

S-164 SubWG, M10
9th February 2024

Agenda

1. Intros (and Apologies)
2. Progress Update and communications
 - Summary since last meeting
 - Plan Update – Now -> HSSC and beyond
3. S-164 / S-98 Updates
 - Datasets and Manual: Update on developments and progress
 - S-98 Annex C: Update on progress
 - S100WG action items + outputs
 - S-128 update
 - S-124 item(s)
 - Data Quality Portrayal
4. Breakout meeting summaries
 - None
5. Selected Issues review
6. AOB / Next meeting

Progress update

- No submission to HSSC required.
- S-164 and S-98 will follow the development of S-101
- Do you want to change the layout of S-98?
- Releases
 - S-164 Manual + Datasets released v1.2 just before xmas
 - S-98 Annex C v1.2 will be posted 9th Feb after meeting on GitHub
- Focus has been on
 - Dataset construction for existing tests (while product specs are being released)
 - Preparing v1.2 data to upgrade exchange sets
 - Preparation for S-100 5.2.0 (digital signature support)

Plan updates

- Dates

- S-101PT13 – Feb 13-15
- S-100 TSM – March 12-15
- HSSC deadline – April 8th, HSSC
- S-101 v2.0 release (PS+FC+PC) – Summer 2024 after S-101PT14 June
- **Expecting Operational product specs for HSSC, S-128, S-124, S-129 & S-102/S-104**

- Timeline

- S-164 - TSM
 - Upgrade to data v1.2
 - Release Manual, v1.2 ENC content with S-100 5.2.0 exchange set (new signatures) – 5th March, before TSM.
- S-98
 - Update with selected Issues. 9th Feb. Update until TSM.
- TSM – Review issues which require focused discussion
- **HSSC. Update on progress. Should have issues captured by then from other product specs**
- Summer 2024 – upgrade of S-101 to v2.0, construction of other product specs including S-128

- **November S100WG Goals?**

Repository Organisation

- Data still located in data/ExchangeSets/S-100
- Some has been ported to v1.2 of ENC, currently located in staging area prior to being brought into the main build.
- Except Chart 1 which has its own exchange set.
- Once exchange sets are using new digital signatures the data will be upgraded to v1.2
- Catalogues will also be updated to reflect the live versions of the data
- Expect to finish this process by TSM
- Live data is in ExchangeSets, test versions are in Staging
- Issues being raised on data content in S-164 repo, may be good to move datasets to S-101-Test-Datasets to keep the issues separate.
- This is a practice run for v2.0.0 upgrade 😊

Name	Last commit message	Last commit date
..		
Chart1Dev/S100_ROOT	update to Chart 1 cells	2 days ago
CorruptData/S100_ROOT	fix coverage in corrupt data	last month
CorruptFeatureCatalogue/S100_ROOT	Corrupt Feature Catalogue added	2 months ago
DisplayOther/S100_ROOT	more intermediate folders	2 months ago
DisplayPriorities1/S100_ROOT	Sequential Updates	2 months ago
DisplayStandard/S100_ROOT	added display standard	2 months ago
GoodBaseCells/S100_ROOT	exchg sets for 2.3.4 mismatched updates/base cells	last month
InitialCatalogues/S100_ROOT	Tidled up initial catalogues	2 months ago
InitialPowerUp/S100_ROOT	Initial Power Up + some intermediate folders	2 months ago
InvalidObjects/S100_ROOT	update to invalid objects content	3 weeks ago
InvalidSequence001/S100_ROOT	exchg sets for 2.3.4 mismatched updates/base cells	last month
InvalidSequence002/S100_ROOT	exchg sets for 2.3.4 mismatched updates/base cells	last month
InvalidSequence003/S100_ROOT	exchg sets for 2.3.4 mismatched updates/base cells	last month
InvalidSequence004/S100_ROOT	exchg sets for 2.3.4 mismatched updates/base cells	last month
InvalidSequence005/S100_ROOT	exchg sets for 2.3.4 mismatched updates/base cells	last month
NavigationalHazards/S100_ROOT	moving folders to intermediate S-100_ROOT	2 months ago
NavigationalHazardsOverview/S100_ROOT	moving folders to intermediate S-100_ROOT	2 months ago
NewUpdate/S100_ROOT	exchg sets for 2.3.4 mismatched updates/base cells	last month
OldUpdate/S100_ROOT	Old Update xchg set added	last month
Overlap/S100_ROOT	fix overlap and polar data	2 months ago
Part15/InvalidPermitFile	new exchange sets for Settings	4 months ago

Name	Last commit message	Last commit date
..		
10100AA_DBASE.000	changes to Mooring Area in DBASE	last week
10100AA_OTHER.000	add values to local magnetic anomaly	last week
10100AA_STNDR.000	populate attributes for distnace mark unit of measurement	last week
README.md	Update README.md	2 weeks ago

README.md

S-101 edition 1.2 versions of Base, Standard and Other

No guarantees, these are converted to v1.2 by decompiling, then recompiling with the right headers etc in them. All feedback welcome. I will work with S-101 Test Datasets team to see if they want to adopt these as the current versions.?

Please raise issues on content in this repository for fixing.

Exchange Set List

- Exchange sets in bold are complete (for now)
- Many require data edits / enhancements
- Require supplementing with other Phase 1 products
- New tests may require new datasets.

AdditionalCell

Chart1

CorruptData

CorruptInteroperabilityCatalogue

CorruptPortrayalCatalogue

CorruptUpdates

DisplayBase

DisplayOther

DisplayPriorities1

DisplayStandard

DisplayUnclassified

DualFuelInitial

DualFuelNavigationalHazards

DualFuelNavigationalHazardsOverview

DualFuelPreference

DualFuelSafetyContour

DualFuelSimple

DualFuelSimpleUpdate

DualFuelSpecialConditions

DualFuelUpdate

GeodesicPlotting

SequentialUpdate1-5

GoodBaseCells

InitialCatalogues

InvalidFeatures

InvalidSequence[1-5]

LanguagePacks

NavigationalHazards

NavigationalHazardsOverview

NewProduct

NewUpdate

OldUpdate

Overlap

PolarData

PowerUp

PowerUpCatalogueUpdates

PowerUpCatalogues

Reissue001

Reissue004

ReissueX01SW

SafetyContour

ScaleMinimum

SequentialUpdate

Settings

SpecialConditions

UpdatedCatalogueData

UpdatedInteroperabilityCatalogue

WLAInvalid

SequentialUpdate1-5

Current dataset/exchange set plan

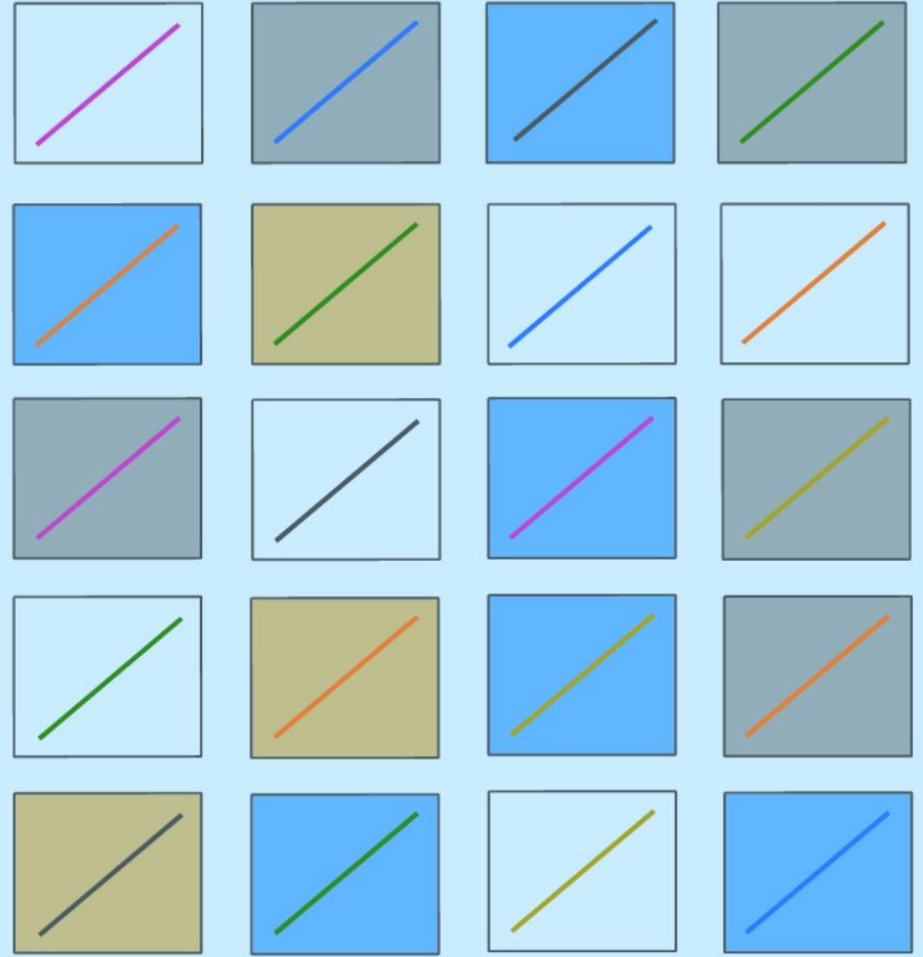
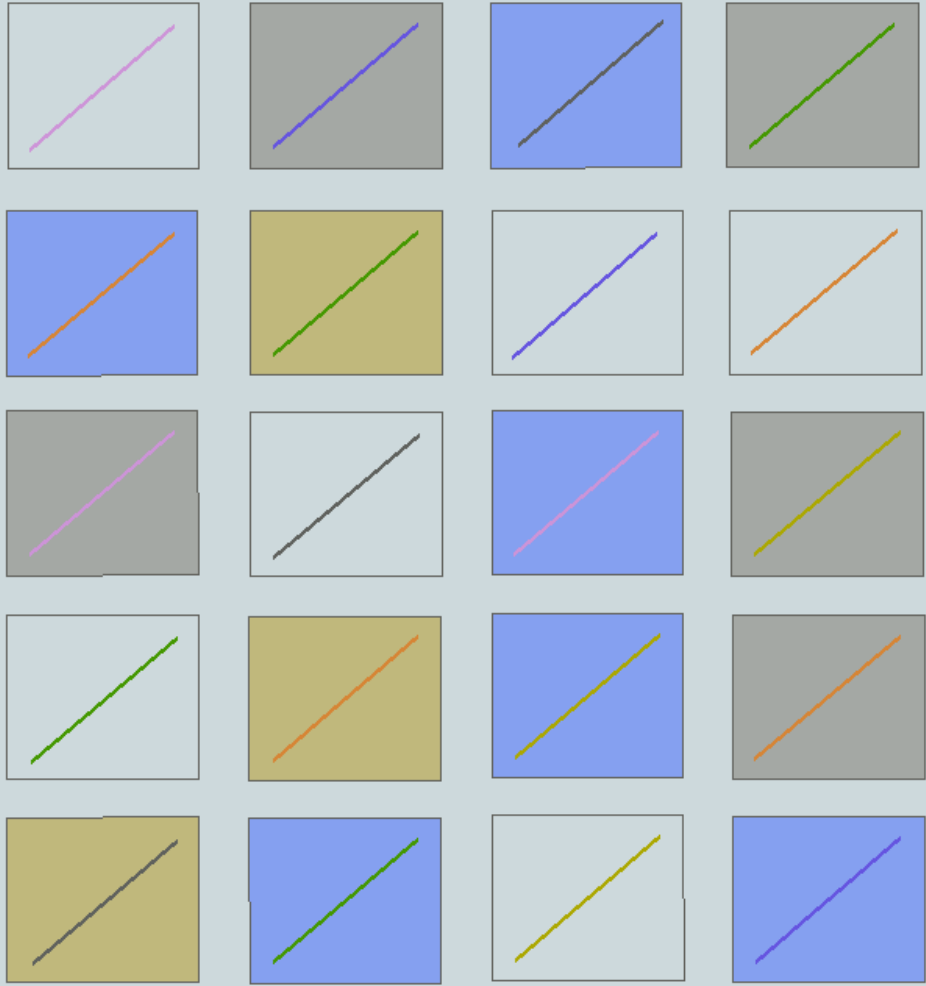
- V7 (TSM – mid March)
 - All S-101 on v1.2
 - All exchange sets on S-100 5.2.0
 - First versions of encryption and authentication
- v8 (April)
 - S-98 (non Annex C content) begins
 - Service Elements (again)
 - Focus on S-101 input & corrections to cells
 - New tests (from GitHub Issues)
 - Prototypes for S-124/S-128
 - S-102/S-104 initial versions
- v8 (June)
 - Refine S-102/S-104
 - Integrate S-124/S-128 and S-129
 - Data Fixes
 - Finalise Tests (additions)
 - All Dual Fuel exchange sets
 - Release Manual v1.4
- v9 [Summer]
 - Integration of other Phase 1 products
 - Data Fixes
- v10 (when FC/PC 2.0.0 are available + 1 month)
 - Upgrade data to 2.0.0
 - First candidate release, Manual + S-98 Annex C

Chart 1: Coming along...

The image displays a grid of 12 panels, each illustrating different symbols and symbols used in nautical charts. The panels are arranged in three rows and four columns:

- Top Row:**
 - Panel 1: Symbols for dredging, including 'dredged to 5.5m' and 'swept to 4.5'.
 - Panel 2: Symbols for various navigational aids and structures, including a red lightning bolt symbol.
 - Panel 3: A central panel showing a variety of symbols for lights, buoys, and structures, with a small inset map showing a harbor area.
 - Panel 4: Symbols for specific navigational features, including a 'RoRo' (Roll-on/Roll-off) symbol.
- Middle Row:**
 - Panel 1: Symbols for depth soundings and other navigational data, including '0.5', '3.2', '3.2', '0.5', '0.2', '0.2', and '3.0'.
 - Panel 2: Symbols for various navigational aids and structures, including a lightning bolt symbol.
 - Panel 3: Symbols for various navigational aids and structures, including a lightning bolt symbol.
 - Panel 4: Symbols for various navigational aids and structures, including a lightning bolt symbol.
- Bottom Row:**
 - Panel 1: Symbols for various navigational aids and structures, including a lightning bolt symbol.
 - Panel 2: Symbols for various navigational aids and structures, including a lightning bolt symbol.
 - Panel 3: Symbols for various navigational aids and structures, including a lightning bolt symbol.
 - Panel 4: Symbols for various navigational aids and structures, including a lightning bolt symbol.

Colour test diagram



Current S-98 Layout.

- S-98 Main - Data Product Interoperability in S-100 Navigation Systems
 - Part A – Level 1 Interoperability
 - Part B – Level 2 Interoperability
 - Part C – Level 3 Interoperability
 - Part D – Level 4 Interoperability
- Annex A - Operational Contexts, Scenarios and Use Cases
- Annex B - Validation Checks [for Interoperability Catalogues]
- **Annex C - Harmonised User Experience for ECDIS and INS**
- [Annex D – Cross Product Validation Tests S100WG8 ?]

S100 WG8 outputs for consideration by S-164/S-98

- Include distinct Appendix in S-98 defining checks for compatibility between datasets from different Product Specifications. (in particular for S-98 Annex C WLA).
- Include section in S-98 Annex C for Manual Updating And Editing
- Submission to HSSC – v2.0.0 not required for HSSC
- Work with Validation SubWG and DQWG on definitions and scope of validation tests.
- Consider language functionality (once agreed). Paper to be submitted by S-101PT
- Interoperability Identifier – updates to be written by CCG (EM)
- Support Files Concept. Describe in S-98 Annex C service element principles.
- Consider Papers
 - Corrections for Mariner's information
 - ECDIS Legend
 - Overscale Pattern

Meeting review Items.

- UKHO S-98 updates on updates
- Dataset Lifecycle – Primar / S100WG
- Referred papers from S100WG
 - Issue 34 – ECDIS Legend
 - Issue 35 – Overscale Pattern
 - Issue 33 – Corrections for Mariner’s information
- S-124 functionality
- Portrayal SubWG issues

Data Lifecycle

- Input from Primar
- Scope
 - Include better descriptions of data lifecycle in S-98 Annex C
 - Clarify, in particular
 - Cancel/replace including fileless cancellation
 - Referencing, Sharing, Update and Delete of Support files
- What else is required?

12-1.1.1 ECDIS Legend

The ECDIS chart legend containing the following elements should be available for display of values derived from at the position selected by the Mariner. Table C-1 indicates which ENC data elements should be used.

NOTE: The legend is currently described in terms of elements of the Dataset Identification (DSID) record in dataset headers in the ISO 8211 encoding as well as dataset discovery metadata because neither the dataset header nor discovery metadata contain all the elements of the legend.

ECDIS Legend Item	Values
Units for depth	Axis Unit of Measure (AXUM) subfield in the Coordinate System Axes (CSAX) field
Units for height	AXUM subfield in the CSAX field
Note: Units for depth and height: although the S-101 ENC Product Specification does not allow any units other than metres for depths and heights, these two elements should be stated for clarity for the Mariner	
Scale of display	Selected by mariner
Data quality indicator	<p>(a) verticalUncertainty.uncertaintyFixed (SQUACC)zoneOfConfidence.categoryOfZoneOfConfidenceInData (CATZOC) attribute of the Quality Of Bathymetric Data (M_QUAL) meta-feature.</p> <p><u>NOTE: When multiple temporal attributes are present:</u></p> <ul style="list-style-type: none"> <u>If a single attribute value is valid for the selected viewing date range, that value should be displayed.</u> <u>If multiple values are valid for the selected viewing date range, the worst-case value should be displayed.</u> <p><u>NOTE 2: When multiple features are present (to indicate bathymetric data quality at various depths):</u></p> <ul style="list-style-type: none"> <u>The feature which intersects the specified safety contour value should be used.</u> <p>(b) —) Total horizontalPositionUncertainty.uncertaintyfixed (POSACC) attribute of the Quality Of Non-Bathymetric Data (M_ACCY) meta-feature if available.</p>
Note: Due to the way quality is encoded in the ENC, both values (a and b) should be used	
Sounding/vertical datum	The soundingDatum and verticalDatum fields of the dataset discovery metadata in the exchange catalogue, or the verticalDatum attribute of the SoundingDatum feature and VerticalDatum feature when available. (verticalDatum attributes of individual features should not be used for the legend.)
Horizontal datum	WGS84
Value of safety depth	Selected by Mariner. Default is 30 metres

5.3	S-98 Annex C ECDIS legend	S-100WG8 noted that the change proposal will be reviewed by S-98/S-164 SG.
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clarify / correct S-98 Annex C requirements related to the ECDIS legend.

ECDIS Legend Item	Values
Value of safety contour	Selected by Mariner. Default is 30 metres
Note: If the Mariner has selected a contour that is not available in the ENC and the ECDIS displays a default contour, both the contour selected and the contour displayed should be quoted	
Magnetic variation	<p>MagneticVariation (MAGVAR) feature, attributes: <i>referenceYearForMagneticVariation (RYRMGV)</i>, <i>valueofAnnualChangeInMagneticVariation (VALACM)</i>, and <i>valueOfMagneticVariation (VALMAG)</i></p> <p>Item should be displayed as: VALMAG RYRMGV (VALACM) For example, 4°15W 1990 (8'E)</p>
Date and number of latest update affecting chart datasets currently in use	Issue date and update number from the dataset discovery record (<u>S100 DatasetDiscoveryMetadata</u>) of the last update dataset applied. (See S-100 Part 17)
Edition number and date of the ENC	Edition number and issue date from the dataset discovery record (<u>S100 DatasetDiscoveryMetadata</u>) of the current base issue of the ENC dataset. (See S-100 Part 17)
Chart projection	Projection used for the ECDIS display (For example, oblique azimuthal). This should be appropriate to the scale and latitude of the data in use

Table C-1 - Legend elements

The list above is the minimum that should be available, but the complete list need not always be shown. Individual items may be picked by the mariner for display for a period; examples are magnetic variation, data quality for depths, etc.

Change Proposal

Update S-98 Annex C table C-14 to reflect S-101 implementation of new alert requirements included in MSC.530(106).

5.2	Corrections for Mariner's information	S-100WG8 noted that the change proposal will be reviewed by S-98/S-164 SG.
5.2	S-98 Annex C	S-100WG8 noted that the change proposal will be reviewed by S-

Change Proposal Justification

S-52 provides a single viewing group (53010) to toggle alert highlights. This viewing group is used for both the danger highlight (DNGHLT) and indication highlight (INDHLT).

MSC.530(106) and IEC 61174 now require that the graphical highlight associated with an alert can be toggled on/off separately for each type of prohibited area or area with special conditions. To support this requirement, S-101 uses viewing groups 53011 – 53024 to represent the various indication highlights. In S-101 viewing group 53010 is only used to represent the danger highlight.

Groups	Contents
MARINERS' FEATURES	
53000	Mariners' Features
53010 ¹	Danger highlight (dnght)
53011 ²	<u>Nav hazards highlight</u>
53012 ²	<u>Proh Are highlight (Traffic separation zones)</u>
53013 ²	<u>Proh Are highlight (Inshore traffic zones)</u>
53014 ²	<u>Proh Are highlight (Restricted areas)</u>
53015 ²	<u>Proh Are highlight (Areas to be avoided)</u>
53016 ²	<u>Proh Are highlight (Particularly Sensitive Sea Areas)</u>
53017 ²	<u>Proh Are highlight (Caution areas)</u>
53018 ²	<u>Proh Are highlight (Offshore production areas)</u>
53019 ²	<u>Proh Are highlight (User defined areas to be avoided)</u>
53020 ²	<u>Proh Are highlight (Military practice areas)</u>
53021 ²	<u>Proh Are highlight (Seaplane landing areas)</u>
53022 ²	<u>Proh Are highlight (Submarine transit lanes)</u>
53023 ²	<u>Proh Are highlight (Anchorage areas)</u>
53024 ²	<u>Proh Are highlight (Marine farm/aquaculture)</u>
53030	Mariners' information note (marnot catnot 1)
53040	Mariners' cautionary note (marnot catnot 2)
53050	Mariners' feature (marfea)

Table C-14 -Viewing groups and their contents for mariners' information - Standard Display

¹ – See IEC 62288 ed. 2.0 Table A.3 entry 3.5 a Mariner danger highlight.

² – See IEC 62288 ed. 2.0 Table A.3 entry 3.5 c Caution highlight.

^{1,2} – These viewing groups are used to toggle alert highlights. Although mariners' features are not normally catalogued, these will be included in the portrayal catalogue when referenced from the alert catalog.

12-1.1.1 Overscale area at scale boundary

ECDIS displays all chart data at the same scale. In order to avoid leaving part of the display blank, the display may be rendered using data from multiple datasets. These datasets may contain **Data Coverage** areas with varying *maximumDisplayScales*.

The area fill OVERSC01 must be used to indicate **Data Coverage** areas displayed **X2 or more** larger than the *maximumDisplayScale*; provided that the area was displayed automatically by the ECDIS in order to avoid leaving that portion of the display blank.

NOTE: This rule applies only to the automatic overscaling performed by the ECDIS in matching ENC's at different *maximumDisplayScales*. It should not be applied to an overscale display deliberately requested by the mariner, which should trigger the overscale indication required by IMO Performance Standard MSC 530(106) section 6.1.1.

A different overscale situation arises when the ship approaches a scale boundary from a larger to a smaller scale ENC, typically when leaving harbour. In combining data from the large scale and the small scale ENC's to generate a display at the larger scale, the ECDIS will have "grossly enlarged" the small scale data.

In addition to drawing the scale boundaries, the "grossly overscale" part of the display should be identified with area fill OVERSC01, as illustrated in Figure C-1.

In this context, "grossly enlarged" and "grossly overscale" should be taken to mean that the display scale is enlarged/overscale **by X2 or more** with respect to the *maximumDisplayScale*. For example, at the left edge of [Figure C-1](#) the display scale of 1/12,500 is X4 the *maximumDisplayScale* of 1/50,000, and so the overscale pattern is required.

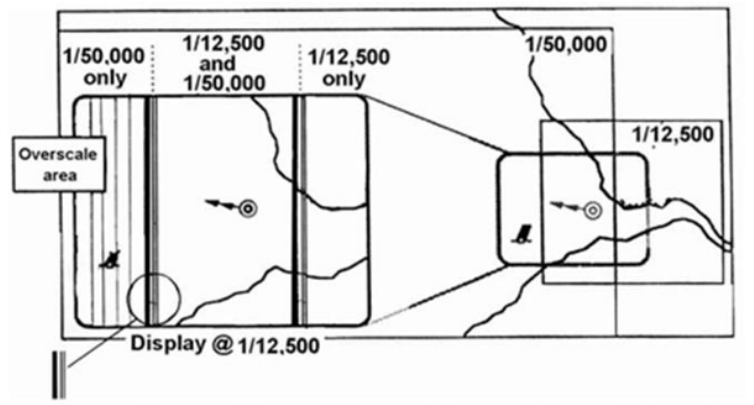


Figure C-1 - Illustration of overscale display

[The right hand side of the Figure shows the ENC layout with the screen window overlaid, and the left hand side is enlarged to show the ECDIS display on that screen.]

Note that in this situation the OVERSC01 area fill should only be shown on the area compiled from the smaller scale ENC. If the area from the larger scale ENC is also overscale, this should be indicated by the "overscale indication". The OVERSC01 area fill should not be shown on the part of the display taken from the larger scale ENC. For example if the display scale of the situation in the data coverage diagram was 1/3,500 the area of compilation scale 1/12,500 would have an overscale indication of X 3.6 but would have no OVERSC01 area fill.

5.4	S-98 Annex C overscale pattern	S-100WG8 noted that the change proposal will be reviewed by S-98/S-164 SG.
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Change Proposal

The attached redlines align the overscale pattern requirement with the S-101 PS and the intended purpose of the equivalent S-52 requirement.

Change Proposal Justification

S-52 uses double ("X2") the compilation scale as the criteria for display of the overscale pattern, identifying these areas as "grossly overscale".

S-101 defines "Maximum Display Scale" as "the maximum (largest) scale with which the data is intended to be displayed." It further requires the overscale pattern to be displayed when "the MSVS is larger than the value indicated by **maximum display scale**". In this context, the data is "grossly overscale" when displayed at scales larger than the **maximum display scale** (beyond the intended use of the data).

The proposed change aligns the S-98 Annex C overscale pattern requirement with the intent of the S-52 requirement, and with the current S-101 PS requirement.

S-124 - 1

10.2 Dataset loading

10.2.1 Use of S-124 in ECDIS

In ECDIS all valid S-124 datasets must always be loaded. Validity is indicated by the **cancellationDate** attribute in the **NAVWARNPreamble** class, and any point in time prior to this time value the dataset is valid. If the **cancellationDate** attribute is empty this means the dataset is valid until **cancelled by a new dataset**. Validity is terminated if a cancellation dataset is issued before the **cancellationDate** of a dataset.

Validity is also indicated by the NAVWARN being present in the latest in-force bulletin. Any dataset prior to and not found in the latest in-force bulletin must be considered not valid.

This is covered by existing date-dependent features

10.2.2 In-force bulletin

If the in-force bulletin contains one or more NAVWARNs that are not present in the system, an indication should be given.

Not covered anywhere. ECDIS needs to parse in-force bulletins and display indication

S-124 - 2

Specific interface required
for S-124 NAVWARN

Not currently specified.

12.1 Portrayal requirements of the Graphical User Interface

A dedicated interface is required to provide users with interaction with NAVWARN messages. This interface should be linked to an individual user so that the risk of missing information during watch handover is reduced. This interface shall, at a minimum, provide functionality for;

- a) The user shall be able to tag individual messages according to the filtering requirements in section 12.2.
- b) Capability for a call listing of all NAVWARN messages in the system and sorting these according to: received date and time, issue date and time, warning type, producer and series, must be provided. Additionally, a means to list according to user classification should be provided.
- c) Provide an indication when a new NAVWARN message is received until it has been displayed or 24 hours have passed. This indication may be suppressed if the NAVWARN message does not meet filtering criteria set by the mariner (see 12.2).
- d) Means shall be provided for the operator to enter criteria for filtering of indication of new NAVWARN messages based on time and distance from own ship, monitored route or planned route (see 12.2). Default setting is no filtering.
- e) Details of the filtering options that have been enabled by user must be readily available for inspection and modification.
- f) Means shall be provided to view the most recent message, past messages, and to view messages associated with selection of NAVWARN symbols in the graphical display area.
- g) Listing of all NAVWARN shall include means for viewing an abbreviated view of any **NAVWARNPart, warningInformation** attributes present.

NOTE: It may be possible to create much of this functionality via portrayal context parameters, however, in this version of S-124, this is not included as further trials on S-100 portrayal are needed to assess the feasibility.

S-124 - 3

List of NAVWARN that can be recalled by user action at any time does not currently exist.

Search/Tag may be possible but classification is not part of mandatory functionality

12.2 Filtering Navigational Warning information

S-124 navigational warnings datasets are intended for use in S-100 ECDIS as elements of an always on layer conforming to S-98 Level 1 interleaving when interoperability is on. There is a risk of clutter with this level of interoperability and it is therefore necessary to include filtering options for the user, to all the removal of not relevant information from the portrayal.

NOTE: Even though a navigational warning is not portrayed, it must still be visible and discoverable in a list of NAVWARNs that can be recalled by user action at any time.

User systems should provide filtering mechanisms for the Navigational Warning information.

At a minimum, functionality must be included that allows the user to classify the relevance of a NAVWARN against the intended route as:

- on chart (relevant for the route, must always be visualized), or;
- off chart (not relevant for the route, and need not be visualized), or;
- information (relevant for the route, but for information and need not be visualized).

On chart should be the default classification for all NAVWARNs.

Additional filtering functions could include options such as;

- filtering on route with a buffer;
- navigational warning topic;
- date range of the hazard;
- valid time of the navigational warning.

These filters could be used to assist the navigator in classifying a NAVWARN according to its relevance for the route.

Portrayal SubWG Inputs

- 1 and 2 – in progress. We can create test data for portrayal testing now and then update S-98 Annex C accordingly
- 3,4,6 = 5.2 and new issue #70
- 5 – S100WG8, raised S-98 issue to track updates.

A screenshot of a Jira issue list for the Portrayal SubWG. The list contains six issues, each with a title, a list of labels, and a comment count. The issues are:

- Update Information - Portrayal of Deleted features** (DCEGsWG, PC 2.0.0, S-98 Change Proposal) - #152, opened on Sep 6, 2023 by alvarosanuy, 1 task, 3 comments.
- Update Information - Better ways of presenting features that were 'Moved' by an ENC update.** (DCEGsWG, New S-164 Test, PC 2.0.0, S-98 Change Proposal) - #151, opened on Sep 6, 2023 by alvarosanuy, 2 tasks, 1 comment.
- Allocate and register mariners viewing group for INDHLT** (GI Registry, New S-164 Test, S-98 Change Proposal) - #136, opened on Mar 30, 2023 by DavidGrant-NIWC, 18 comments.
- Submit S-98 change proposal regarding removal of mariners viewing groups from S-101 PC** (PC 1.2.0 or later, S-98 Change Proposal) - #135, opened on Mar 30, 2023 by DavidGrant-NIWC, 3 comments.
- S-98 change proposal - Standardisation of the portrayal of shared edges in ECDIS** (ECDIS Performance, New S-164 Test, PC 2.0.0, S-98 Change Proposal) - #100, opened on Jul 29, 2022 by alvarosanuy, 11 comments.
- NIWC Testbed Update - Slide # 37 - Independent Mariner Selections** (New S-164 Test, PC 1.2.0 or later, S-98 Change Proposal, Technical - Implementation) - #18, opened on Sep 30, 2020 by alvarosanuy, 36 comments.

Data Quality Portrayal

- Ongoing
- Dialogue with S-164/S-98, ENCWG, S-101, 7Cs, IEC etc...
- Required by new IMO performance standard
- Will apply equally to S-57 and S-101 (others? S-102? S-104?)
- Methodology so far is to add horizontal (and vertical) uncertainty to look ahead distance searched for objects/features used for indication and danger highlight.
- This is probably bespoke functionality for the OEM, not natively supported by portrayal model in S-100 edition 5.2.0, and therefore has to be documented in S-98 Annex C.

Use of Data Quality for Indication and Danger highlights

When a route is planned and the Mariner has chosen to take accuracy into account the ECDIS must use the underlying M_QUAL, CATZOC attribute to determine the distance from the route, the indication highlight must be used to highlight the relevant features.

e.g In a M_QUAL area with attribute CATZOC B area all features that would generate an indication 50m from the route must be highlighted.

M_QUAL – CATZOC Value	Positional Accuracy	Depth Accuracy
A1	+/- 5m + 5% depth	0.5m +1% depth
A2	+/- 20m	1m + 2% depth
B	+/- 50m	1m + 2% depth
C	+/- 500m	2m + 5% depth
D	+/- 500m	2m + 5% depth*
U	NA	NA**

*Where the M_QUAL area is equal to CATZOC value D, a warning must be displayed on the ECDIS advising 'accuracy of the data is of a poor quality'.

**Where the M_QUAL area is equal to CATZOC value U, a warning must be displayed on the ECDIS advising 'accuracy of the data is unassessed'

Proposed text of S-52 update

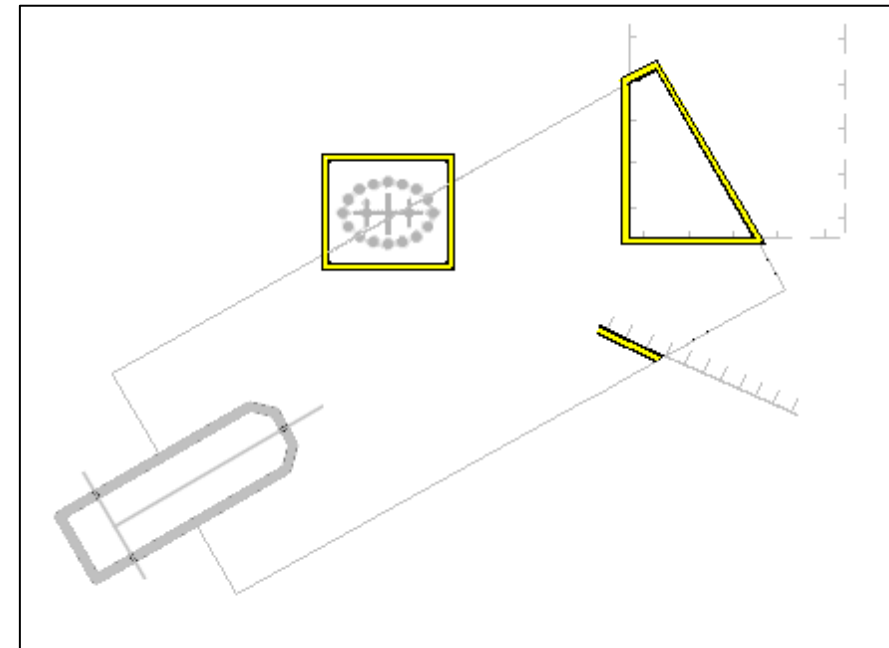
10.5.13 Indications related to ENC accuracy

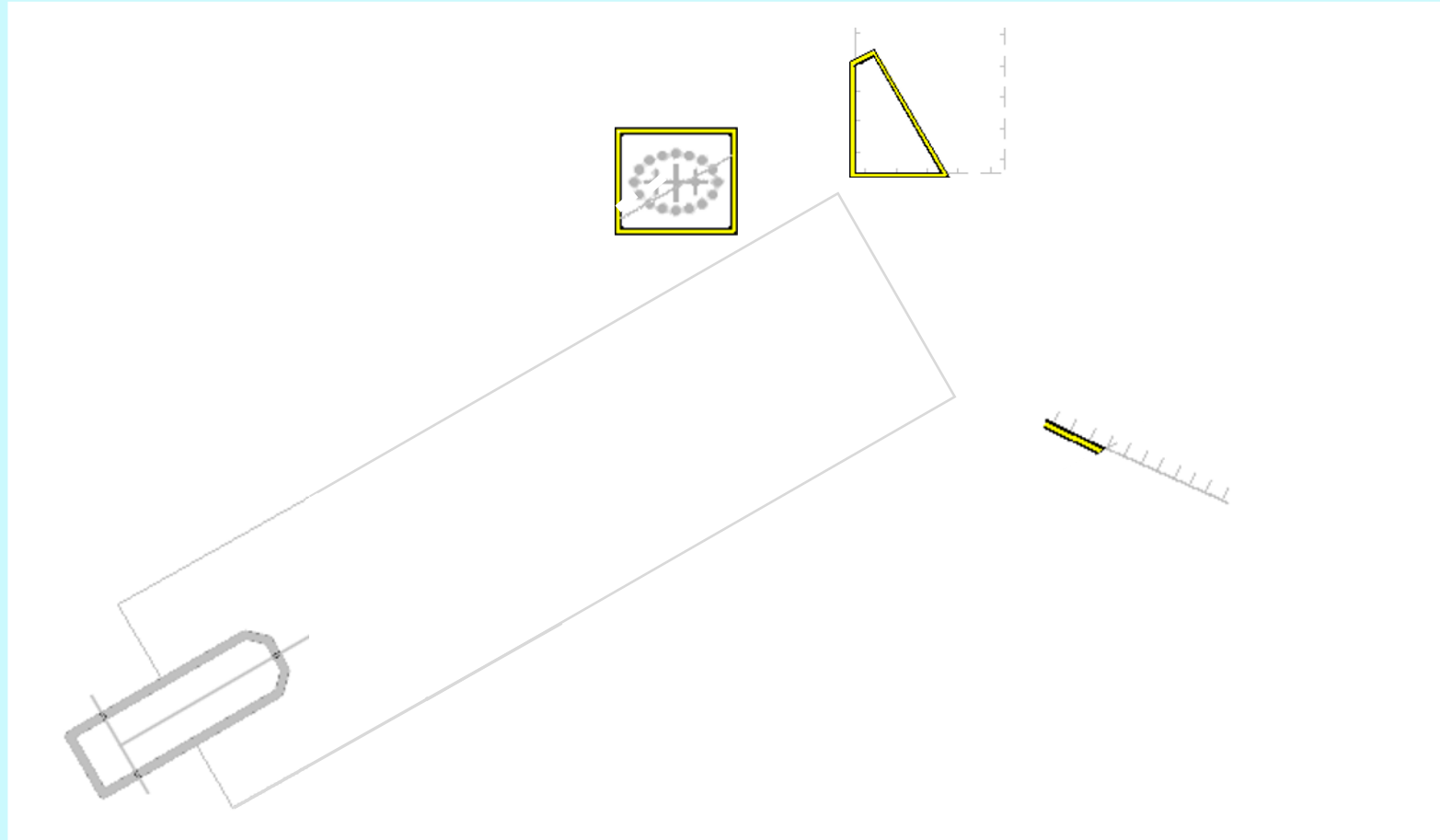
The IMO Performance Standard for ECDIS MSC.530(106), clause 11.3.6 Route Planning states;

11.3.6 It should be possible for the mariner to select that the indications of 11.3.4 and 11.3.5 take into account accuracy information of relevant hydrographic information, as defined by IHO standards.

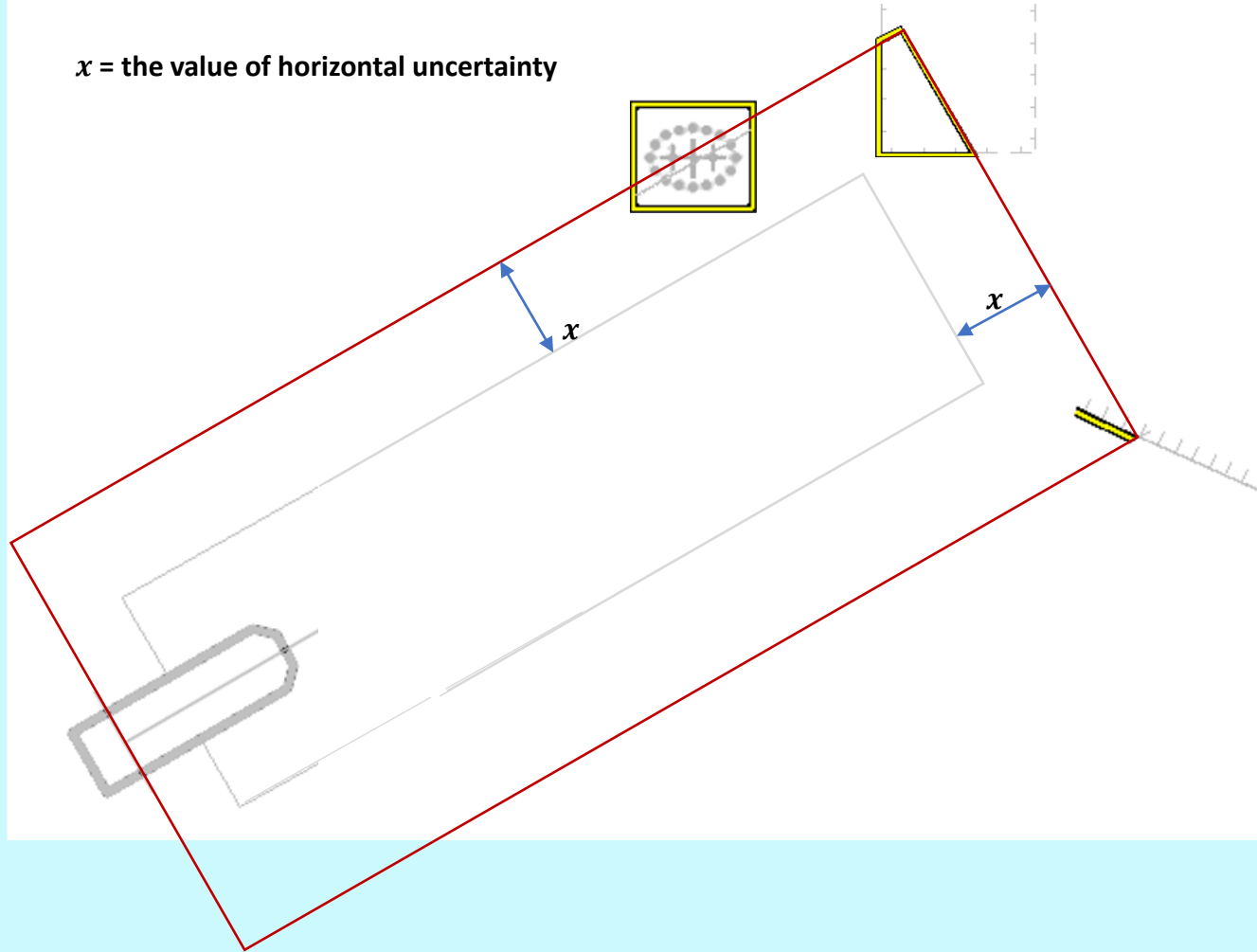
Clause 11.4.9 Route Monitoring states;

11.4.9 It should be possible for the mariner to select that the indications of 11.4.3, 11.4.4, 11.4.6, 11.4.7 and 11.4.8 take into account accuracy information of relevant hydrographic information, as defined by IHO standards.





x = the value of horizontal uncertainty



S-164 Test Form

- New version of S-164 Manual Form
- Updated with test from Section 3
- Feedback welcomed – GitHub Issue #42
- Rewrite of manual using new form will start after TSM?

This is a small, partially obscured version of the S-164 Test Form, crossed out with a large red 'X'. It shows the same structure as the larger form on the right, including sections for Test Reference, IHO Reference, Test Description, Loaded Data, Exchange Set Name, Display Mode, Independent Mariner's Selections, Context Parameters, Palette, Date Dependent Objects, Display, Viewing Groups, Standard Display, Other, Additional, Setup, Action, and Results.

Test Reference		IHO Reference	
Test Description			
Loaded Data			
Exchange Set Name			
Display Mode		Independent Mariner's Selections (Default=On)	
Standard		Accuracy	
Context Parameters		Contour label	
Safety Contour		Highlight date dependent	
Safety Depth		Highlight document	
Deep Contour		Highlight info	
Shallow Contour		Shallow Pattern	
Four Shades		Unknown	
Radial Overlay		Update Review	
Plain Boundaries		Text Groups	
Simplified Symbols		Chart Text	
Full Light Lines		Important text	
Ignore scale minimum		Other Text	
Shallow Water Dangers		Names	
Palette		Light description	
Day		All other chart text	
Date Dependent Objects		Display	
Start Date		Centre	32°29.66'S, 060°55.86'E
End Date		Scale	1:50,000
		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			
Setup			
Action			
Results			



Issues

- S-98 Issues
 - 17 edits included in new version of S-98 for review
 - Upload to GitHub after meeting
 - Issue number is marked in document edits, can be reviewed and feedback sent
 - Plan is to complete edits as remaining issues get resolved, e.g. S-101PT.
 - Time for one more update before TSM
 - Core Issues review at TSM to try and resolve and move forward to another release.
 - Post TSM we will update and review in detail the content.
- S-164 Issues
 - Currently a mixture of data and new tests.
 - As we move data back into S-101-Test-Datasets we can reduce them back to just issues on tests and the associated manual.
- S-101PT potentially resolves quite a few issues for S-164 and S-98 Annex C