

ENC STANDARDS MAINTENANCE WORKING GROUP (ENCWG)

Paper by the AHO

DAYMAR and the double encoding of Base display
objects



Introduction

- S-58 check 54b requires that any DAYMAR not a slave in a master/slave relationship shares location with one of the listed objects.
- S-58 check 1775 also generates a Critical Error for DAYMAR (being listed in UOC 12.1.1 as ‘navigational aid equipment’) when either it sits in the water and does not share its location with a ‘navigational aid structure’ (as listed in UOC 12.2.1) or one of the objects listed in the check.
- In many real world scenarios, a DAYMAR sits in the water and it supports a light. Logical encoding practices would allocate the DAYMAR a ‘Master’ status and the light a ‘Slave’ status.
- DAYMARs belong to ECDIS ‘Standard display’ like Beacons and Buoys.
- DAYMARs provide in ECDIS the same indication to mariners, at the route planning and monitoring stages, as beacons and buoys do.



The problem

54b	For each DAYMAR feature object which is not a slave in a master/slave relationship AND is not COVERED_BY a BRIDGE, COALNE, DAMCON, FLODOC, LNDARE, OFSPLF, PILPNT, PONTON, PYLONS, SLCONS or UWTROC feature object.	DAYMAR not covered by a suitable supporting object.	Amend object to ensure it is situated on a suitable object.	Logical consistency	C
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1775	For each navigational aid equipment feature object which is COVERED_BY a DEPARE, DRGARE or UNSARE AND does not have a navigational aid structure feature object as a master AND the geometry of which is not COVERED_BY a CBLOHD, COALNE, CONVYR, DAMCON, (with CATDAM Equal to 3 (flood barrage)), LNDARE, PIPOHD or SLCONS feature object.	Equipment object within DEPARE, DRGARE or UNSARE without an appropriate supporting structure object or underlying object.	Ensure equipment object is encoded with an appropriate structure object or underlying object.	12.1.2 and 12.8.8	C
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Conclusion

- DAYMAR is part of ECDIS Standard display and it shouldn't be treated differently than Beacons.
- There shouldn't be a requirement to double encode a 'Base display' object (e.g. PILPNT) in the same location than a DAYMAR. Beacons are as dangerous to navigation as DAYMARs but they are treated differently. Why DAYMARs require a PILPNT double encoded whereas BCN**'s do not?
- A DAYMAR object in the water with no overlapping Base display object shouldn't be considered as '*... data which is unsafe for navigation*' as defined in S-58 section 1.2 under 'Critical Error'.



The proposed solution

1. S-58 check 54b - Update and downgrade from 'Critical Error' to 'Warning':

No.	Check description	Check message	Check solution	Conformity to:	Cat.
54b	For each 'navigational aid equipment' DAYMAR feature object which is not a slave in a master/slave relationship AND is not COVERED_BY a BRIDGE, COALNE, DAMCON, FLODOC, HULKES, LNDARE, OFSPLF, PILPNT, PONTON, PYLONS, SLCONS or UWTROC feature object.	Navigational aid equipment (DAYMAR) not covered by a suitable supporting object.	Confirm feature object is not a 'navigational aid structure' (DAYMAR) and amend object to ensure it is situated on a suitable object.	Logical consistency	W



The proposed solution

1. S-58 check 1775 - Amend 'check description' to exclude DAYMAR

No.	Check description	Check message	Check solution	Conformity to:	Cat.
1775	For each navigational aid equipment feature object (excluding DAYMAR) which is COVERED_BY a DEPARE, DRGARE or UNSARE AND does not have a navigational aid structure feature object as a master AND the geometry of which is not COVERED_BY a BRIDGE, CBLOHD, COALNE, CONVYR, DAMCON, (with CATDAM Equal to 3 (flood barrage)), LNDARE, PIPOHD, PONTON or SLCONS feature object.	Equipment object within DEPARE, DRGARE or UNSARE without an appropriate supporting structure object or underlying object.	Ensure equipment object is encoded with an appropriate structure object or underlying object.	12.1.2 and 12.8.8	C



The proposed solution

1. S-57 Appendix B.1, Annex A UOC – Update section 12.1.2:

When the nature of the base structure in the water is unknown, an ECDIS Base or Standard Display object (see S-52, Annex A, clause 13.2), for example a **PILPNT** object of type point or a **BCNSPP** object, must be encoded as the structure object at the same position as the equipment objects. **For DAYMAR objects, this requirement only applies to features considered by the producer as being equipment and not the aids to navigation structure itself.**

