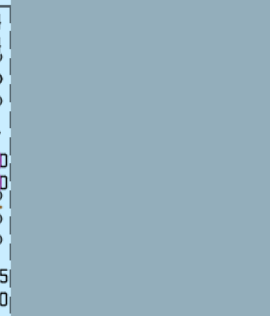
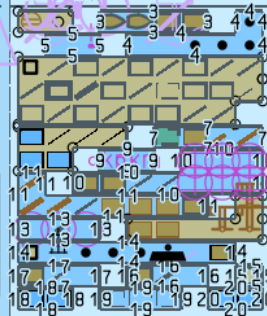
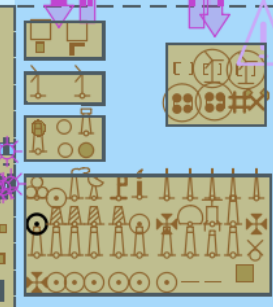
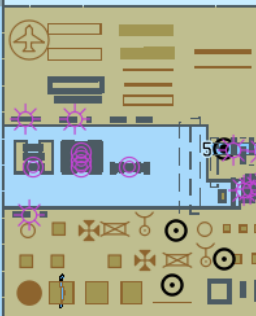
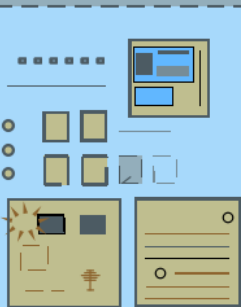
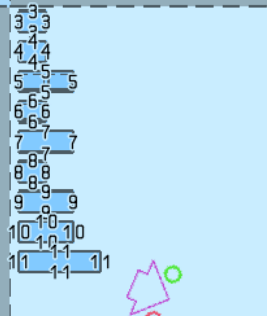
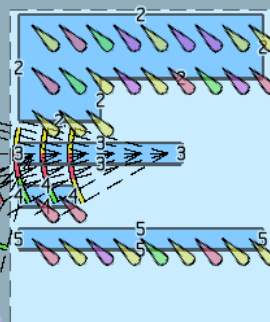
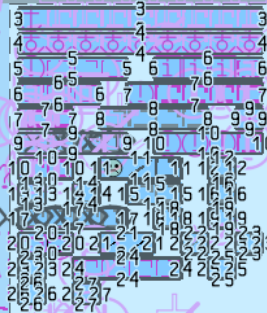
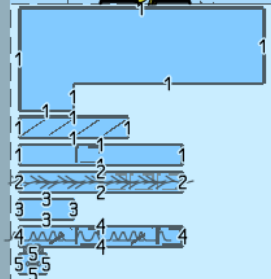
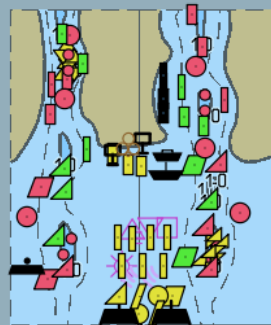


# S-164



# Objectives

- Share and review previous S-164 efforts
- Update recent deliverables
- Develop ideas for storage, maintenance, location for S-164
- Review and develop next levels of detail for tests

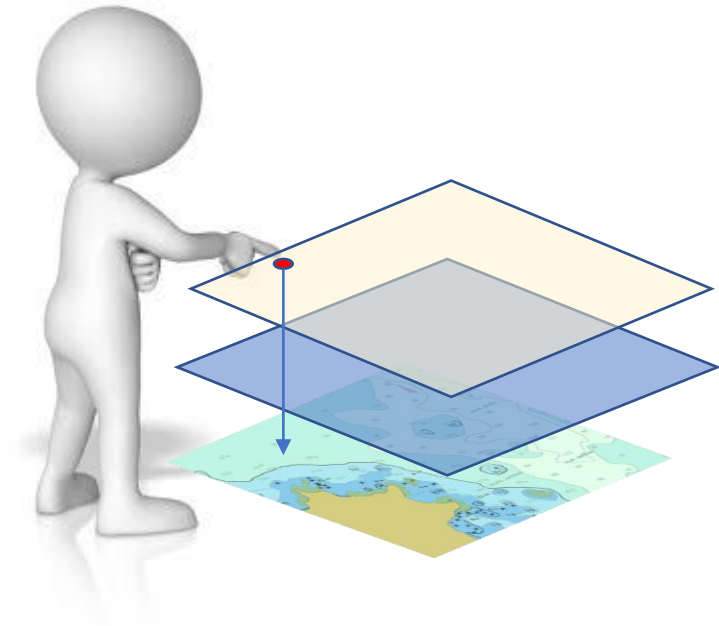
# History

- Some S-164 preparation has already been done
- Initial “conversion”s of existing S-64 test datasets + other datasets
- Scope of tests required drafted (now old)
- S-164 “new” native datasets
- S-101 preparation
- S-164 methodology suggestions / proposals
- Individual data producers
  - ENC
  - S-102
  - Other S-12X
  - Catalogues + IC.
  - Others...
- Calls for “landing page”

# Guiding principles (from S-164 report)

- Scope is Dual Fuel mode of S-100 ECDIS only.
- Structure of S-164 remains the same in terms of sections and types of section (reflects IMO PS)
- New tests are either (a) equivalent tests based on existing S-64 data or (b) tests which are required because of new functionality defined by S-100 or S-98
- Structure of data. Datasets should be aggregations of one or more S-100 product specifications with a conformant S-100 CATALOG.XML which details the content.
- As per current S-64, datasets should test a group of functionality
- Elements which "define" ECDIS behaviour by filling in detail of IMO PS need to be preserved in the new tests. These will all be preserved from the current test dataset baseline
- The existing S-57 set of tests remains as unchanged as possible. Dual Fuel mode testing will test both S-57 and S-101 as well as many other S-100 product specifications independently.
- After S-57 is no longer a live standard, the S-57 tests can be deleted from the test cases and documentation without any impact. Therefore, S-100 and S-57 datasets should be standalone (except where specific DF tests are planned/executed)
- Versions of FC/PC/IC must be stated and are co-dependent.

# S-164 structure



- There are three types of data on S-100 ECDIS
  - Chart data (S-101, S-401)
  - Ancillary chart data (S-102, S-111 etc...)
  - Extra Layers (e.g. S-12X)
- S-164 data covers functionality defined by IMO PS and defined by S-100 and S-98
- Standard functionality
  - Loading
  - Display
  - Management
  - ECDIS functions
- “New” functionality
  - Interoperability and overlays
  - User selected safety contour / WLA
  - Catalogue management
  - DF operation

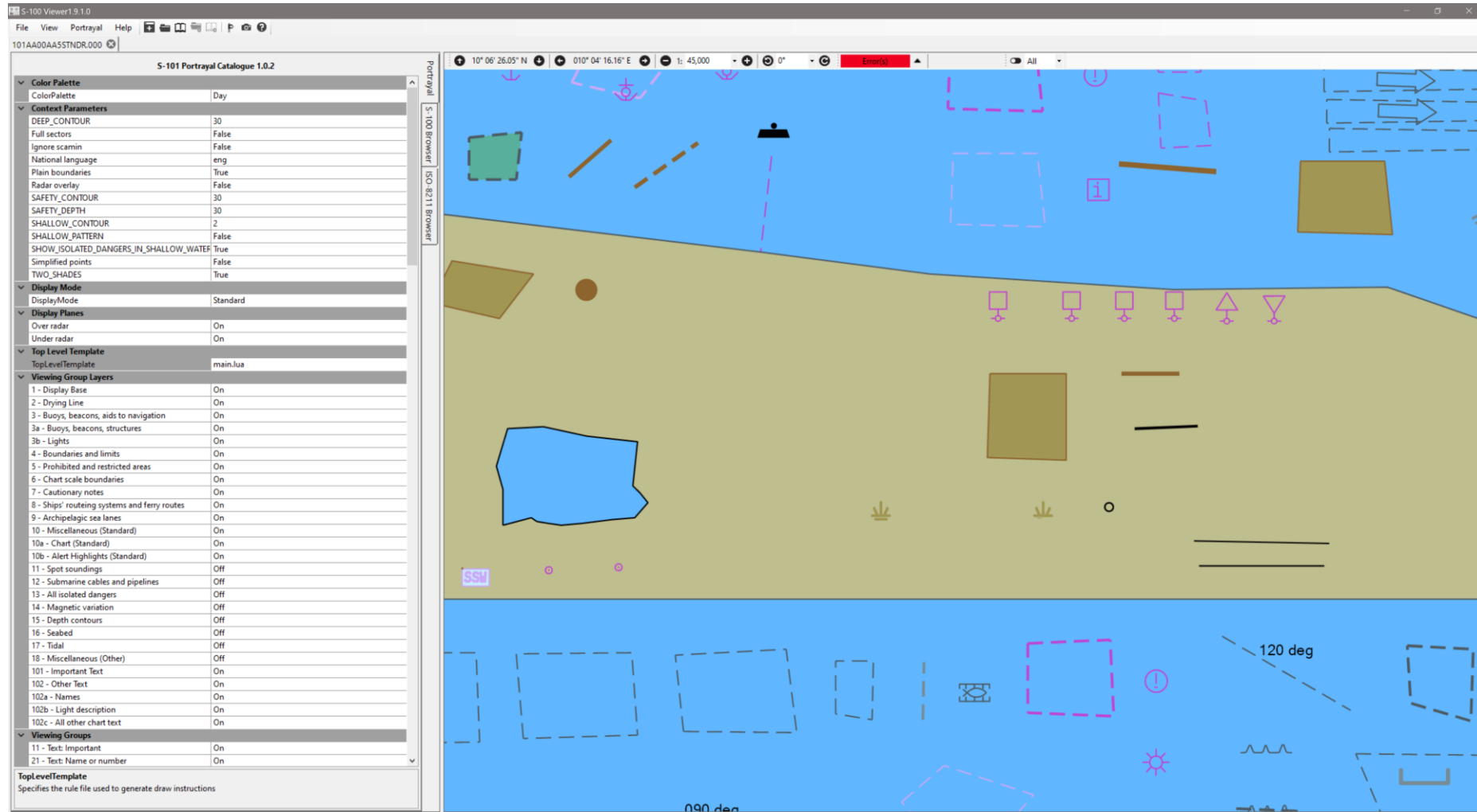
# End goal / simplified S-164 structure

	Based on IMO sections content.	
1	Chart Loading and Updating	<b>Anything to do with initial data loading. Expanded from Just S-57/S-63 to all data.</b> <b>All new loading tests for new product specifications and testing of Part 15 content.</b> <b>Includes arbitrary product loading. Includes dual fuel.</b>
		Metadta tests and multiple products Loading tests, all PSs Part 15 tests including corruption, mixed Exch sets Co-Existence (exch sets) and loading Out of Date data All update tests (to all products)
2	Chart Display	<b>Tests involving basic portrayal. This is only display of data, identification of which data products are present and their successful import (and update) into the system. Includes dual fuel. Loading strategy of charts, ancillary + others. Includes arbitrary products</b>
		Loading Strategy Tests Co-Existence
3	Functions associated with Chart display	<b>All tests of "extended" functionality other than basic portrayal. Includes interoperability (and S-98). Also includes loading/updating of feature and portrayal catalogues (and any other catalogues). Status Report. Existing tests and co-existence (this section needs subdividing)</b>
		Anything to do with Catalogue loading/unloading/update Interoperability Status report (and up to datedness) Co-Existence Chart 1 Interrogation
4	Alarms and Indications	<b>Any thing to do with safety contour, Areas of special conditions and safety contour. Also includes interoperability cases where such features are involved and S-98 WLA/planning. Exhaustive tests against S-101. Includes Dual Fuel.</b>
		Existing tests and functions S-101 Interoperability Catalogue loading/modifications Co-Existence

# Plan for completion – how do we get there?

<b>Package 1 - Setup and simple migration</b>		Existing datasets Simple 1-1 conversions New content and UOC considerations Initial creation of new edition (with placeholders) DF S-101/S-57
<b>Package 2 - Addition of other product specifications</b>		New product specs including catalogues Co-Existence with other product specifications Loading/Unloading/Update functionality
<b>Package 3 - Added Functionality</b>		Interoperability All functionality – Interrogation WLA / USSC Updates from Gaps closed.
<b>Package 4 - OTHER functionality</b>		Update, for updated product specifications More interoperability - Other product specs

# Current S-164 status





# Review.

- S-164 hasn't been added to IHO Webpage systematically
- Never maintained version numbers of dependent components
  - Feature Catalogue
  - DCEG
  - Compatible portrayal catalogues
  - Conversion guidance document (INF)
  - Interoperability Catalogue
  - Other product specifications
- Not kept up to date
- Documentation and HOWTO guides need to be drafted

Detail.

# Summary

- A lot of detail has already been written
- IC-ENC tests (12 groups)
- Proposed S-164 (18 groups)
- Since then edition 5.0.0 has been released including
  - S-98 interoperability
  - Water Level adjustment
  - User selected safety contour
  - Part 17 – “service” aspects of data loading
  - Part 15 – authentication and (optionally) encryption
  - Dual fuel is “better” defined
- Versioning!

Dataset Discovery

Purpose

- newDataset
- newEdition
- update
- reissue
- cancellation
- delta
  
- specificUsage
- replacedData

XC	Issue Date	Resource	Type	Purpose (DS) resourcePurpose(SF) Scope (CAT)	Edition.Update	Revision Status
001	20221114	101AA00TDS0001	DS	newDataset	1.0	-
	20221114	101.xml	CAT	featureCatalogue	2.0	-
001	20221114	101AA0CHAIN.TXT	SF	supportFile	1.0	new
002	20221121	101AA0CHAIN.TXT	SF	supportFile	1.1	replacement
003	20221121	101AA00TDS0001	DS	newEdition	2.0	-
	20221121	101AA0CHAIN.TXT	SF	supportFile	1.1	deletion
004	20221128	101AA00TDS0001	DS	update	2.1	-

Support File Discovery Metadata

revisionStatus

- new
- replacement
- deletion

resourcePurpose

- dataset
- featureCatalogue
- portrayalCatalogue
- interoperabilityCatalogue
- supportFile
- productVersion
- productFamily
- software
- system
- exchangeCatalogue
- ISOMetadata
- languagePack
- GMLSchema

Service aspects of S-100 (Part 17)

# Ideas?

interoperability

Water Level Adjustment

“Other” product Specifications

ENC Conversion

User **Selected** Safety Contour

>1 feature Catalogue

S-102 + S-104 + S-101

Part 15

Catalogue loading

# Detailed Test scenarios

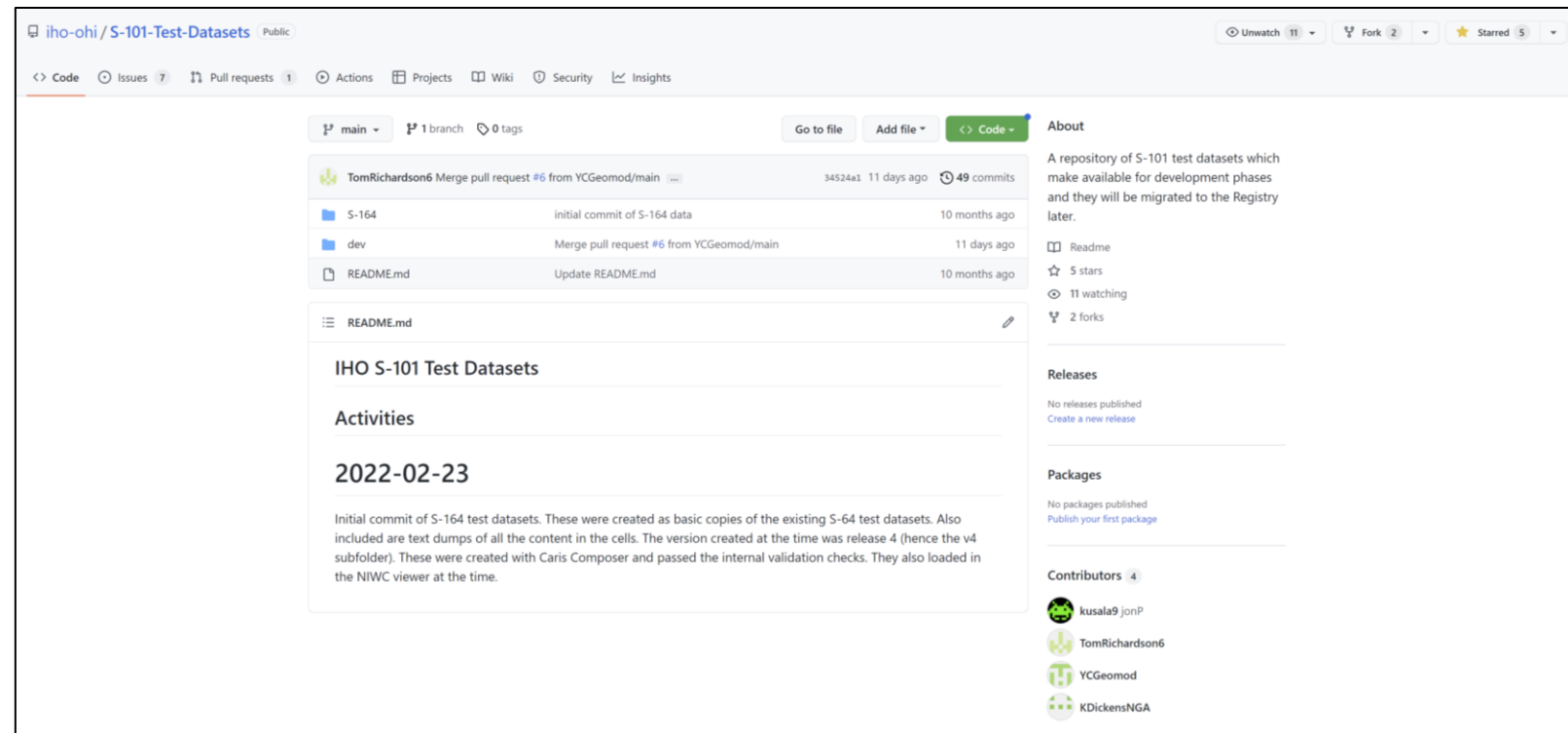
Shall we look at the spreadsheet?

# Things to do

- Figure out how to manage versioning and concurrency
- Bring existing S-164 (from S-64) up to date and wrap into exchange sets.
- Revise scope and define tests for new functions
- Re-house and reference from a landing page
- Stocktake of existing data available.
- Action List
- Timelines
  - v1.0.0 ready for TSM wrapping up existing
  - v2.0.0 drafted 1Q2024 for test/review
- **VOLUNTEERS!**

# Repositories

- Github is often the answer
- What is the question?
- What do you want to do?
  - Issues
  - Wiki
  - Configuration Management
- We have made a good start
- More needs to be done
- Linked to by landing page





# Overall structure

- What is it?
- Preparation
  - Versioning
  - Coverage / Scope
  - Methodology
- Test and Feedback
- May also need to do:
  - Inputs into product specification development teams
  - Interim / working versions.
- Communication and Use
- Ongoing maintenance (+Longer Term)