Paper for Consideration by ENCWG6
Proposed Revision of S-58

Submitted by:	ENCWG S-58SubWG
Executive Summary:	This paper seeks approval of S-58 Draft Edition 7.0.0 for submission to HSSC.
Related Documents:	S-58 edition 6.1.0,S-58 Edition 7.0.0(redline), S-58 Edition 7.0.0 (clean) ENCWG6-9a IHO ENCWG-S58-ENC-Validation-Checks GitHub Issue #1-33
Related Projects:	-

Introduction / Background

1. Since the publication of S-58 Edition 6.1.0 the ENCWG have received numerous proposals for corrections, clarification and new checks for S-58. These proposals have been reviewed and discussed by the ENCWG S-58 Sub-WG on the IHO GitHub repository and at two virtual meetings. The agreed changes have been incorporated in the proposed new edition of S-58.

2. This paper contains a summary of the changes included in the draft edition 7.0.0 of S-58

Summary of Changes

1. Clause 1.3 amended to clarify that minimum check standard for ENC's

2. Clause 1.4.3 Clarification of the definitions for the terms 'Null' and 'notNull' 'Known' , 'Unknown' and 'Optional' – and subsequent changes to checks where these terms are used.

3. Check 19 check solution amended.

4. Check 44 split into 4 new checks 44a, 44b, 44c, and 44d to reflect the amended guidance for the population of DRVAL1 and DRVAL2 isolated shoals and deeps in *S-57 Appendix B.1, Annex A – Use of the Object Catalogue* clause 5.4.3.

5. Check 54a, 54b and 54c amended to add MORFAC as an acceptable underlying feature.

6. Check 61b to add DRGARE and UNSARE as acceptable covering features for point features with the attribute WATLEV = 3 (always underwater/submerged)

7. Check 72 renumbered as 72a and new check 72b added to check for objects encoded as both a 'master' and as a 'slave'

8. Check 94 amended to clarify the intent of the check.

9. Check 519a check message and solution amended.

10. Check 548 renumbered as 548a and new check 548b added to check for overlapping M_COVR objects

11. Check 551a re-classified from ‘Error’ to ‘Critical’

12. Check 555 split into 555a and 555b to differentiate between critical and non-critical cases of incorrect data record ordering.

13. Check 1504 renumbered as 1504a and new check 1504b added to check for specific values of VDAT

14. Check 1510 renumbered as 1510a and new check 1510b added to check for specific values of SDAT

15. Check 1512a amended to clarify the intent.

16. New check 1512c added to check for any point of a SOUNDG features that touches a M_SDAT feature.

17. Check 1670 reworded to add MARCUL and UWTROC

18. Check 1722a ‘Check solution’ amended.

19. Check 1768a renumbered as 1768a and new check 1768b added to allow for soundings equal to the DRVAL1 of the covering DRGARE.

20. Check 1775 amended to exclude DAYMAR features.

21. Check 1778 downgraded from ‘Error’ to ‘Warning’

22. Checks 1795c, 1795d, 1795e and 1795f added to ensure conformity between the temporal attribution of master and slave features.

23. New checks 1809a and 1809b added to identify illogical intertidal areas.

24. New check 1810 added to identify the absence of a centre point for LIGHTS with a range greater than 10M.

25. Check 2000 amended to
    - add RESTRN = 7 as an acceptable attribute value for MARCUL features.
    - to restrict the values of VERDAT for BRIDGE, CBLOHD, CONVYR, CRANES, GATCON, LIGHTS, PIPOHD M_SDAT and M_VDAT feature objects.

Conclusions
The inclusion of the proposed changes to S-58 will improve the clarity of the document and contribute to the identification of data that does not conform to the encoding guidelines in the UOC.

Recommendation
It is recommended that ENCWG approve the proposed changes applied to the draft edition 7.0.0 of S-58 ENC Validation Checks listed 1-25 above; and subsequently endorse this revision to be submitted for publication in accordance with the processes specified in IHO resolution 2/2007.

Action Required of ENC WG

The ENCWG is invited to:

a) Discuss and approve the proposed revisions and additional checks for inclusion in S-58.
b) Endorse the submission of S-58 ENC Validation Checks Edition 7.0.0 for publication.