

S-164 SubWG, M11
13th June 2024

Agenda

1. Intros (and Apologies)
2. Progress Update and communications
 - Summary since last meeting
3. S-164 / S-98 Updates
 - S-164 Datasets and Manual: Update on developments and progress with product specifications
 - S-98 Annex C: Update, drafts and incoming content
 - Product Specification Updates
 - Plan Update – Now -> Summer 2024 – S100WG
4. Breakout meeting summaries
 - None
5. Selected Issues review
 - None
6. Papers
 1. China MSA paper – Safety Contour
7. AOB / Next meeting

Progress update

- S-100WG TSM
 - Some items to add to S-98 Annex C
 - “data loading strategy”
- HSSC
 - New version S-98 Annex C v1.3.0
 - v1.2.0 ENC exchange sets for S-164 (+ new digital signatures)
 - Revision to manual using new form (ch 3 only)
 - Planning for other product specifications
- Other Product Specifications
 - “Summer 2024”
- S-98 Annex C
 - Issues review

S-164 datasets and manual

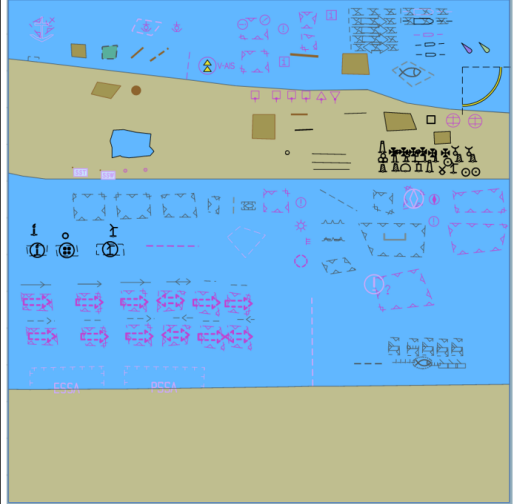
- v1.2.0 upgrade still in progress
- Datasets are all v1.2.0 except
 - Invalid objects
 - Updates
- Exchange sets to follow. Part 3 and Part 1 done
- Dataset upgrades to 1.3.0 are in progress. Exchange sets to follow (maybe?).
- Manual upgrade to new form has started. Most of Section 3 is done and looks much better. Section 1 to follow then Section 2 as it is drafted. Work in progress in repository.

IHO Test Datasets in ECDIS 73

3.1.2 Standard Display category

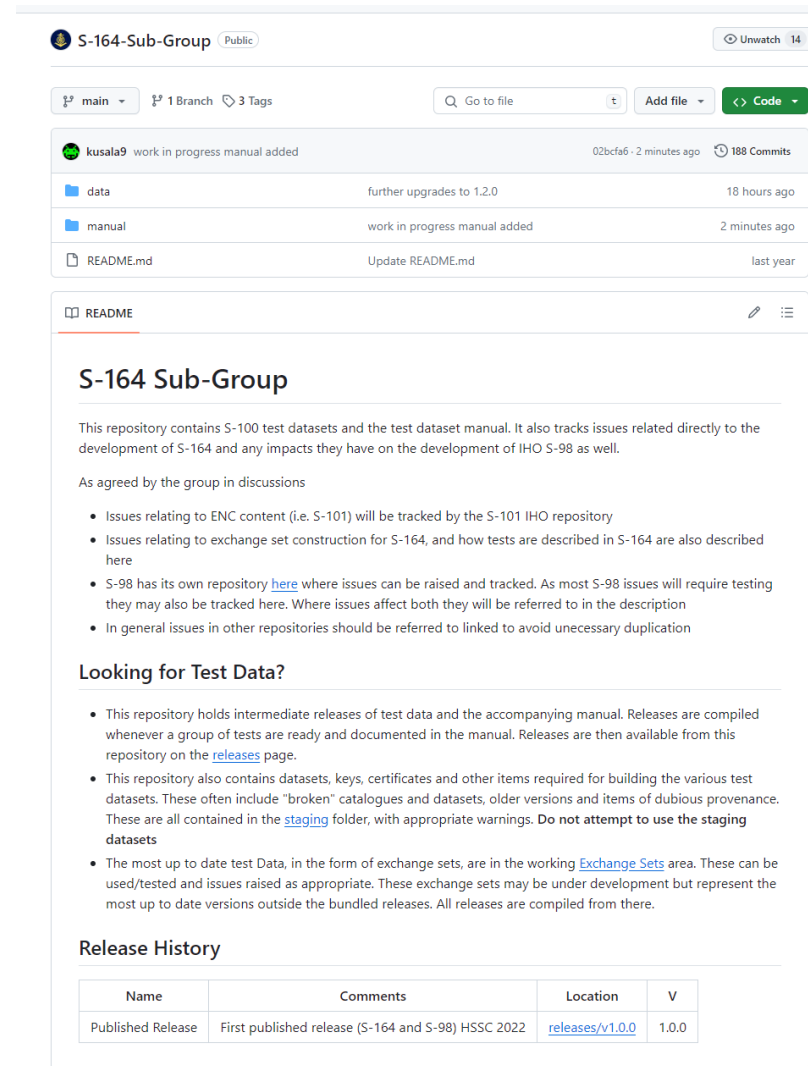
Test Reference	DisplayStandard	IHO Reference	S-98 C-9.5.3
Test Description			
The purpose of the test is to verify by observation that ECDIS correctly displays all S-101 ENC features included in the IMO Standard Display category. The test is performed by loading to ECDIS a test S-101 dataset and checking the display against graphical plots.			
The test ENC dataset 10100AA_STNDR.000 contains depth and land areas from Display Base plus all S-101 ENC features belonging to Standard Display according to the S-101 Portrayal Catalogue. The features belonging to Standard Display are to be shown if Standard Display is selected in ECDIS HMI and should disappear in the Display Base mode.			
Loaded Data			
Exchange Set Name			
DisplayStandard			
Display Mode		Independent Mariner's Selections (default=On)	
Standard		Accuracy	
Context Parameters		Contour label	
Four Shades		Highlight date dependent	
Full Light Lines		Highlight document	
Ignore Scale minimum		Highlight info	
Plain Boundaries	Off	Shallow Pattern	
Radar Overlay		Unknown	
Shallow Contour	-	Update Review	
Shallow Water Dangers		Text Groups	
Simplified Symbols	On	Chart Text	
Safety Contour	10m	Important text	
Safety Depth	10m	Other Text	
Deep Contour	-	Names	
Palette		Light description	
Day		All other chart text	
Date Dependent Objects		Initial Display	
Start Date		Centre	10°5'30.48"N 10°5'23.64"E
End Date		Scale	1:70,000
		Orientation	
Viewing Groups			
Standard Display		Other	
Drying lines		Spot soundings	
Buoys, Beacons, aids to navigation		Submarine cables and pipelines	
Buoys, beacons, structures		All isolated dangers	
Lights		Magnetic variation	
Boundaries and limits		Depth contours	
Prohibited and restricted areas		Seabed	
Chart scale boundaries		Tidal	
Cautionary notes		Miscellaneous (Other)	
Ships' routing systems and ferry routes			
Archipelagic sea lanes			
Miscellaneous (Standard)			
Chart (Standard)			
Alert Highlights (Standard)			
Additional			

IHO Test Datasets in ECDIS 74

Setup
Load the exchange set DisplayStandard (10100AA_STNDR.000) with the following settings provided.
Action
Switch on Standard Display. Check ENC symbols shown in ECDIS against graphical plot
Results
<ul style="list-style-type: none"> - Confirm that depth and land areas from Display Base are shown - The ENC in the ECDIS should be shown as in the picture below (scale 1:70,000).


Repository(s) Organisation

- S-164
 - Contains definitive exchange sets
 - Also has “Staging area” for datasets of different revisions
 - Definitive at the moment is a mix of v1.1 and v1.2.0 – migration to v1.2.0 in progress.
 - Focus has been on ENC content and migration since pre-TSM.
- Definitive Data still located in data/ExchangeSets/S-100. These are exchange sets with new S-100 5.2.0 digital signatures.
- Staging Area has v1.2.0 datasets, and will also contain v1.3.0 datasets once they are complete.
- Chart 1 has its own exchange set and is now also in staging area too. Post PT13 and port to v1.3.0 Chart 1 will be edited to bring in all the necessary symbols.
- “*This is a practice run for v2.0.0 upgrade*” – S-101 version is now centralized, and a number of issues with the exchange set catalogues have been fixed. V2.0.0 exchange set generation should be a lot quicker.
- Happy to take content issues in S-164, we will work with the S-101-Test-Datasets repository if need be.
- Manual (latest work in progress) is in repository too
- Should we move exchange sets to v1.3.0?



S-164-Sub-Group Public Unwatch 14

main 1 Branch 3 Tags Go to file Add file Code

kusala9 work in progress manual added 02bcfa6 · 2 minutes ago 188 Commits

- data further upgrades to 1.2.0 18 hours ago
- manual work in progress manual added 2 minutes ago
- README.md Update README.md last year

README

S-164 Sub-Group

This repository contains S-100 test datasets and the test dataset manual. It also tracks issues related directly to the development of S-164 and any impacts they have on the development of IHO S-98 as well.

As agreed by the group in discussions

- Issues relating to ENC content (i.e. S-101) will be tracked by the S-101 IHO repository
- Issues relating to exchange set construction for S-164, and how tests are described in S-164 are also described here
- S-98 has its own repository [here](#) where issues can be raised and tracked. As most S-98 issues will require testing they may also be tracked here. Where issues affect both they will be referred to in the description
- In general issues in other repositories should be referred to linked to avoid unnecessary duplication

Looking for Test Data?

- This repository holds intermediate releases of test data and the accompanying manual. Releases are compiled whenever a group of tests are ready and documented in the manual. Releases are then available from this repository on the [releases](#) page.
- This repository also contains datasets, keys, certificates and other items required for building the various test datasets. These often include “broken” catalogues and datasets, older versions and items of dubious provenance. These are all contained in the [staging](#) folder, with appropriate warnings. **Do not attempt to use the staging datasets**
- The most up to date test Data, in the form of exchange sets, are in the working [Exchange Sets](#) area. These can be used/tested and issues raised as appropriate. These exchange sets may be under development but represent the most up to date versions outside the bundled releases. All releases are compiled from there.

Release History

Name	Comments	Location	V
Published Release	First published release (S-164 and S-98) HSSC 2022	releases/v1.0.0	1.0.0

- Definitive data – <https://github.com/iho-ohi/S-164-Sub-Group/tree/main/data/ExchangeSets/S-100>
- Staging Area – <https://github.com/iho-ohi/S-164-Sub-Group/tree/main/data/Staging>
- Manual - <https://github.com/iho-ohi/S-164-Sub-Group/tree/main/manual/docs>

S-101 dataset update

- S-101 PT13 17-19 June
- Items of interest (S-98 Annex C, S-164 test cases and test data)
 - Data Loading strategy / drawingIndex
 - optimumDisplayScale
 - Multiple languages
 - textPlacement
 - updateInformation
 - File formats
 - Supplementary files
 - Chart 1
 - Some “GitHub items”
- Are we missing anything?

Product Specs of Summer 2024 – looking ahead

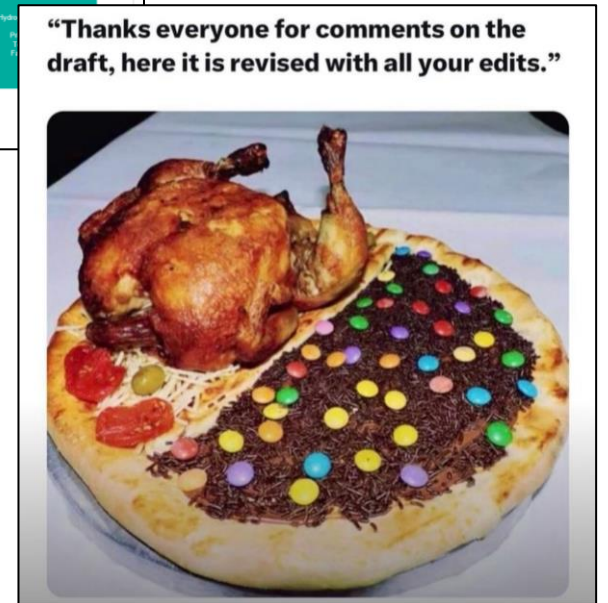
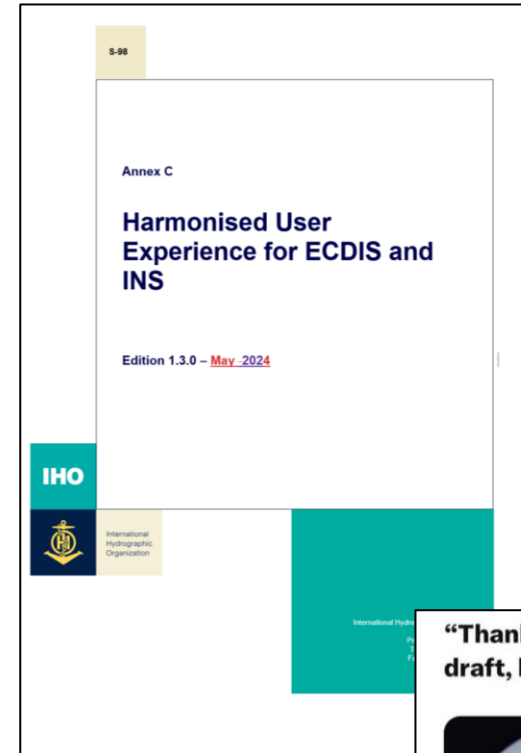
	Scheming/Tests	S-98 A.C	Tools	Comments
S-128	90%	Y 90%	Y 99%	<ul style="list-style-type: none"> NIPWG VTC 21/06/24 Updates (GML) Equivalents not required
S-124	80%	Draft 80%	Y 99%	<ul style="list-style-type: none"> Draft in S-98 (from TSM) Have some content ready
S-104	60%	WLA 75%	Y 90%	<ul style="list-style-type: none"> Regular grids only Multiple Vertical datums? Clarify “coverage”
S-102	60%	WLA 75%	Y 80%	<ul style="list-style-type: none"> Multiple vertical datums? Clarify “coverage”
S-111	80%	Y 90%	Y 90%	<ul style="list-style-type: none"> Supported DCFs need adding
S-129	90%	Y 99%	Y 99%	<ul style="list-style-type: none"> Encoding advice received Scope of test data tbd
S-101	90%	Y 90%	Y 99%	!

Plan update, S-164

- Dates
 - S-101PT14 – June 17-19 – operational S-101 2.0.0 should follow
 - Operational Product specifications for Phase 1 products by “Summer 2024”
- Timeline
 - S-164
 - Datasets almost at 1.2.0. Upgrade to data v1.3.0 in progress
 - Then some testing would be good!!!!
 - Focus June / July on getting ready for upgrade to 2.0.0 (when FC is available)
 - Ensuring all issues are captured for ENC data
 - Finishing existing modifications and making edits on v1.3.0
 - Closing issues as agreed by S-101 PT
 - Finishing Chart 1 updates
 - August
 - Drafting New tests and any edits required
 - Scheming for other Phase 1 datasets
 - Manual ready for other tests and datasets
 - Closing issues
 - September / October
 - Bringing test datasets up to date with last minute changes

S-98 Update (Annex C)

- Review held Feb-March 2024. Feedback received and aggregated into a single document
- Document updated according to received comments
- Comment Sheet and updated document now available on github repository.
 - Comments are numbered in the sheet and in the document to trace source and outcome.
- Not all comments could be addressed. I have some questions and there is much that can be done with the edits so far...
- We need to focus on S-98 Annex C, there are many issues still to be added to the existing document but accepting the comments so far is the priority.
- So.....



S-98 Annex C (cont'd)

- A series of meetings to accept (or otherwise) the comments made so far. [June / July]. v1.3.0
- In parallel the bigger gaps will be prepared ready to add (v.1.4.0)
 - Existing issues (incl agreed items from S-101PT)
 - Agreed new content
 - Outstanding comments and sections
- So
 - If you want to help edit the existing comments attend the separate S-98 Annex C meetings in June/July or send feedback to those meetings
 - If you have input to S-98 Annex C (product specific functionality which isn't captured, or just comments on what is there) raise a GitHub Issue or reference an existing one.
- Summer 2024 (=August?) Add prepared content + any new content as required by mature product specifications
- September, detailed review (F2F) and last chance for new content (v.1.5.0)
- October, new version (v1.5.0), changes and new content (which missed September)

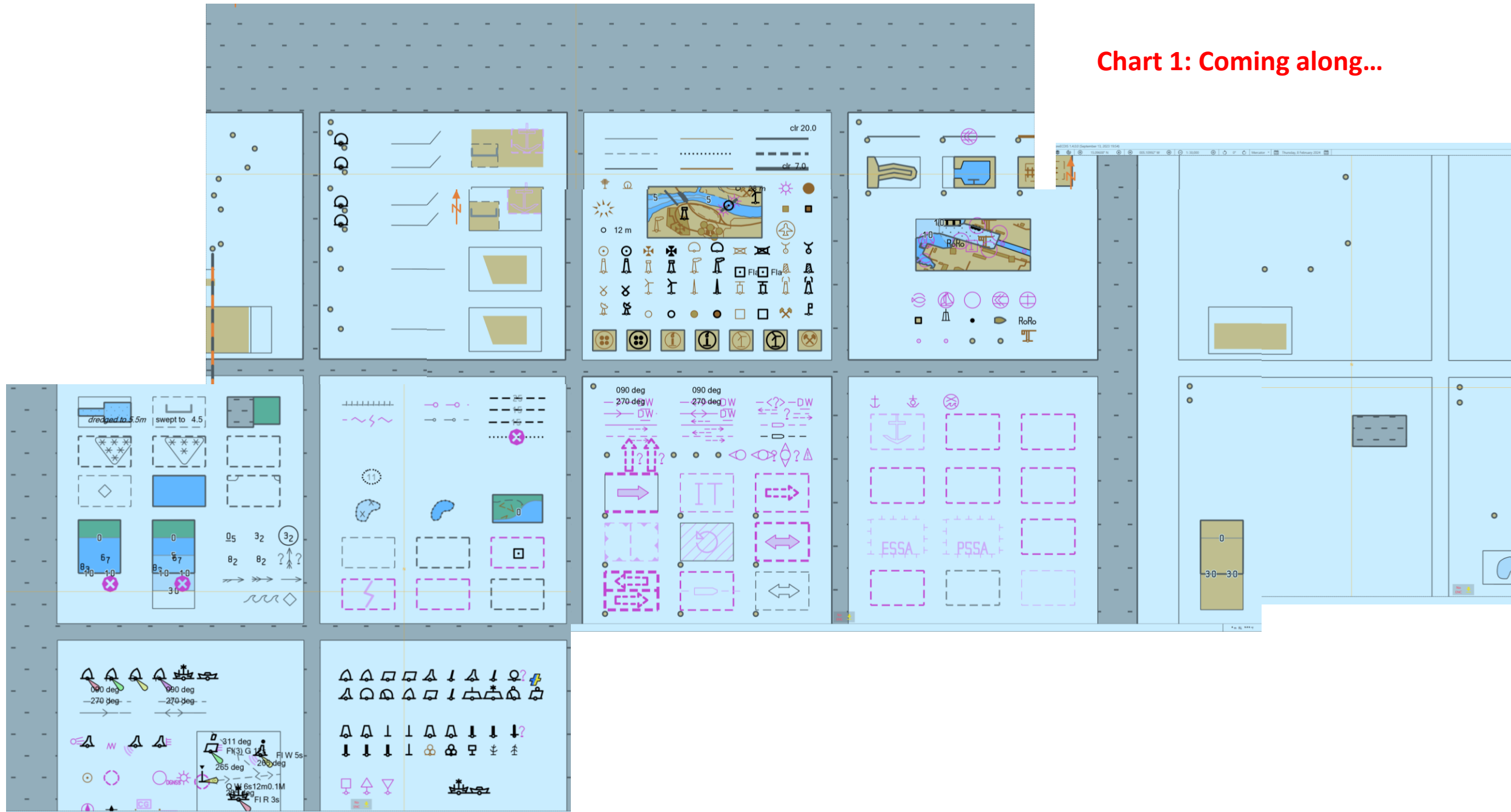
Risks and mitigations...

- Lots of content still to add and agree between the various stakeholders
- Summer 2024 for mature product specifications will be a challenge to prepare data, tests and any S-98 Annex C documentation
- Very little testing of a number of tests is possible.
- Little margin for error if problems are found
- Everyone is Very Busy
- Testbed functionality is very advanced
- Offers of software to assist with preparation of the standards
- Automation of exchange set creation
- Tools for data preparation are much more mature
- Slowdown in new issues
- It is easier to update data, than documentation. Focus will be on getting documents ready for November S100WG meeting.

The Hitlist – Gaps, priorities

- Existing changes to S-98 Annex C (v1.3.0)
- Insert Loading strategy (if agreed) – get the words right.
- Manual updates section (needs portrayal and FC)
- Interoperability (currently untouched)
- Data Quality Portrayal (alerts, indications, taking accuracy into account)
- SSE codes needs review and approval
- Data Service provision
 - Encrypted datasets, permits, updates, support files etc etc...
- File lifecycle
 - Support files, cancellations etc...
- S-101 items
 - Data Edits and Specific Test Cases
 - Updates once everything agreed (e.g. optimumDisplayScale etc...), scales and scheming
 - Have we missed anything?
- Other products
 - S-124 review and update
 - Have we missed anything?
- S-102/S-104
 - Multiple vertical datums, define “overlaps” and coverage better in WLA
 - Have we captured ALL the right scenarios?

Chart 1: Coming along...



Information about
 Chart display (A,B) SY (INDHLT01) SY (INFORM01) SY (CHINFO10) SY (CHCRDEL1) LC (CHCRDEL1)

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)

Seabed, obstructions, pipelines, etc. (J, K, L)

Traffic routes (M)

Special areas (N)

Aids and services (P,R,S,T,U)

Buoys and beacons (Q)

Topmarks (Q)

Approved new object symbols

15 08

ECDIS SYMBOLS

SY (CHCRID01) LC (CHCRID01)

SY (DNHGLIT)

LC (NONHODAT)

WRECKS01
 ISODGR01
 DANGER02
 OBSTRN03
 WRECKS05

? COLOUR

SY (TSLDEF51)

Topmarks (Q)

Category Name here

Needs approval at S-101PT to continue as an S-101 ENC, otherwise it becomes "S-164"

Papers

- China MSA has carried out a testbed looking at S-102/S-101 and generation of safety contours using various methods.
- Two approaches and four options for generation of safety contours from a combination of S-102, S-101 and S-104.
 - **The first approach** focuses on displaying safety contours by distinguishing safe and unsafe water areas through linear coloring method without generating new line features
 - **The second approach** leans towards creating new safety contours by extracting line features.
- Please review the paper. Even if S-98 Annex C does not recommend algorithms and processing, it may be useful to made recommendations in other IHO guidance.
- S-98 Annex C experts should provide input to HDWG as appropriate.



Recommendations

1. Based on the description provided in Annex C of S-98, the safety contours can be generated from S-102 data or the depth information after WLA processing, and the concept of SENC should be extended to cover all S-100 products. Thus, it is recommended to **update the definition of Own Ship's Safety Contour in IHO Hydrographic Dictionary**. For instance, the definition could be: the contour related to the own ship selected by the mariner from the contours provided for in the SENC or generated from depth information in the SENC, to be used by ECDIS to distinguish on the display between the safe and the unsafe water, and for generating anti-grounding alarms.
2. **Discuss the approaches and options analyzed above for generating safety contour** and clarify whether manufacturers need to extract and create new datasets for safety contours in interoperable scenarios, or whether they can effectively display safety contours through visual representation without generating any new line features.

Action Required of S-164/S-98SG

The S-164/S-98SG is invited to:

1. Note the paper.
2. Discuss the Recommendation 1 and update the definition of Own Ship's Safety Contour.
3. Discussion on the Recommendation 2 and make explicit decisions.

Any other business?

- Separate S-98 Annex C review meetings
- Next meeting for S-164/S-98 subWG
- Possible F2F in September 18-20?
- Significant Issues?
- Other inputs?

Questions arising from S-98 A.C comments (Examples)

- Where is ENP actually defined? Is it in IMO references.?
- We've agreed "must" as the language for mandatory requirements. Document needs to be adjusted to identify all things mandatory (and ensure that things which are specified elsewhere are captured)
- S-421 – do we need to include S-421 (and SECOM?) in S-164 test data, and S-98 Annex C at all? If so, is it an import of S-421 exchange set, or SECOM encoded data?
- Interoperability is untested as yet. Shouldn't it be turned on all the time?