



# Update Information Features in S-101

*S-101PT12 VTC Feb 13-15 2024*  
*S-101PT12-06.6*

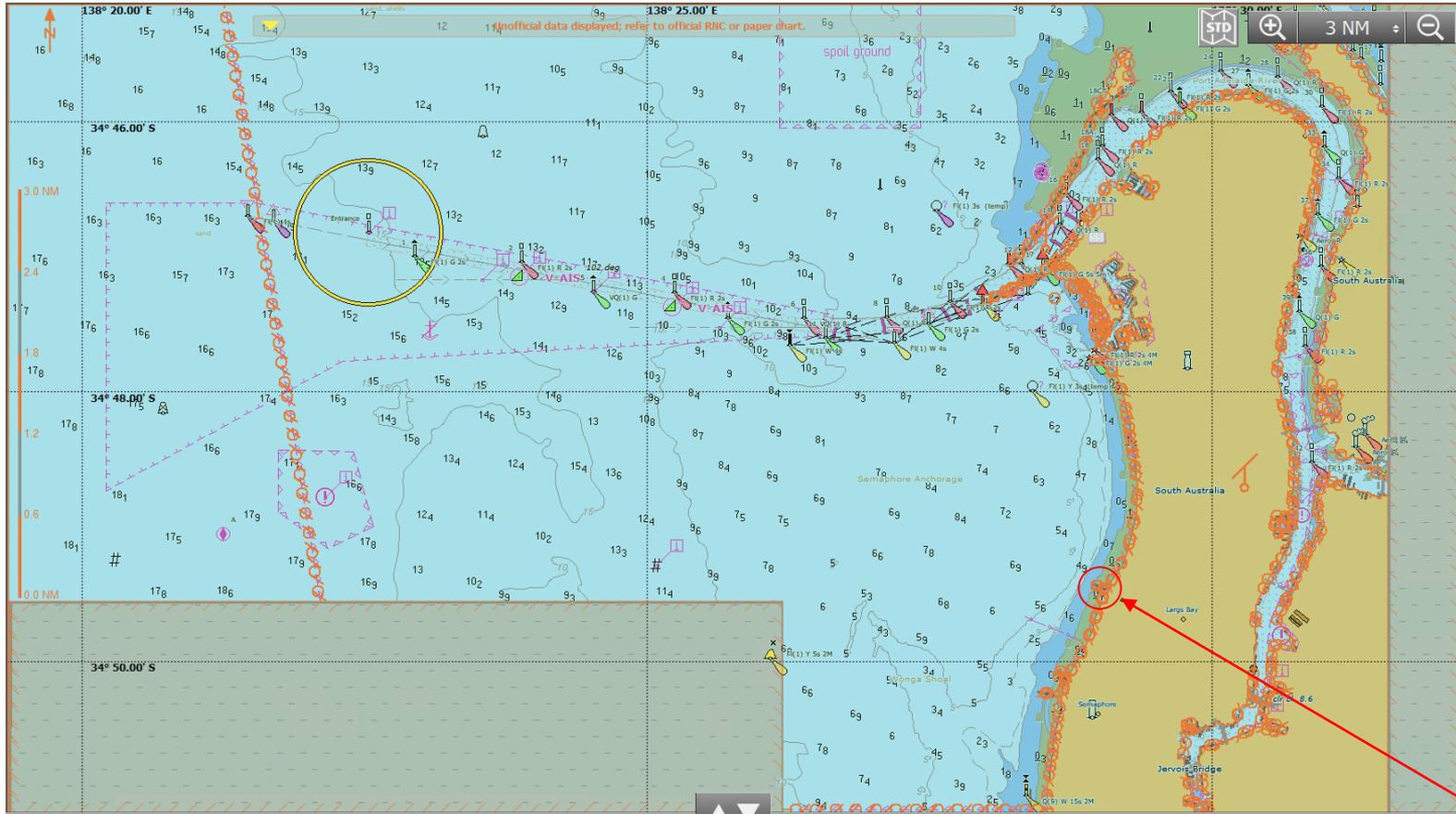
# The Proposal



- AHO proposes to request some slight modelling changes to the UpdateInformation Feature Objects in S-101 1.2.0
- Recommend adding an Update Composition Feature Association to the DCEG to allow UpdateInformation Features to be aggregated
- AHO would like this functionality to replace the existing Binary differencing method of S-57/S-52
- For this group to discuss potential portrayal examples that are proposed



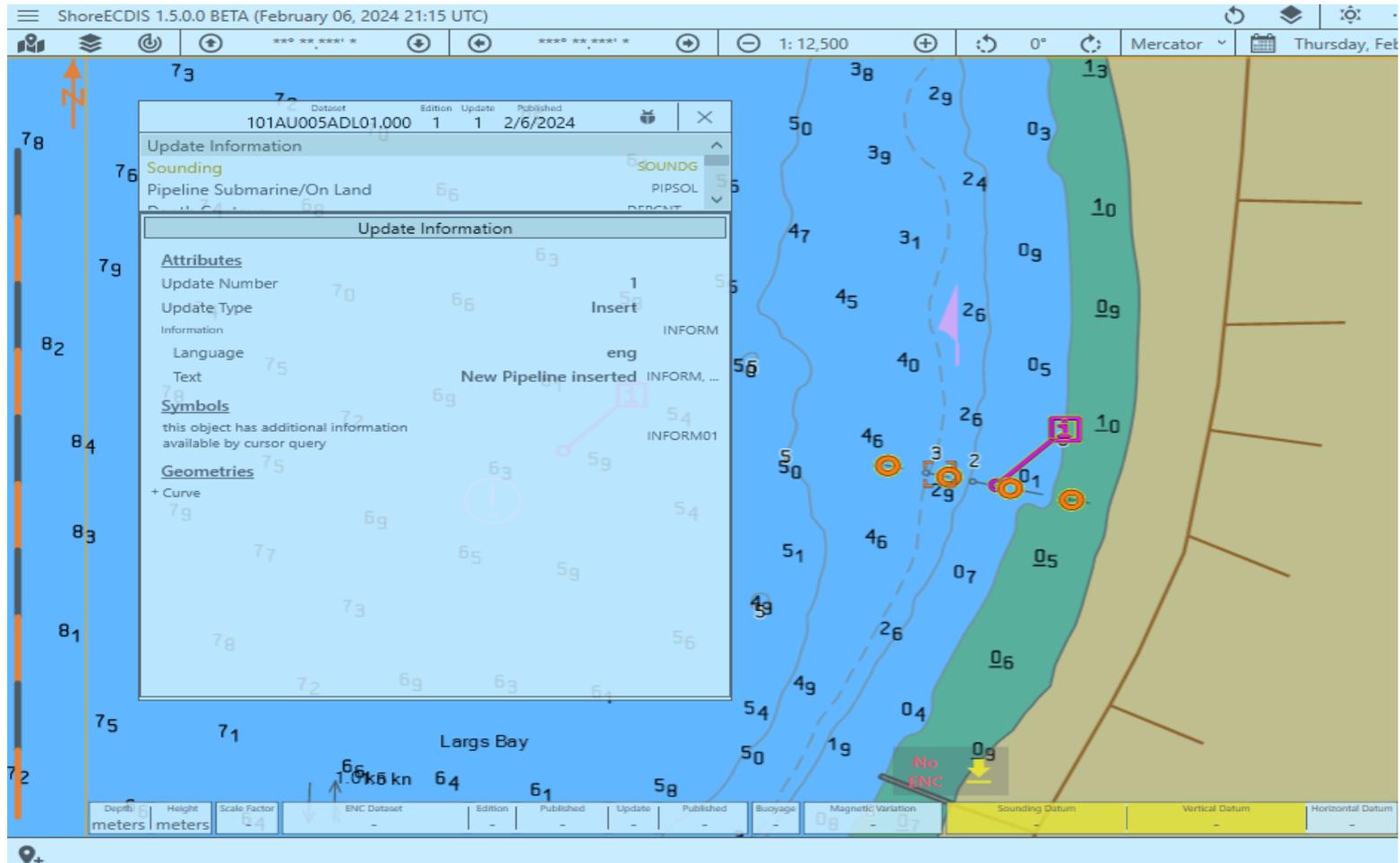
# Current functionality within S-52 ECDIS portrayal



Pipeline inserted

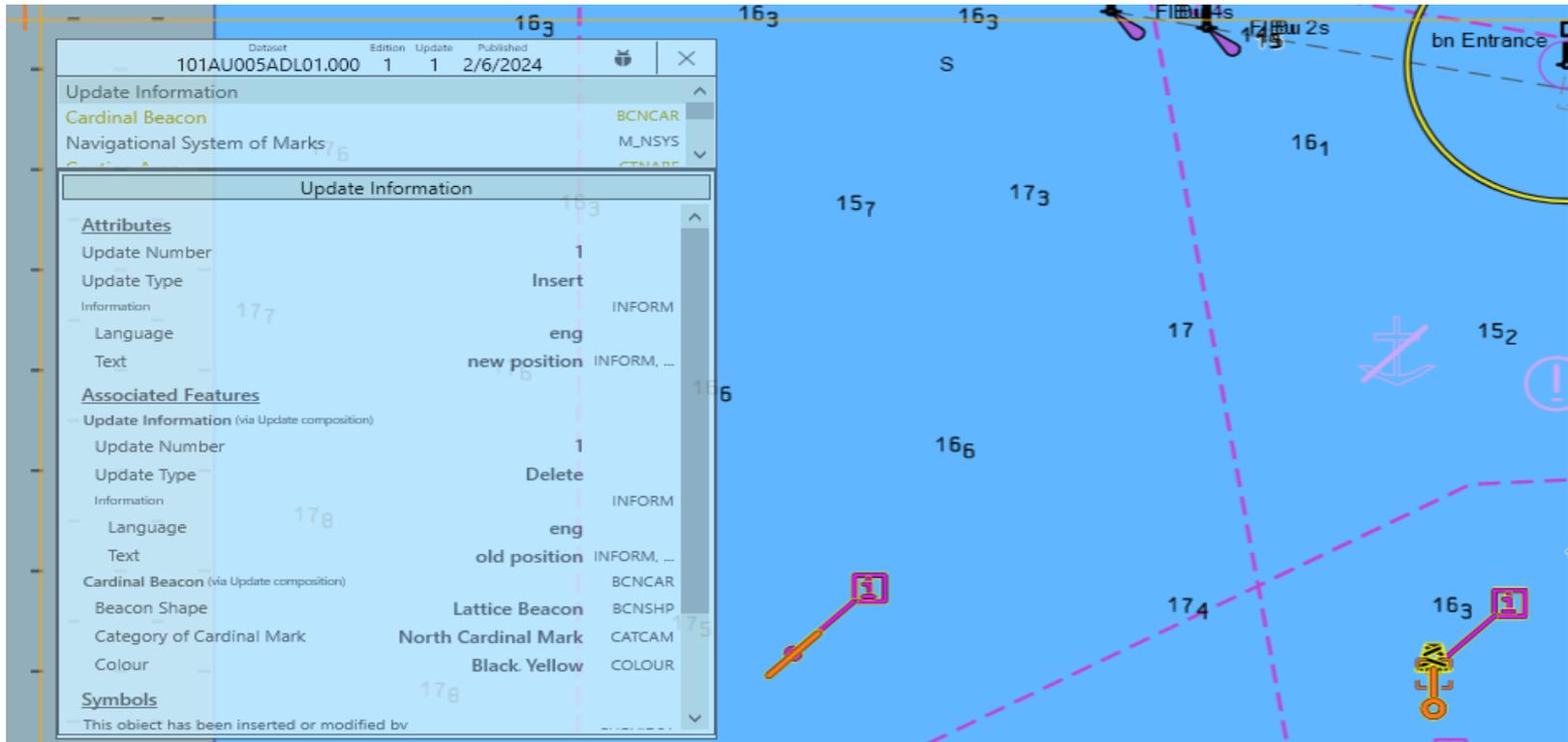


# Proposed S-101 portrayal/functionality



# UpdateInformation Information Object

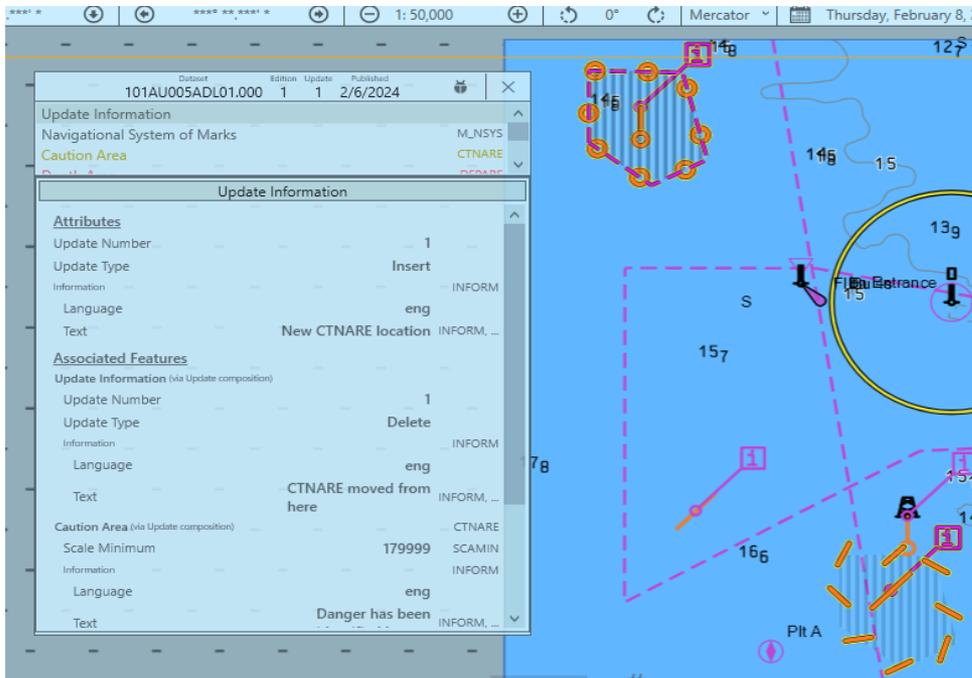
- We all understand that the intent of S101 is to have a relationship between the feature being updated and the type of update that is being applied to that feature. Encoding guidance for this is sound.



The screenshot displays a software interface for managing hydrographic data. On the left, a panel titled 'Update Information' shows details for a 'Cardinal Beacon' (BCNCAR) with 'Update Number 1' and 'Update Type Insert'. Below this, 'Associated Features' are listed, including an 'Update Information' object with 'Update Number 1' and 'Update Type Delete', and a 'Cardinal Beacon' object with 'Beacon Shape Lattice Beacon', 'Category of Cardinal Mark North Cardinal Mark', and 'Colour Black Yellow'. The right side of the image shows a map with various navigational features, including depth soundings (e.g., 157, 173, 166, 174, 163), a 'bn Entrance' label, and symbols for a lattice beacon and a cardinal mark.

# Update Composition proposal

- The association that has been proposed is designed to group together the combined Information feature objects and display to the mariner a simple instruction of what has occurred in this update. This is particularly useful in the Move scenario as it can group the Delete and Insert instruction to define the Move.



## Update Composition

**IHO Definition: Update Composition.** A feature association for the binding between an Update Information feature and its component Update Information features.

### Remarks:

- Useful to collect a group of updates such as when a series of deletes, inserts and modifies go together.

Role Type	Role	Associated With	Multiplicity
Composition	Component of	Update Information	0,1
Association	Consists of	Update Information	0,*

# Production tool automation

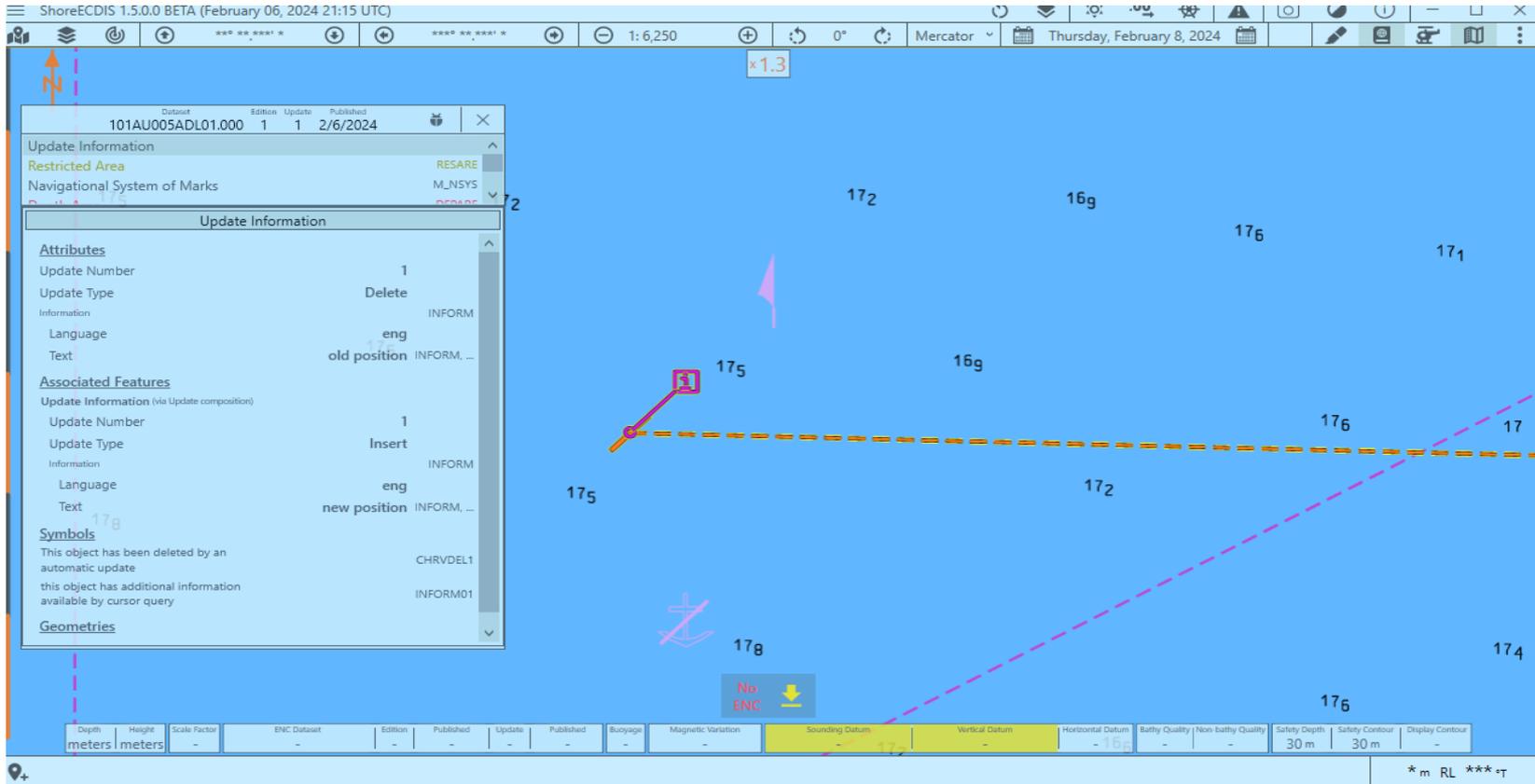


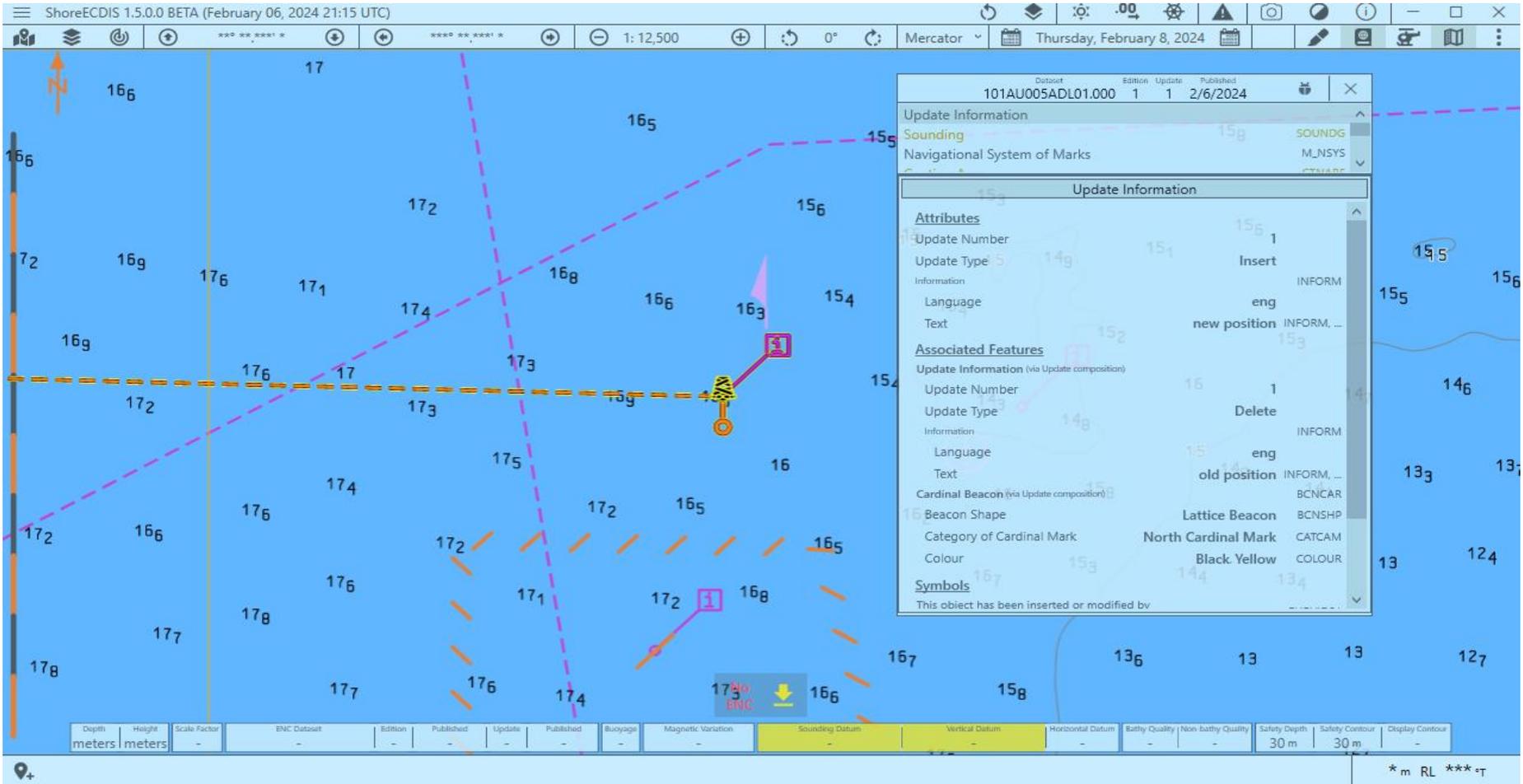
- ❑ At S101PT11, the group identified that resources would be a concern with the implementation of these features.
- ❑ AHO uses CARIS HPD Production Software
- ❑ AHO has workshopped with Teledyne CARIS the ability to semi automate parts of the production process to create the Update Information Features.
- ❑ Even without automation, there are multiple workflow options to consider when applying these features to the producers systems.
- ❑ Application of these features can be done manually by a compiler within a Source Database, manually within a Product, or by the use of automation when applying changes to a product that have been verified within the Source Database.
- ❑ In the example of a Pipeline insert, the compiler can be prompted to add an Update Information Object to all features that are being applied to the product, or the compiler can simply choose only the Pipeline and show that feature as the only important change to the Product.
- ❑ AHO have trialled this in a Cloud environment with CARIS software and it is not labour intensive, it didn't take any longer to add these features, than it took to edit Max, Min and Optimum display scales, and applying Sounding Datum Values to the dataset.

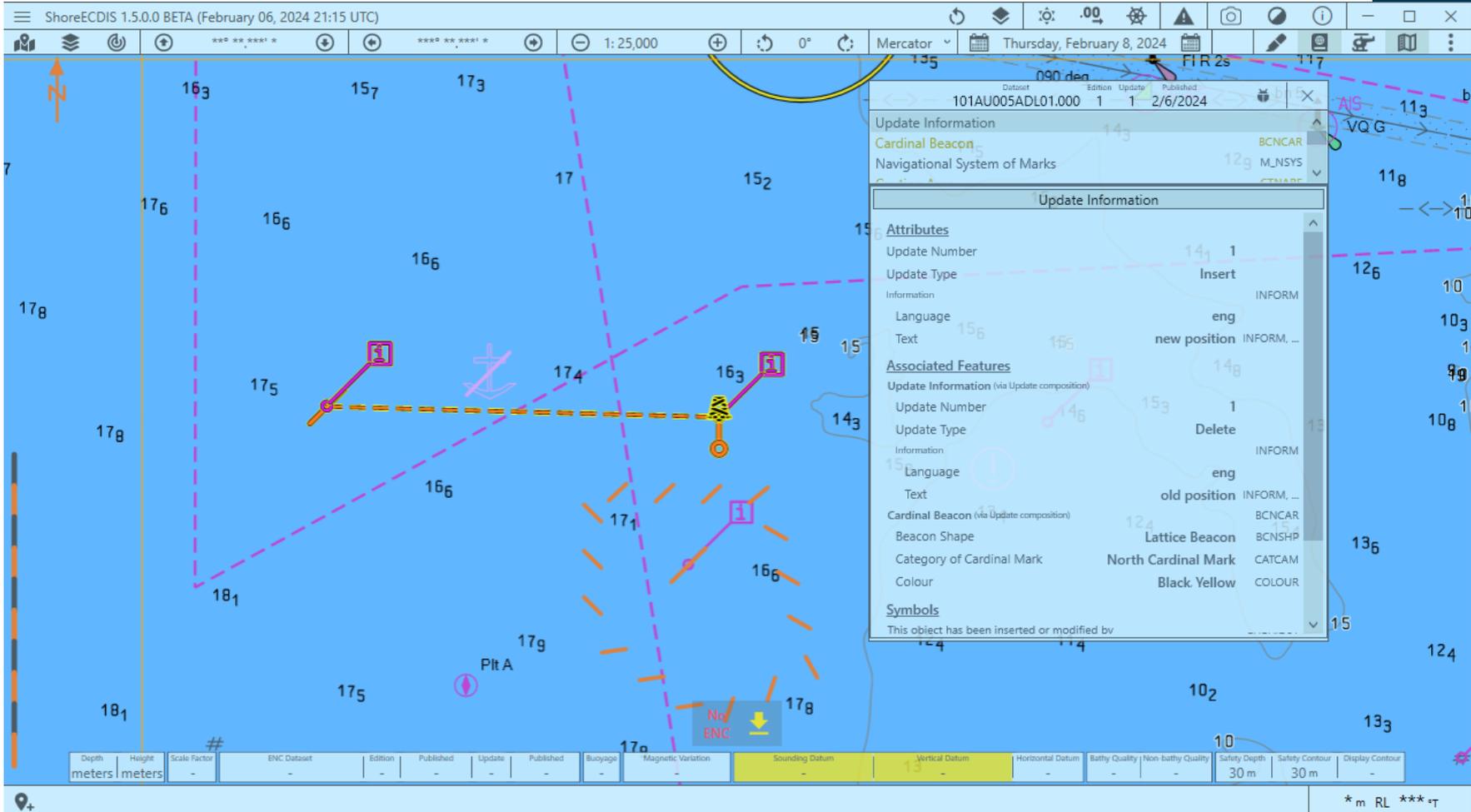


# Options for Portrayal

AHO have been testing ideas for portrayal for a moved feature and what that may look like, the reality of the situation is that not always will the two points be on the same screen. Some examples are below:







ShoreECDIS 1.5.0.0 BETA (February 06, 2024 21:15 UTC)

Dataset: 101AU005ADL01.000 | Edition: 1 | Update: 1 | Published: 2/6/2024

Update Information

Navigation System of Marks: MLNSYS

Depth Area: DEPART

Attributes

Update Number	1
Update Type	Insert
Information	INFORM
Language	eng
Text	new position

Associated Features

Update Information (via Update composition)

Update Number	1
Update Type	Delete
Information	INFORM
Language	eng
Text	old position

Cardinal Beacon (via Update composition)

Beacon Shape	Lattice Beacon	BCNSHP
Category of Cardinal Mark	North Cardinal Mark	CATCAM
Colour	Black Yellow	COLOUR

Symbols

This object has been inserted or modified by

Map Scale: 1:3,125 | Projection: Mercator | Date: Thursday, February 8, 2024

Map Features: 174, 176, 17, 173

ENC Status: No ENC

Depth	Height	Scale Factor	ENC Dataset	Edition	Published	Update	Published	Buysage	Magnetic Variation	Sounding Datum	Vertical Datum	Horizontal Datum	Bathy Quality	Non bathy Quality	Safety Depth	Safety Contour	Display Contour
meters	meters	-	-	-	-	-	-	-	-	-	-	-	-	-	30 m	30 m	-

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# Conclusions



- There is great potential of UpdateInformation to provide meaningful information to Mariners about changes to ENC Products
- Mariners now use both NTM's and S-57 differencing to understand what has changed. This functionality could replace both.
- Production is not intensive, and automation can make it easy.
- Producers can control the message about what has changed.



# Recommendations



- We ask the group to consider approving the revised modelling for Update Information Features to include the Update Composition Association.
- Approve that this functionality can replace the existing S-52 binary differencing method for ECDIS.
- Allow this group to work on guidance and examples of UpdateInformation encoding and guidance
- We would like to hear the groups input to portrayal options.

