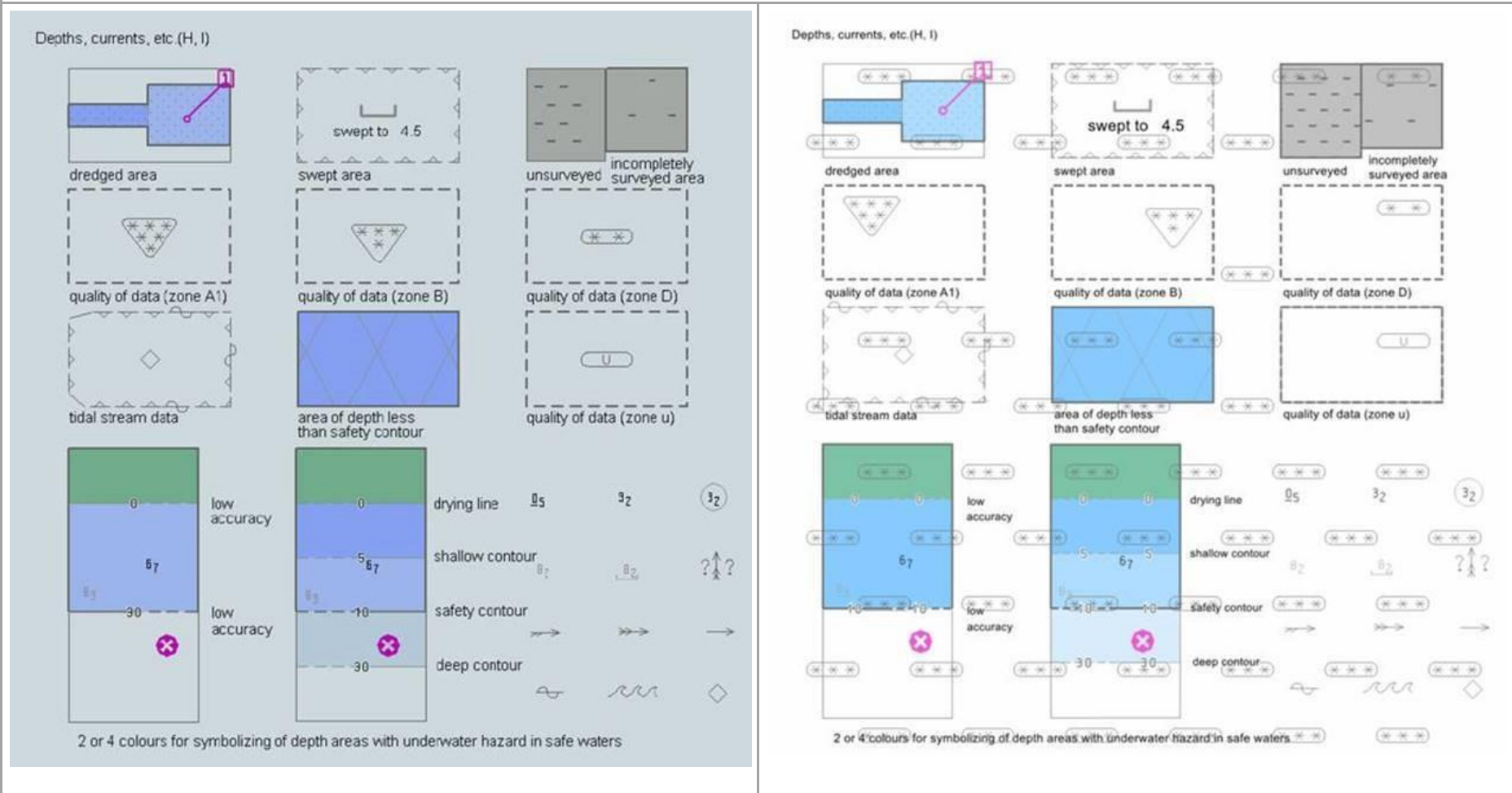
More importantly, this cell illustrates a problem in the .dai presentation library file for the NEWOBJ point symbol. You’ll notice we’re missing the exclamation mark from the circle in our rendition. The instruction in the .dai file is:

SPA;SW1;PU300,300;PM0;CI300;PM1;PU250,70;PD350,70;PD350,350;PD250,350;PD250,70;PU300,475;CI60;PM2;FP;

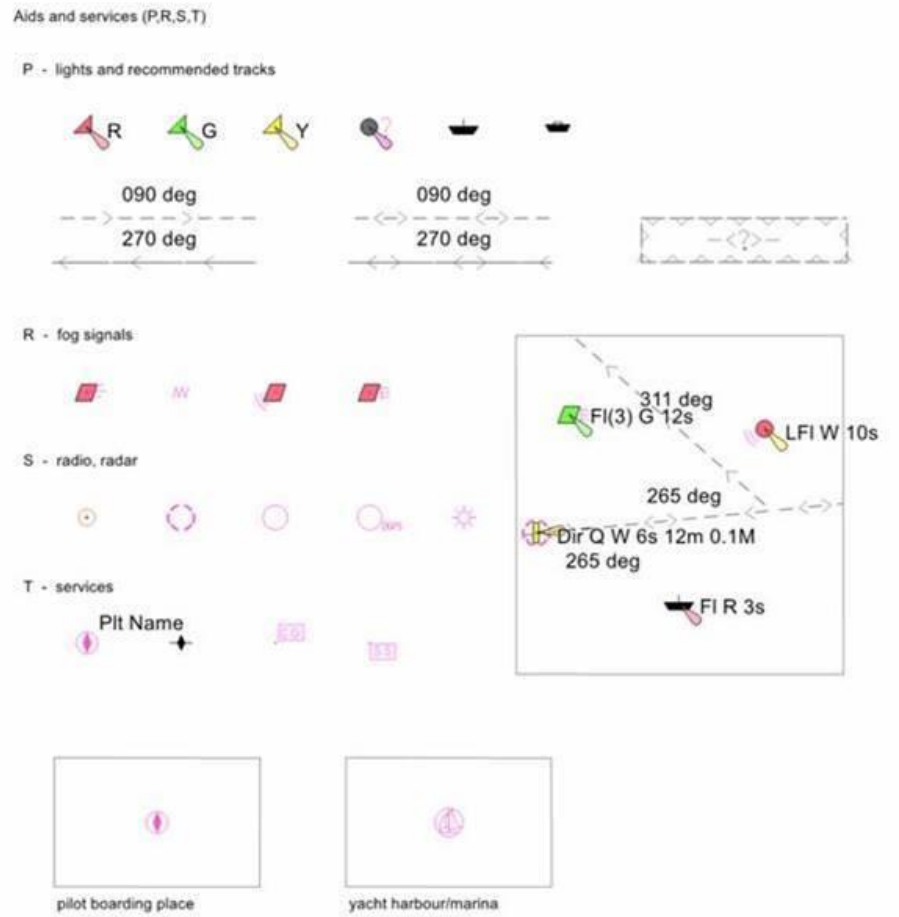
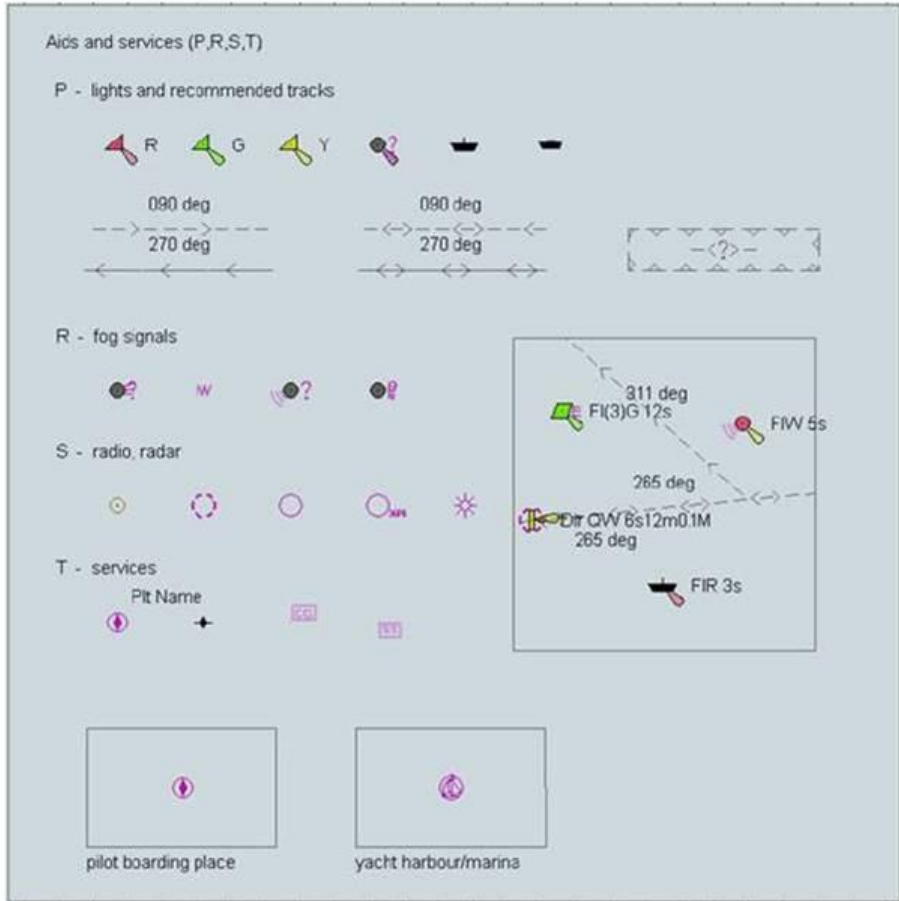
The issue here is that there's one colour instruction at the start (SPA) that sets the pen colour to purple. There's no further colour instruction so we draw the circle and the polygons that make up the exclamation mark in the same colour.



You might notice that in the CherSoft screenshot, we are not showing height contour elevation text for the LNDELV line features. From the .dai file it looks like elevation is only output for LNDELV point features so it's surprising to see it on the S-52 screenshot.



There's a few issues here, but I think the main one is that in the 2 colour depth area symbolisation, the S-52 screenshot shows 30m for the deepest water. I think this is wrong and it should show 10 as that is the depth of the shallower water.



It looks like the symbols used for the fog signals in the S-52 screenshot are just wrong.

Recommendations

It is recommended that the ENCWG review the comments within this paper and take remedial action to correct the issues where necessary.

Action Required of ENCWG

The ENCWG is invited to review the paper and correct the Presentation Library edition 4.0.2 as necessary.