S-164 subWG, M7
22nd September 2023

Agenda

1. Intros (and Apologies)
2. Progress Update and communications
    - Actions and plan update
3. S-164 / S-98 updates
    - Documentation: Papers and Proposals for agreement
    - Datasets: Update on developments and progress
4. Breakout meeting summaries
5. Issues review (from GitHub)
6. AOB / Next meeting

Progress Update

- Release Plan and Risks communicated to ISO cell
- Interoperability Catalogue delivery (in github)
- Dataset Progress
- NIPWG
  - All items
- S-101PT next week!
  - Testing needs to focus on TDS to see if more changes are needed
  - Thereafter changes will be staged separately
  - Shouldn’t need changes to FC
  - Portrayal focus between S-101PT and S100WG in case refinements are needed
- WLA adjustment breakout
- Manual Updating Breakout
- Input Papers

NIPWG outputs relevant to S-98/S-164

- Proposal for complex formatting of pick report information

C-15.5 Schedules, contact Information, and vessel characteristics

[Templates to be developed.]

- MRN proposal for interoperability between datasets available in pick reports.
  - S-98 Annex C clause 15-4: Add #11:
    - **"When interoperability is enabled by the mariner, the pick report should combine information from different products when picked features include common unique identifier "*interoperabilityID*". Note: the format of the "*interoperabilityID*" is MRN and multiplicity is [0..]."**

Example 1:

S-101 ENC contains a RestrictedArea feature and S-131 a HarbourAreaSection feature both with interoperabilityID=urn:mrn:iho:N004:s101:1234-5678 (its geometry was originally created for an S-101 ENC, and reused by S-131, whence "s101"). There is a Regulations info type associated to the S-131 feature. When interoperability is enabled, the pick report detects the common *interoperabilityID* and displays the content of the Regulations as being (also) connected to the S-101 RestrictedArea even though the S-101 ENC does not actually contain the Regulations info type.

NIPWG update (2)

- S-128 will be released in October
- S-164 tests need to include tests for S-128 which tests (needs tracking Issue):
  - One S-128 source
  - Two S-128 sources
  - Two S-128 sources with a common cell with the same information
  - Two S-128 sources with a common cell with different revision information
  - Sources without any S-128
- Add note to S-98 that it is acceptable for certain S-1XX layers to overlap S-101 (chart) coverage areas from a different data producer (example is S-123 radio service areas). (needs tracking issue)
- GML Objects. NIPWG recommends coverage objects to be of a simple form, not create own S-100 Coverage polygon but restrict initially in documents (S-100 Part 17) and in the future in the schemas. Paper to go to S-100WG proposing details. Form is gml:Polygon with exterior (and optional interior) LinearRing/PosList. No updates for S-98, S-164 CATALOG.XML to note.

Input papers – Sperry Marine

1. Para C-4-2.7 references MSC 232(82), which does not apply to S-101 ECDIS and may cause confusion, or even be incorrect. Recommend all MSC 232(82) references are re-seated to MSC.530(106).

2. S-98 Annex C is written in a conversational style, without distinguishing descriptive text from requirements. (IMO uses *should* for mandatory requirements, IEC uses *shall*.) I appreciate this is not a new situation, but it does make it more difficult to identify which requirements require a corresponding S-164 test. In the past, we have used machine tools to parse printed documents to identify requirements, but this is only practical when a standardised style is in use.

3. User Specified Distances (paper) Recommendations:

    - The references in Para C-4-2.3 and C-4-2.7 to MSC 232(82) 11.3.5 should clarify which user-specified distance is referenced, as follows: Proposal for Para C-4-2.3:

        - (1) "A distance parameter, as described below ~~the limit of the check area as specified by IMO MSC 232(82) 11.3.5.~~"

        - (2) Add below "When route planning, the same user-specified distance shall be applied to both own ship's safety contour and the user-selectable category of point objects, and the distance parameter referenced above shall be this distance ~~limit of the check area as specified by IMO~~ ~~MSC 232(82) 11.3.5~~ Ref MSC.530(106) 11.3.4 and 11.3.5. When route monitoring, the same user-selected distance shall be applied to both the safety contour and the user-selectable category of danger (e.g. obstruction, wreck, rock) that is shallower than the mariner's safety contour or user-selectable category of aid to navigation, and the distance parameter referenced above shall be this distance Ref MSC.530(106) 11.4.3 and 11.4.6."

    - iii) Proposal for Para C-4-2.7:

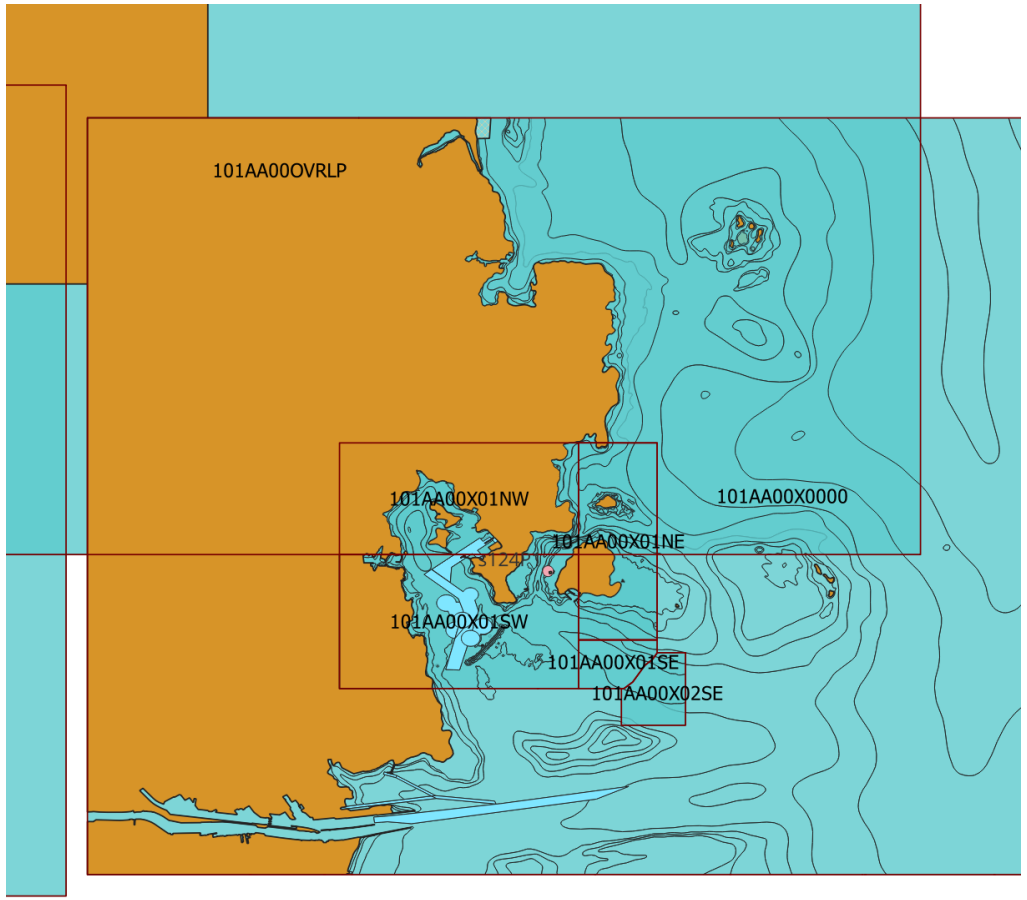
        - (1) Replace "… as specified by Para C-4-2.3 ~~IMO MSC 232(82) 11.3.5~~." in two instances.

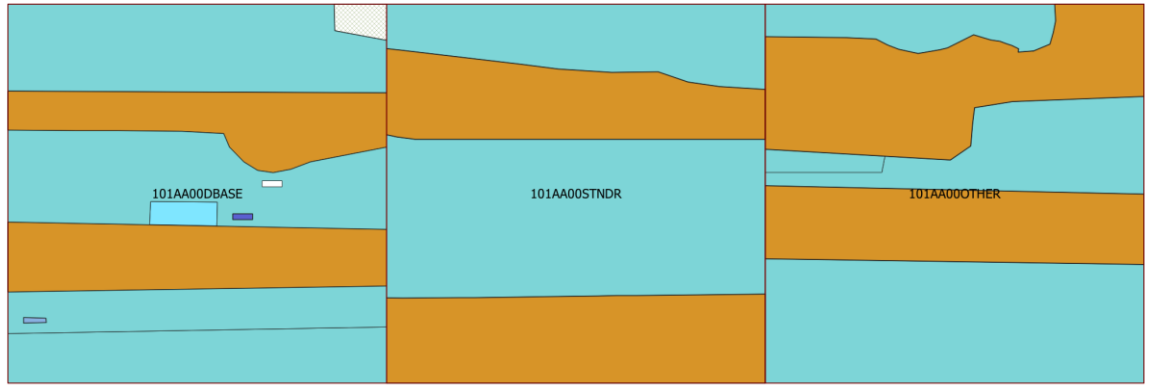
- Para C-4-2.7 allows WLA to be applied to a monitored route using a time from a planned schedule that does not pertain to the actual schedule. This could lead to an unsafe condition where the water level applied may be incorrect and the mariner is unaware of the situation.

    - a) Recommendation: Add after the first two bullets "When WLA is based on the planned schedule and own ship is not keeping to schedule a Caution shall be raised to indicate the water level being experienced may be different to that being applied by the ECDIS."

Release Plan…

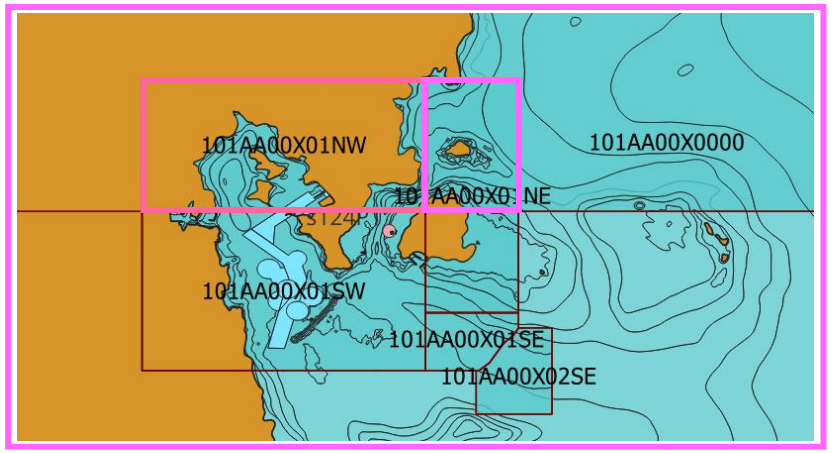
- V1 (S-101PT)
  - Initial Catalogues
  - Std Layers
  - Simple Dual Fuel x1
  - NavHaz x1
  - Polar Data
- v2 (end October)
  - v1.1.0 fixes++
  - Initial version of encrypted/signed data
- v3 (end November)
  - “Chart Display” initial versions
  - Requirements for Data Content complete
- v4 (end December)
  - Navigation Hazards (S-100)
  - Dual Fuel x1





End Sept (S-101PT)

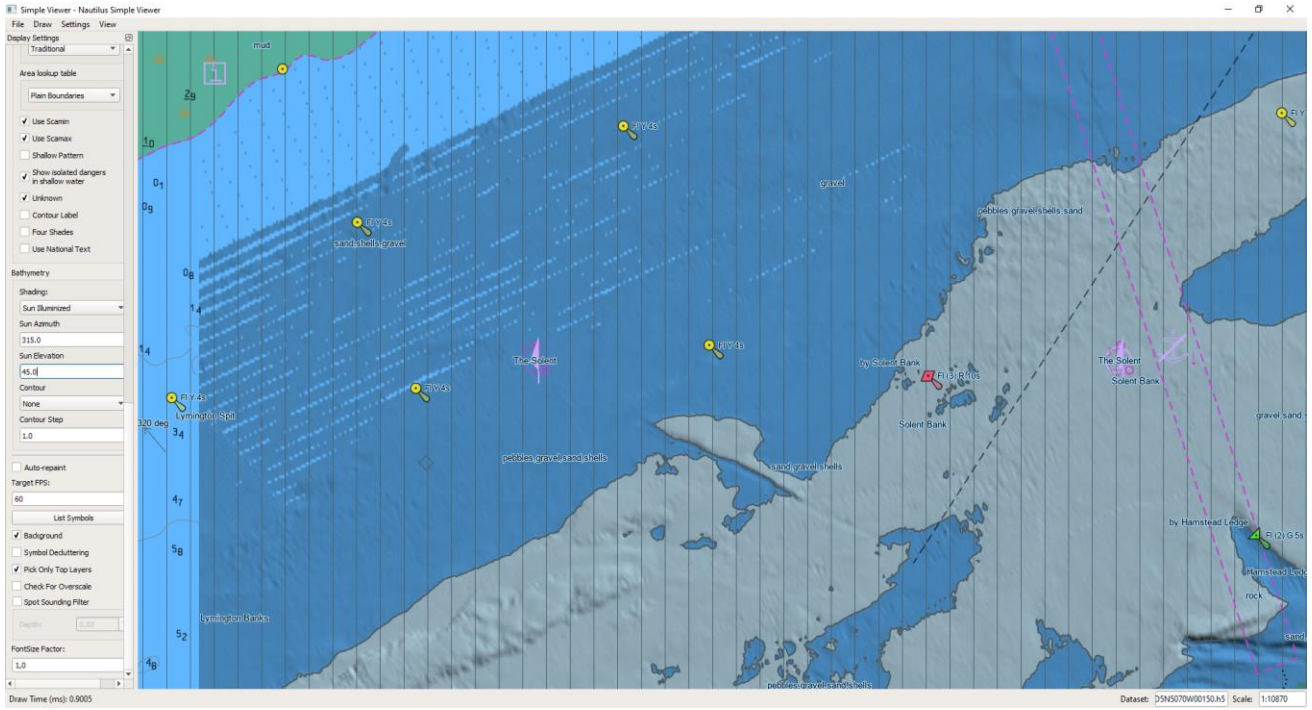
- V1
  - Initial Catalogues (all catalogue datasets + signing using IHO certs)
  - Std Layers (x3)
  - Simple Dual Fuel x1 (first one - DFSimple)
  - NavHaz x1 (NavigationalHazards)
  - Polar Data



- **Includes updates to S-164 to match dataset details and tests**

Breakout: WLA implementation 1

- Discussion on WLA implementation outputs:
  - Strong need for validation between S-102, S-104 and S-101 to ensure WLA can be implemented.
  - Validation required for
    - Consistent Vertical (Sounding Datums)
    - Holes in data
    - Non coincidental coverage of 102 and 104
    - Use of grids other than regular grids
- Proposals to be made to S-102 and S-104 groups for clarifying words on “Datasets intended for use on ECDIS”



WLA implementation 2

Proposed edit to S-98 re: taking out areas only covered by S-104

WLA needs both the Water, and the Level (to which it is to be adjusted) to be in a grid structure. Applying WLA to polygons in S-101 raises too many issues of both complexity and user interface problems.

Propose this part of WLA is taken out and Annex C-4 adjusted accordingly.

C-4.3.1.3 Areas covered by only S-104

In areas with only S-104 coverage WLA adjustment of depth values shall be performed using the S-104 data for all features within the S-104 coverage area using the method for the different geographic primitives as described in the previous section C-4.3.1.2. When S-101 features are not completely within the S-104 data coverage the adjusted value is the shoalest value resulting from original depth value in the S-101 attribute and the WLA adjusted value.

Breakout meetings 2 – Manual Update / Manual Editing

- Requirements for Manual Corrections are currently defined in S-52 and S-98 Annex C (C-12.6.4, C-12.6.5). This applies to ENC S-57/S-101 (C-12.6.4) and other products like S-102, S-104 (C-12.6.5). Includes the requirement that "Manual updates of ENC information should be displayed using the same symbology as ENC information". This approach:
  - Does not go in line with Clause 1.5 IMO MSC.530 (106) "ECDIS should reduce the navigational workload compared to using the paper chart and paper nautical publications". Manual Correction functionality according to current S-52 does exactly the opposite. For example, minimum 10 attributes to display beacon/buoy correctly. Compared to paper charts practices it would take 5-10 times longer depending on ECDIS make and model. In addition, such approach implies that changes are ENC cells - based which would multiply the efforts to cover e.g. both Approach cell and Harbor cell affected by the same changed conditions.
  - Does not go in line with Clause 4.5 IMO MSC.530 (106) "ECDIS should also be capable of accepting updates to the ENDS data entered manually with simple means for verification prior to the final acceptance of the data. They should be distinguishable on the display from ENDS information and its official updates and not affect display legibility". Use of the same symbology can lead to easy misinterpretation. Small orange symbol to identify that object belongs to manual correction can be easily overseen.

Breakout meetings 2 – Manual Update / Manual Editing

- Proposal (7Cs) is to restrict manual updates/editing to a particular set of symbols for use on ECDIS. Current rules would be too open to interpretation and no symbol set is currently defined.
- Proposed use of Symbol set which is based on symbols defined for annotating NW information (most common manual updating/editing use case)
- Point/Curve/Surface symbology
- If this is acceptable then a full description (and proposal) can be created based on portrayal catalogue terminology
- Proposal is for:
  - Description in S-98 of detailed functionality required. The user must be able to select from the described symbols, together with accompanying text/notes and text to be displayed.
  - S-164 would contain a test to check user is capable of creating a manual update/edit using the symbols / types defined in S-98.
  - Symbols could be described just in S-98, or developed in portrayal catalogue

Point Symbols

- Depth

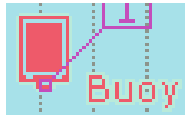
- Underwater

- Wreck

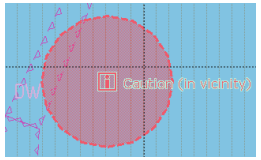
- Obstruction

- Beacon

- Buoy



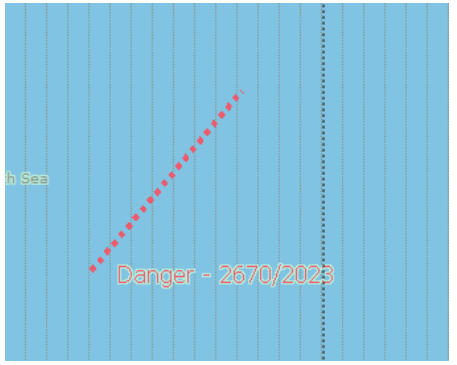
- Caution (Vicinity)



- Caution (Object Missing)

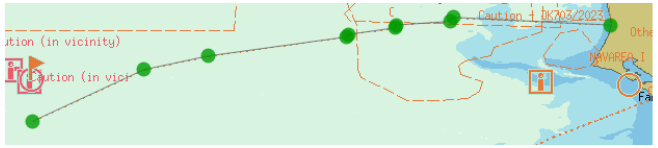
Curve Symbols

- Danger



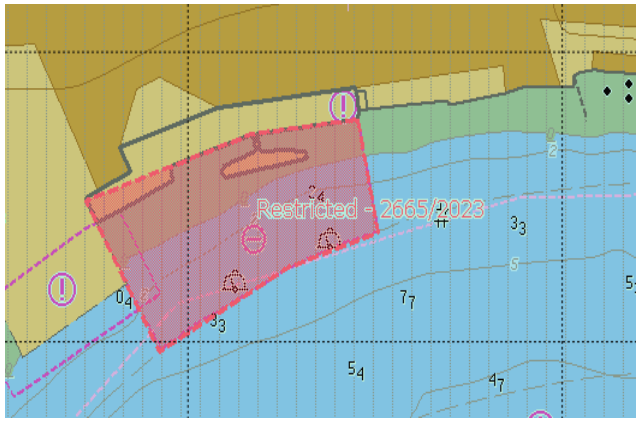
- Cable

- Other

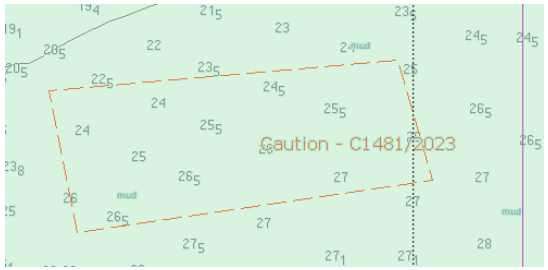


Surface Symbols

- Restricted



- Caution



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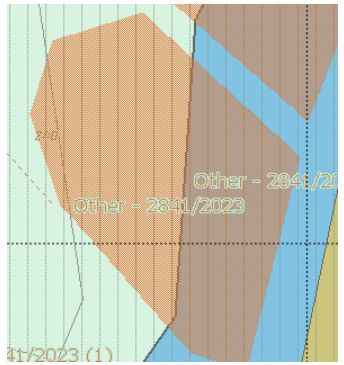
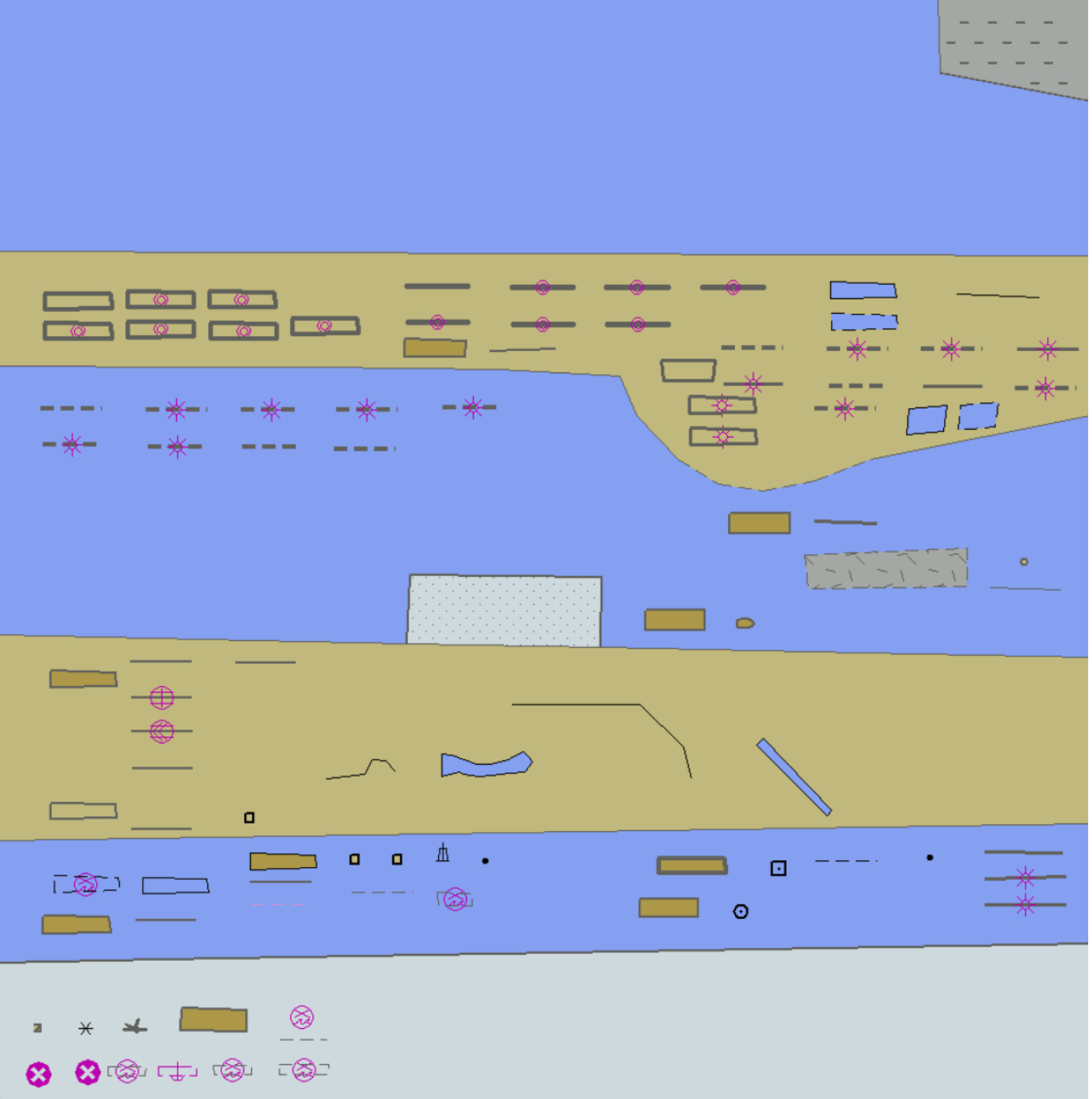
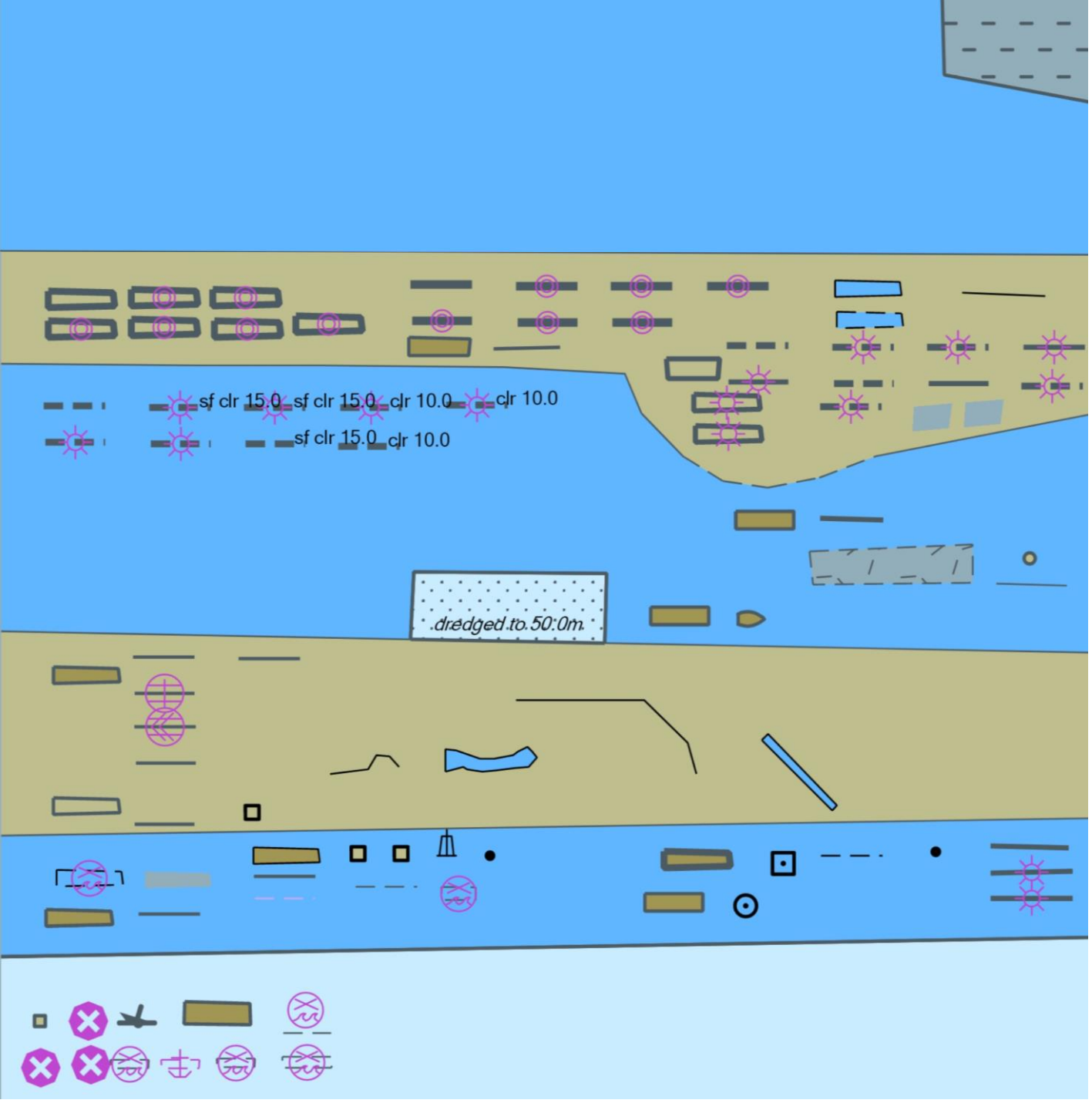


Questions.?

Issues

- Coordinates and date/time fixed in automated exchange sets. Will close 36, 33
- 32 – tools now exist for changing in all exchg sets
- 31 – may need clarification in S-100 P15
- 27,20 – Updated dataset available.
- 17 – S-124 proposal to go to S-100WG
- 16/15 – NIPWG feedback to be added (MRNs)
- 11 – Update Information to be discussed at S-101PT
- 14 – catalogue added to GitHub

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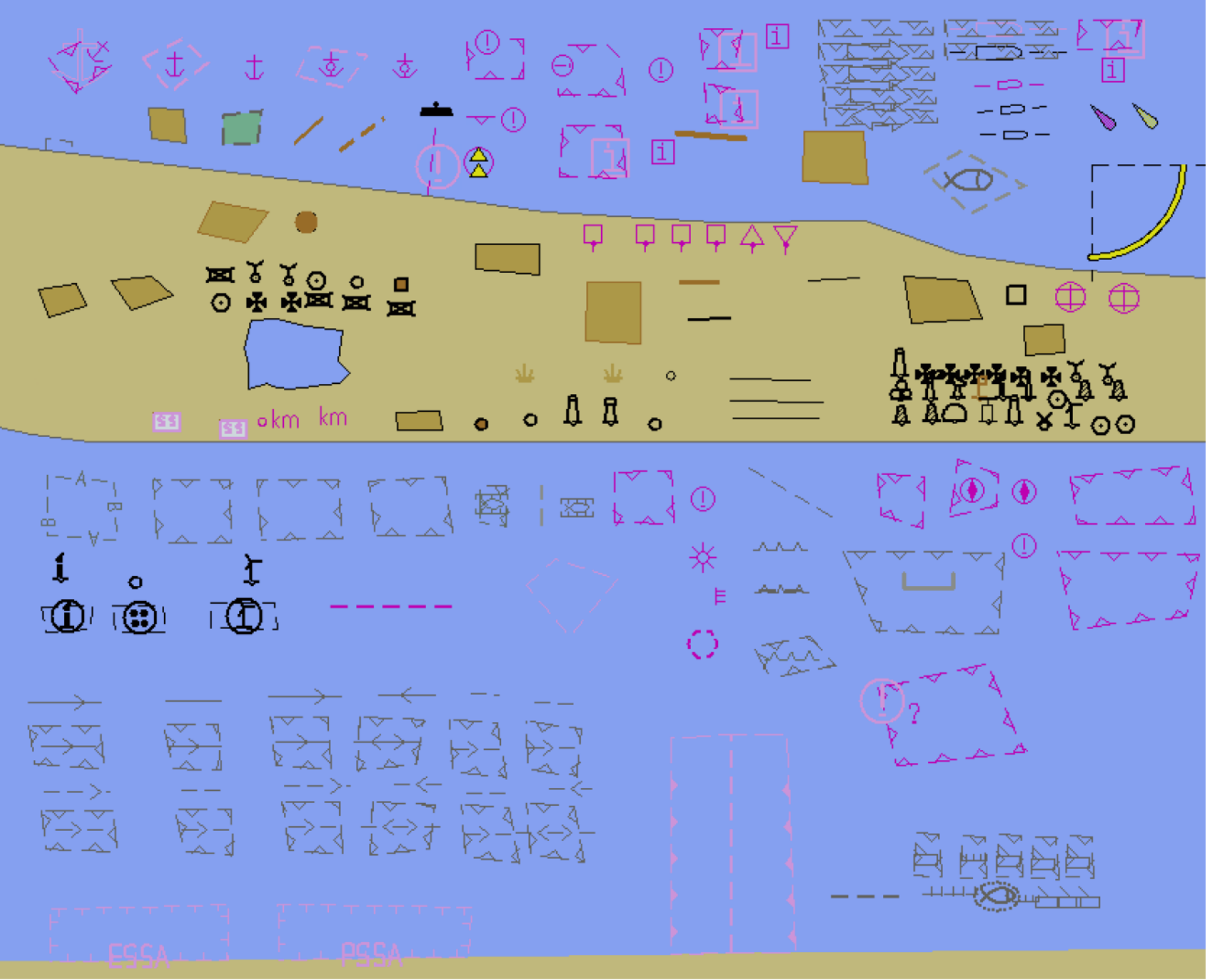
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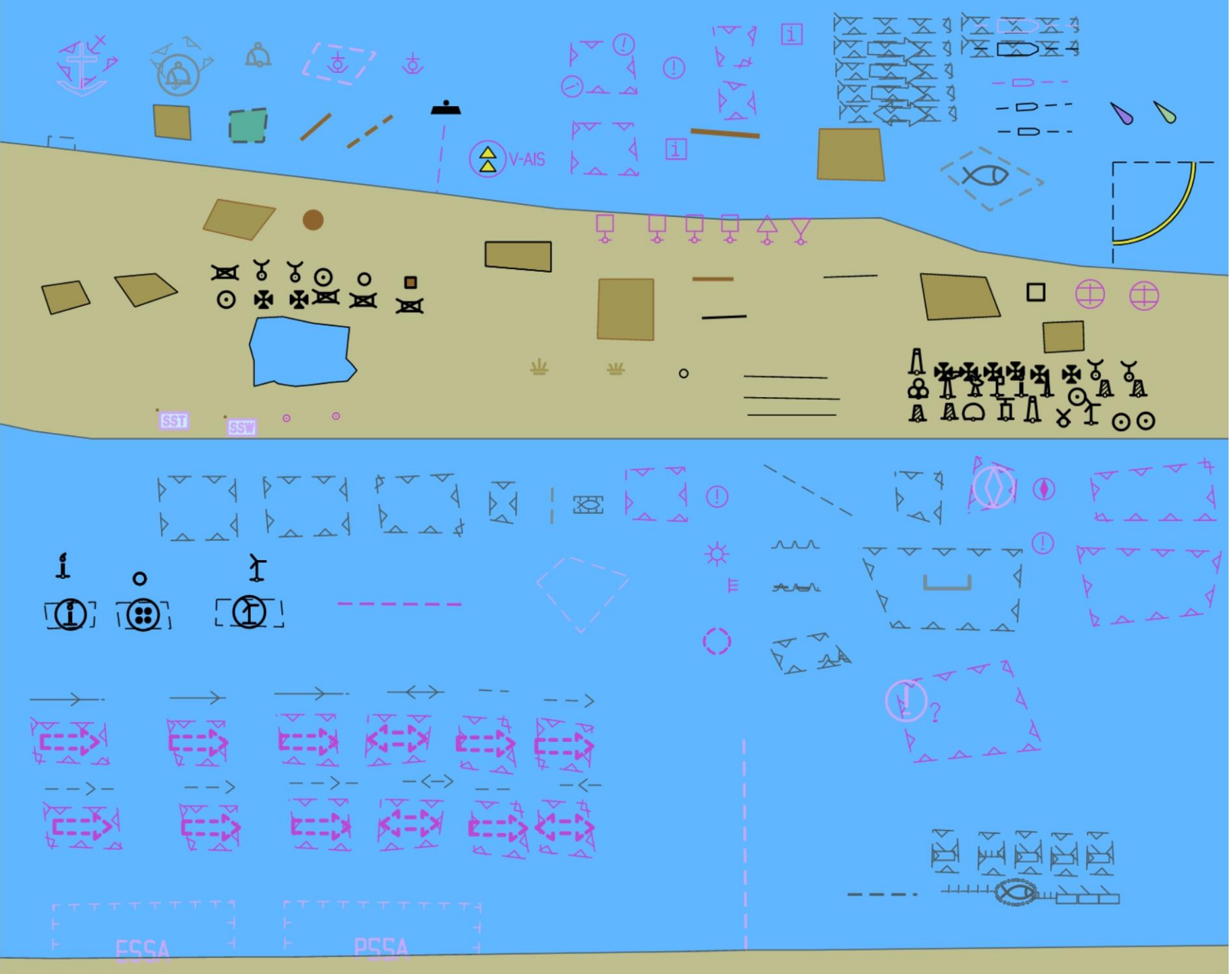
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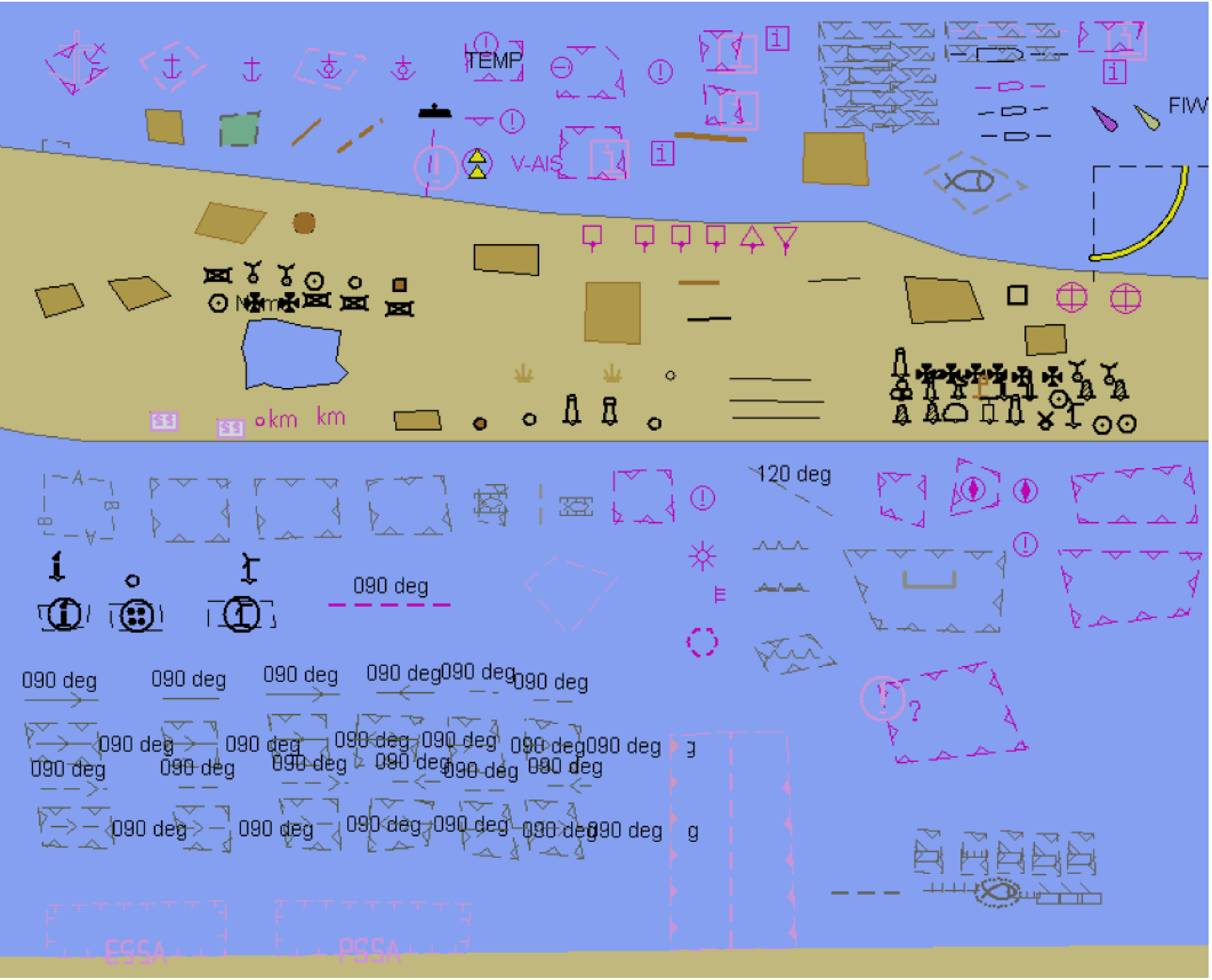
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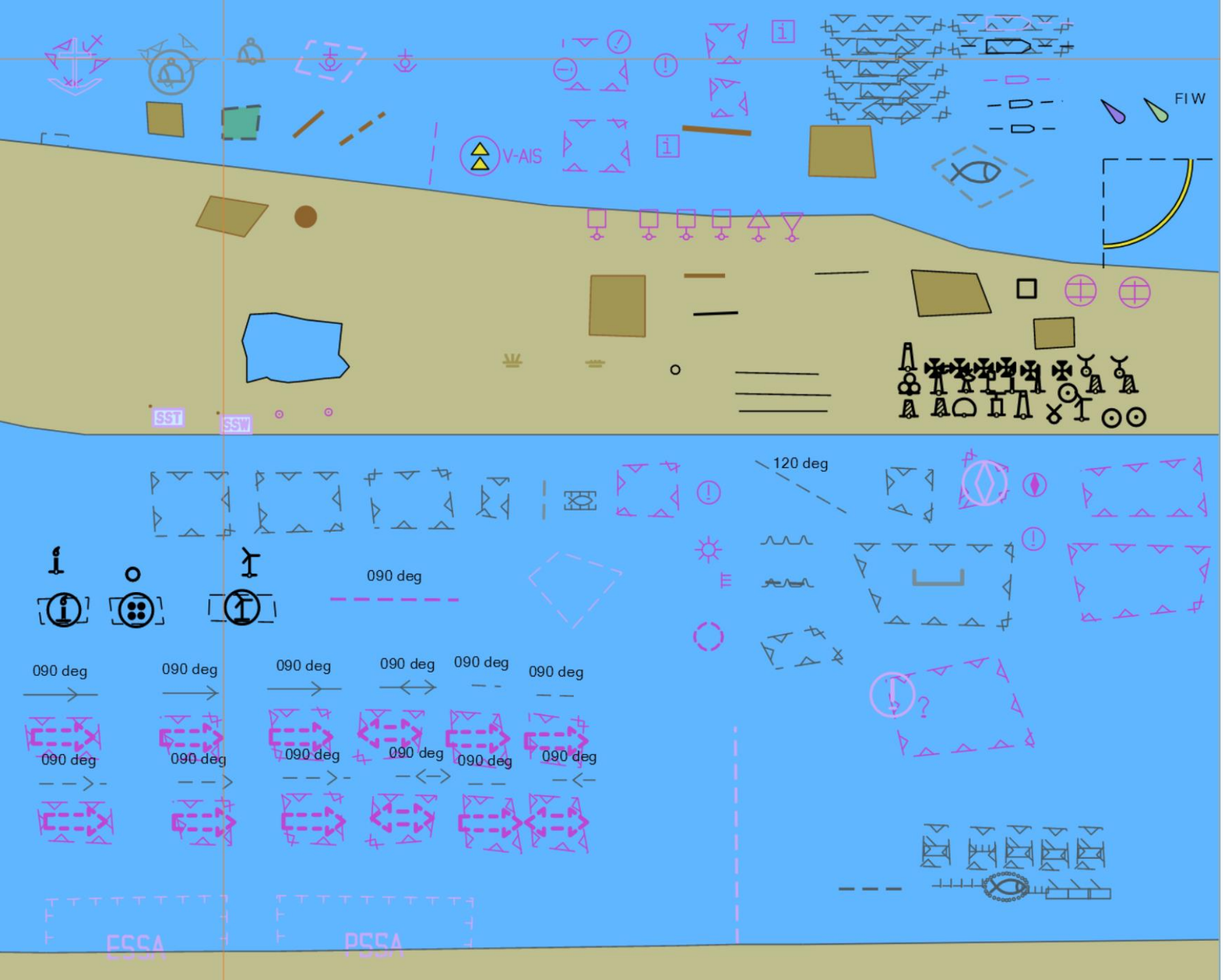
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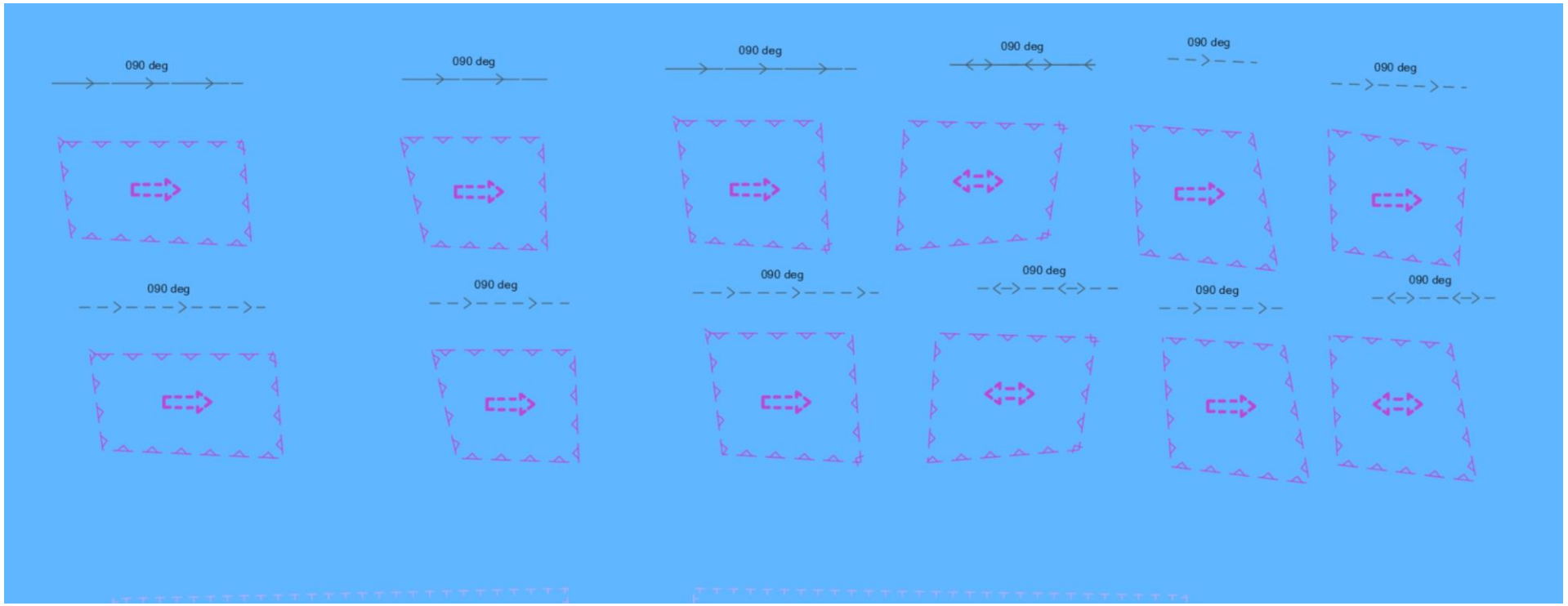
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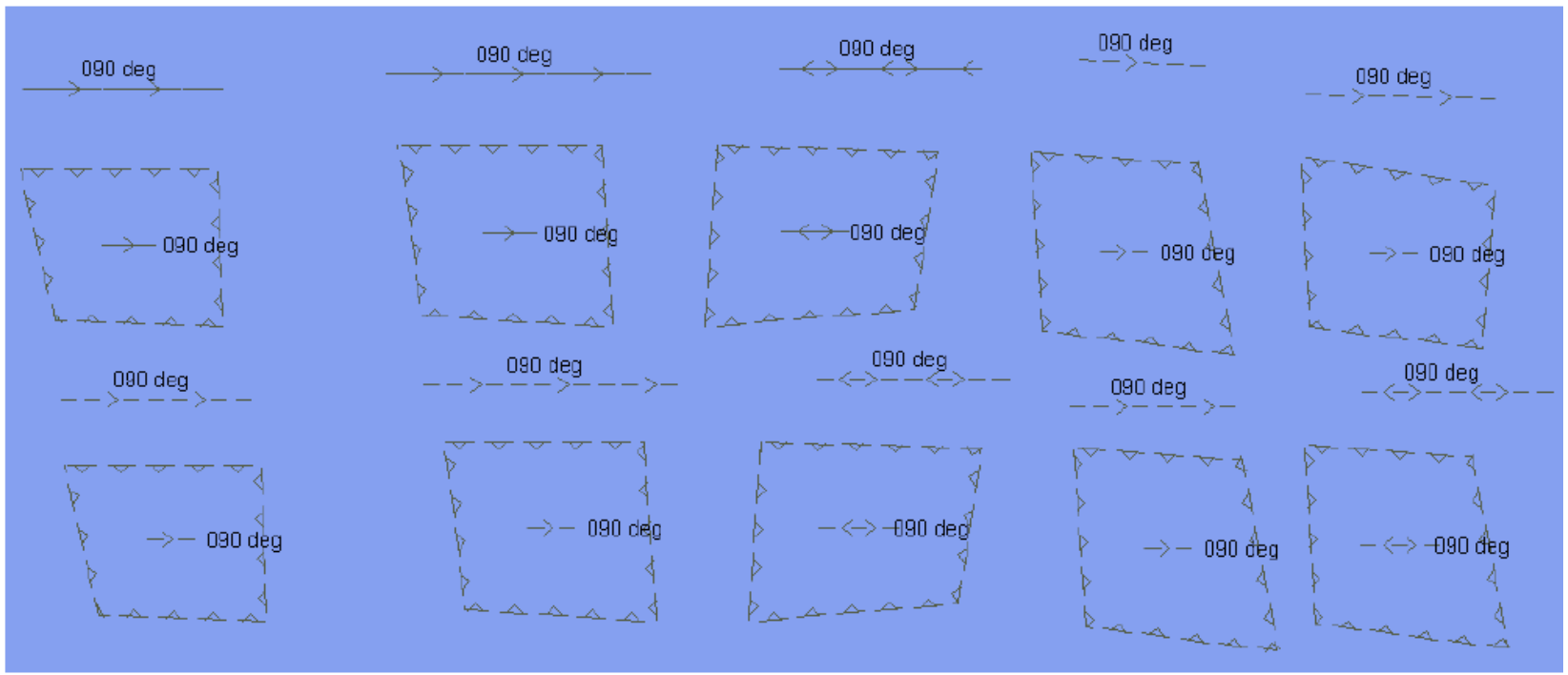
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