



16th Meeting of the Hydrographic Services and Standards Committee

Report of the ENCWG

HSSC-16, Tokyo, Japan, 27 - 31 May 2024



IHO ENCWG REPORT

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The ENCWG 8 meeting took place September 2023 in Lombok, Indonesia

Elections for ENCWG officer roles conducted, the following members were re-elected for the following roles;

Chair: T. Mellor

Vice Chair: Richard Fowle

Secretary: Yong Baek

Membership(29 MSs): AR, AU, BE, BR, CN, CL, DK, EG, EE, FI, FR, DE, IN, ID, IT, JP, KR, NL, NZ, NO, PT, RU, SG, ZA, ES, SE, UA, GB, US

Expert Contributors: 28 experts





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PRINCIPAL ACTIVITIES AND ACHIEVEMENTS

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| ENCWG Standards` | Achievements |
|--|---|
| S-57 UOC | Edition 4.4.0 ready for HSSC endorsement |
| S-58 ENC Validation Checks | Edition 8.0.0 ready for HSSC endorsement |
| S-64 IHO Test Data Sets for ECDIS | Edition 4.0.0, impact study completed |
| S-66 Facts About Electronic Charts and Carriage Requirements | Edition 2.0.0 ready for HSSC endorsement |
| S-65 ENCs: Production, Maintenance and Distribution Guidance | |
| Annex A High Density (HD) ENC Production and Maintenance Guidance | Edition 1.1.0 of S-65 Annex A, ENCWG approval completed - published |
| Annex B S-57 ENC to S-101 Conversion Guidance | Edition 1.2.0 of S-65 Annex B, ENCWG approval completed - published |



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S-57 UOC EDITION 4.4.0

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- S-57 Use of the Object Catalogue edition 4.4.0 ready for HSSC endorsement

Main Changes

- SCAMIN steps updated for conspicuous features
- New guidance for separating discrete text strings in INFORM*
- New guidance for encoding dangerous or hazardous cargo berths*
- Enhanced guidance for encoding opening and fixed bridges*
- Improved guidance for encoding heights of offshore platforms*

* In addition to providing enhanced guidance for consistent ENC performance in ECDIS, changes will facilitate automated S-57 ENC to S-101 conversion



HSSC15/32

- As reported at HSSC 15 the ENCWG have reviewed the open issues identified in S-58 edition 7. Having reviewed the cases, the ENCWG deemed it necessary to create a new edition to address the issues summarised below

| No | Check description | Check message | Check solution | Conformity to | Cat |
|------|---|---|--|------------------|-----|
| 1 | For each edge which is COINCIDENT with another full or a segment of an edge of the same or another line. | Partially duplicated edges or their segments. | Remove duplication, add nodes and edit edges as required. | Part 2 (2.2.1.2) | E |
| 3 | For each record where the record identifier NAME (concatenation of the RCNM & RCID subfields) is not unique within the dataset (Base dataset (EN) file and all subsequent Update (ER) files) applicable to a single Edition of an ENC.. | Record identifier NAME is not unique. | Amend Record identifier NAME to be unique. | Part 3 (2.2) | C |
| 548c | For Each M_COVR feature object where the boundary geometry is coincident with the boundary of another M_COVR feature object with identical attribution. | M_COVR object unnecessarily split | Merge adjacent M_COVR features with identical attribution. | 2.2 | W |



- **HSSC15/32**

| No | Check description | Check message | Check solution | Conformity to | Cat |
|-------|--|---|--|-----------------------|-----|
| 1551b | If the combined coverage of M_CSCL meta objects EQUALS the combined coverage of M_COVR meta objects with CATCOV = 1(coverage is available) | M_CSCL object has the same geometry as a M_COVR meta object with CATCOV = 1. | Consider removing the M_CSCL meta object and/or reconsider the value of the CSCL of the dataset. | 2.2.6 | W |
| 1778b | For each LIGHTS feature object where CATLIT contains the value 1 (directional function) OR contains the value 16 (moiré effect) AND SECTR1 and SECTR2 have no values AND ORIENT is Unknown AND the associated structure feature object is not aggregated to a RECTRC or NAVLNE feature object in a C_AGGR collection object. | LIGHTS object with CATLIT = 1 (directional function) or 16 (moiré effect) with possible missing attribute values for SECTR1 and SECTR2 or for ORIENT. | Populate SECTR1 and SECTR2, or ORIENT reconsider the CATLIT value. | 12.8.6.5 and 12.8.6.6 | W |
| 1769 | Check removed. | | | | |



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S-58 EDITION 8.0 IMPACT STUDY

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- 67 organisations responded to the survey
- 97% of organisations said they would implement S-58 edition 8.0.0
- 97% of organisations indicated there would be no negative implementation issues

of the implementation issues cited 'Impact on software development' was referenced twice.

Based on the results of the impact study HSSC are invited to endorse S-58 edition 8.0



HSSC15/35, HSSC15-05.2E INF

- ENCWG conducted impact study with relevant stakeholders
 - HOs, OEMs, RENCs, PSC inspectors & Maritime Administrations
- Of the OEMs surveyed the majority did not think the changes would incur significant cost to implement and would not require additional type approval
- Maritime Administrations were concerned with how the concurrent validity of standards on the IHO web pages would be communicated
- To simplify this situation, it is proposed that a S-64 New Edition 4.0.0 for the performance of S-57 data in “dual fuel” mode be created for the type approval of S-100 ECDIS. The ENCWG would create a series of additional checks for the display of indication highlights taking into account ENC accuracy.



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S-66 FACTS ABOUT ELECTRONIC CHARTS AND CARRIAGE REQUIREMENTS EDITION 2.0.0

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HSSC15/34

- ENCWG and DQWG have worked to consolidate S-66, S-67 and associated information papers into one unifying document for mariners
- In addition to the consolidation activity the new cyber security guidance developed by the ENCWG has been added to the document
- S-66 edition 2.0 has been submitted for HSSC endorsement
- Next steps in the life cycle of this document are to consider what guidance is needed to support introduction of S-100 ECDIS



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S-65 ANNEX A HIGH DENSITY (HD) ENC PRODUCTION AND MAINTENANCE GUIDANCE EDITION 1.1.0

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- Removed table taken from an old edition of IHO S-44
- Minor editorial amendments and clarifications made throughout



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S-65 ANNEX B

S-57 ENC TO S-101 CONVERSION GUIDANCE EDITION 1.2.0

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- Revision to align with S-101 Edition 1.2.0
- Approved by ENCWG for testing



| ENCWG Subgroups | Problems/Issues |
|-----------------------------------|--|
| S-52 edition 5.0 | The new S-100 ECDIS performance standard has introduced a requirement for the Mariner to be able to select the ECDIS indication highlight has taken into account the underlying accuracy of the hydrographic information. This requirement equally applies to both S-57 and S-100 datasets |
| S-64 edition 4.0 | Hydrographic accuracy in S-100 ECDIS (refer S-52 edition 5.0 above) SOE tests |
| S-57 | WENDWG requested ENCWG investigate inverse scale band overlapping ENC's in ECDIS. A survey and test data has been created and sent to OEMs to assess issue. |
| S-52 edition 4.0.4 | It was agreed at ENCWG 8 before changes were made to S-52 they should be tested alongside overlapping test data |
| S-101 Educational Guidance | France raised the issue of creating supporting standards/guidance document related to the creation, maintenance and use of S-101 |



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ACTIONS REQUESTED FROM HSSC

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1. Note the report of ENCWG
2. Endorse publication of S-57 UOC 4.4.0 for MS approval
3. Endorse publication of S-58 ENC edition 8.0.0 for MS approval
4. Endorse publication of S-66 edition 2.0.0 for MS approval
5. Approve request to create new editions of S-52 and S-64 for S-100 ECDIS
6. Note intention of publication of S-65 Annex A HD ENC edition 1.1.0*
7. Note intention of publication of S-65 Annex B of S-57 ENC to S-101 Conversion Guidance edition 1.2.0*

* Information only – no requirement for HSSC endorsement under Resolution 2/2007 until Edition 2.0.0.