

Paper for Consideration by TSMAD29/DIPWG7

New issues in S-52 new edition around ECDIS Chart 1

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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 for an ECDIS.
Related Documents:	N/A.
Related Projects:	Recently published new edition 4.0.0 of S-52 PresLib

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 have been 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 ECDIS Chart 1 related issues which require fixing of the S-52 PresLib document.

Analysis/Discussion

4. This document includes 2 issues. Below is a summary of issues:
 - Issue 1: Changes made for Chart cells of ECDIS Chart 1 are not updated in the document.
 - Issue 2: Some screen samples of ECDIS Chart 1 include errors which need fixing.
5. All issues in this document are like typos or clear mistakes.

Conclusions

6. All documented issues are true practical problems which need fixing.

Recommendations

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

Justification and Impacts

8. As a whole all issues in this document are small compared to the size of the new editions of S-52.
9. IHO has already published 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).
10. 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). 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 clarification S-52 PresLib ed 4.0.1

Annex – Description of new issues

Issue 1, IHO S-52 PresLib Part I, clause 18.2.4, table of cells for ECDIS Chart 1

Description

- The table is not updated for the changes done in the new edition 4.0.0
 - New cell code for index chart is C1XMS instead of C1X00
 - New cell C1XMNS including examples of New objects has not been added to the table
- Below is proposal for fix of the table as tracked changes

The cells are identified as follows:

cell code	INT 1	Name	comp. Scale	“N”
C1AB1	AB	information about the chart display	1/14 000	5
C1AB2	AB	information about the chart display	1/14 000	5
C1CDE	CDE	natural and man-made features	1/14 000	5
C1FOO	F	port features	1/14 000	5
C1HIO	HI	depths, currents etc.	1/14 000	5
C1JKL	JKL	seabed, obstructions, pipelines etc.	1/14 000	5
C1MOO	M	traffic routes	1/14 000	5
C1NOO	N	special areas	1/14 000	5
C1PRS	PQRSTU	aids and services	1/14 000	5
C1QO1	Q	paper chart buoys and beacons	1/14 000	5
C1QO2	Q	topmarks	1/14 000	5
C1WOO	-	colour differentiation test diagram	1/14 000	5
<u>C1MNS</u>	-	<u>approved new object symbols</u>	<u>1/14 000</u>	<u>5</u>
<u>C1XMS</u> 00	-	index covering all of above detail cells excluding Mariners navigational objects	1/42 000	4

Related parts of S-52 PL

- Chapter 18.2.4

What to do

- Fix the S-52 as proposed

Issue 2, IHO S-52 PresLib Part I, clause 16.2, Screen plots from ECDIS Chart 1

Description

- 3 out of 13 screen plots require fixes for following simple errors:
 - Object “Radio Station DGPS” is presented as question mark in 2 of the plots (Index, Aids and services)
 - Objects “Vegetation – tree in general” and “Vegetation – mangrove tree” are missing in plot for Natural and man-made features
 - Value of land elevation has an error in plot for Natural and man-made features. It should be 200 instead 0.
 - Two objects “Tower” with radio transmission have an error in plot for Natural and man-made features.

Related parts of S-52 PL

- Chapter 16.2

What to do

- Fix the screen samples as below:

Current in S-52, error indicated with red circle	Result after proposed fix
<p>ECDIS SYMBOLS</p> <p>Information about chart display (A,B)</p> <p>Information about chart display (A,B)</p> <p>Natural and man-made features (C,D,E)</p> <p>Port features (F)</p> <p>Depth, currents, etc. (G)</p> <p>Symbols, obstructions, pipelines, etc. (H,I,J,K,L)</p> <p>Tide gauges (M)</p> <p>Special areas (N)</p> <p>Aids and services (O)</p> <p>Buoys and beacons (Q)</p> <p>Topmarks (R)</p> <p>Colour test diagram</p> <p>Scale 1:1000</p>	<p>ECDIS SYMBOLS</p> <p>Information about chart display (A,B)</p> <p>Information about chart display (A,B)</p> <p>Natural and man-made features (C,D,E)</p> <p>Port features (F)</p> <p>Depth, currents, etc. (G)</p> <p>Symbols, obstructions, pipelines, etc. (H,I,J,K,L)</p> <p>Tide gauges (M)</p> <p>Special areas (N)</p> <p>Aids and services (O)</p> <p>Buoys and beacons (Q)</p> <p>Topmarks (R)</p> <p>Colour test diagram</p> <p>Scale 1:1000</p>
<p>Natural and man-made features (C,D,E)</p> <p>cr 20.0</p> <p>coastline, surveyed</p> <p>land elevation</p> <p>pipeline, overhead</p> <p>coastline, unsurveyed</p> <p>vegetation</p> <p>cable, overhead</p> <p>river, stream</p> <p>road</p> <p>fixed bridge</p> <p>cr 7.0</p> <p>name</p> <p>12 m</p>	<p>Natural and man-made features (C,D,E)</p> <p>cr 20.0</p> <p>coastline, surveyed</p> <p>land elevation</p> <p>pipeline, overhead</p> <p>coastline, unsurveyed</p> <p>vegetation</p> <p>cable, overhead</p> <p>river, stream</p> <p>road</p> <p>fixed bridge</p> <p>cr 7.0</p> <p>name</p> <p>12 m</p>

