



# 6<sup>th</sup> Meeting of the ENC Maintenance WG

## ENC Display Issues

### Agenda Item 6.8

ENCWG 6, VTC Event, 15-17 June 2021



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## THE ISSUE, CAUSE & EFFECT

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### Background:

- S-52 CSP UDWHAZ05 requires the depth of the 'Underlying area'
- This relation is in S-57 only 'implicit' and will be calculated during Conversion to SENC.
- After applying an update the calculation must be done again (if relevant objects are affected)
- Due to a software error, this was not done in all cases.
- As a result the relationship to the 'underlying area' could get lost or pointing to an area that is not underneath.
- Two cases causes the issue.
  1. The deletion of an 'Skin Of the Earth' object (if it contains at least one WRECKS, OBSTRN, or UWTROC)
  2. The modification of an SOE object in a way that because of the change an WRECKS, OBSTRN, or UWTROC object is not longer overlapping the object or is now overlapping but not before the update.
- The effect is that the WRECKS, OBSTRN, or UWTROC may not be shown as an isolated danger and is only visible in display mode 'Other Information" (The opposite case may happen as well but is less critical).

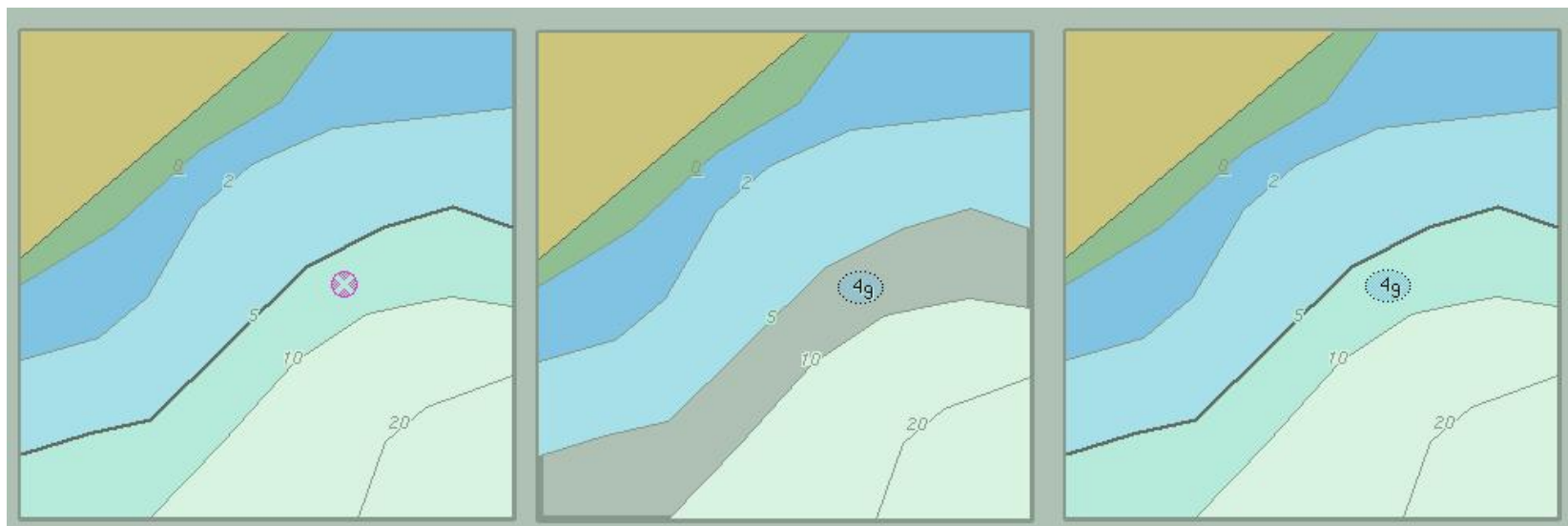


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## CASE 1 – DELETION OF SOE

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A DEPARE is deleted by an update and then a new DEPARE is inserted.





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## CASE 2 – MODIFICATION OF A SOE OBJECT

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The shape of a DEPARE has changed and the OBSTRN lies now in a different area (but has still the relationship to the old one)





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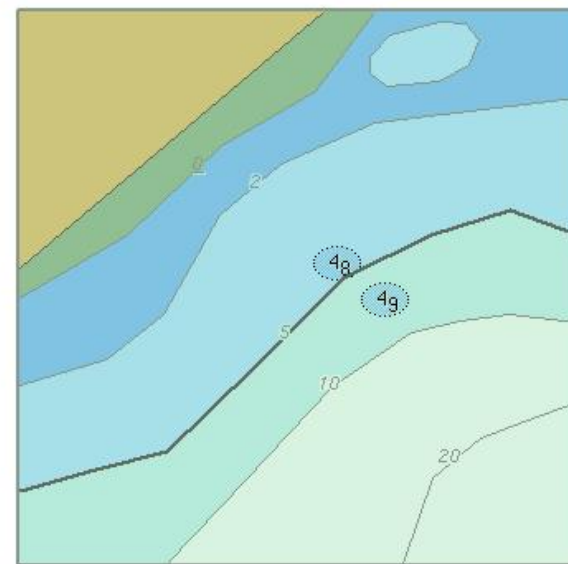
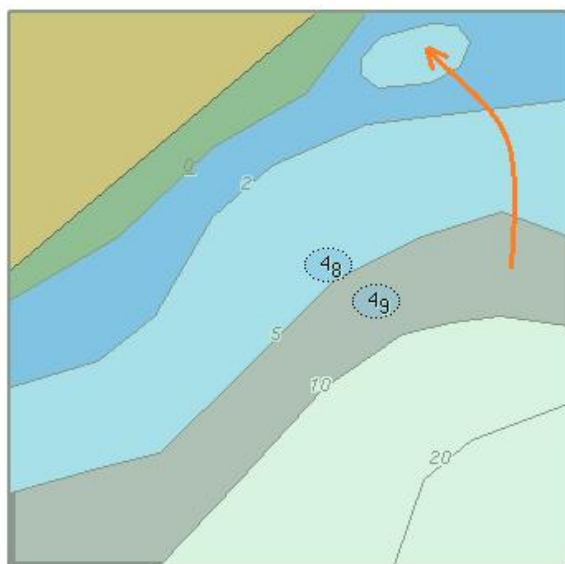
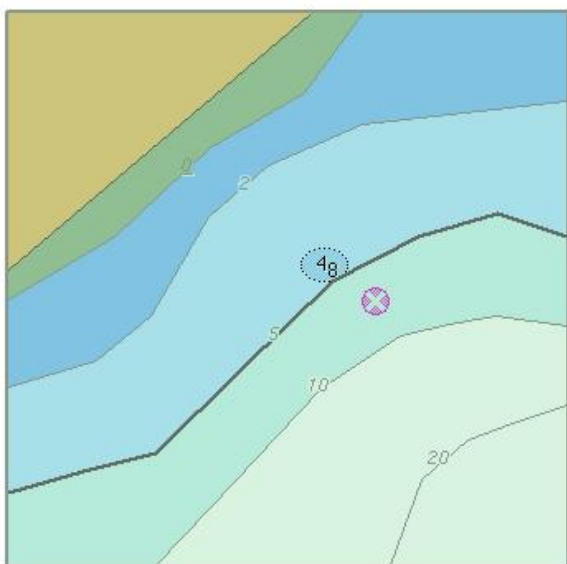
## CASE 2 – RECYCLING OF RCID

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This is another Case 2

- A DEPARE is modified so that it becomes a complete different object (including different attributes)  
Note: Both RCID and FOID are still the same.
- And a new DEPARE is inserted where the other one was before.

As a result the OBSTRN has still the relation to the old DEPARE that now is situated somewhere else.





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## SOME NOTES

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- All observed updates have been conformal to the standard
- Though the updates are often not done in the most efficient way.
- Especially deletion and insertion have been used where a modification could do the job.
- Using the same RCID and (FOID) for a complete different object is at least not the intended way of S-57 updates.

The following actions will ,Repair‘ the issue.

- A new edition of a dataset – The problem arises only with the ER - profile
- A re-issue with the next update (How to ensure that the incremental update is not delivered is unclear and critical)
- A modification of a WRECKS, OBSTRN and UWTRC object. (e.g. delete and insert, this is rather a hack but will fix the problem)



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## ACTIONS TO DATE

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Date	Action
4 <sup>th</sup> May	IHO/7Cs meeting, initial identification of ECDIS display issue
7 <sup>th</sup> May	ENCWG letter 1 issued to IHO MS outlining the issue
10 <sup>th</sup> May	ENCWG letter to RENCs requesting limited set of cells receive NEs
18 <sup>th</sup> May	UKHO investigation additional situations identified that can cause a display issue
21 <sup>st</sup> May	7Cs confirmation issue is wider than first expected, group 1 features modified by updates can cause problem
26 <sup>th</sup> May	ENCWG letter 2 issued to IHO MS outlining new findings
26 <sup>th</sup> May	ENCWG letter to RENCs and MS requesting additional sets of cells receive NEs



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VALIDATION

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- Updates to 7Cs Analyzer
- Distributed to RENCs





## IHO ENC PRODUCTION

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- How are ENC updates constructed?
- Reuse of RCID?



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## PLANNED ACTIONS

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1. Formation of ECDIS display correspondence group
2. Review test data, and develop feedback form for OEM survey
3. Send survey to all S-63 members to understand if this is an isolated incident or more widespread
4. Correspondence group to report findings to ENCWG 7
5. Correspondence group to develop proposed S-64 tests, report to ENCWG 7
6. Encoding information issued to ENC producers via IHO CL
7. Encoding information for ENC producers reviewed ENCWG 7
8. 7Cs to report on ECDIS upgrades to ENCWG 7