

Paper for Consideration by the Transfer Standard Maintenance and Applications Development Working Group
(TSMAD)

S-58 Edition 5.0.0 Status

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| Submitted by: | TSMAD S-58 Sub-WG |
| Executive Summary: | Brief to TSMAD on the progress of edition 5.0.0 of S58 |
| Related Documents: | TSMAD23 4.7.1; TSMAD24/DIPWG4 11-1A; TSMAD26_DIPWG-12-1A; TSMAD27-4.1.1; http://www.iho.int/iho_pubs/draft_pubs/S-58_e5.0.0/Draft S-58_ENC Validation Checks e5.0.0.pdf |
| Related Projects: | |

Introduction / Background

HSSC5 endorsed Edition 5.0.0 of S-58 subject to minor amendment and final approval by TSMAD27. CI 18/2014 has now been issued requesting the approval of member states for the adoption of S-58 Edition 5.0.0 Closing dates for votes is the 15th April 2014.

Analysis/Discussion/Conclusions

This edition of S-58 has re-worded and re-structured the checks as specified in TSMAD23 4.7.1 and introduces the concept of critical errors and the mandating of a minimum check standard to be introduced after the completion of suitable test data and the availability of validation software.

Following the circulation of S-58 to IHO member states, a number of editorial amendments have been identified (see Annex A) It is hoped to include these prior to publication.

In addition, NOAA has contracted IIC to update the S-58 test datasets to the edition 5.0.0 of S-58. These will be made available for download on the IHO website.

Action Required of TSMAD

TSMAD is invited to note this and to encourage their national representatives to vote to approve of the adoption of this new edition.

TSMAD is also requested to approve the editorial corrections in annex A for inclusion to edition 5.0.0 of S-58 prior to publication.

Annex A – S-58 Edition 5.0.0 Editorial corrections.

| 2.1 Checks relating to S-57 Data Structure | | | | | |
|---|--|--|---|--|--------------|
| No | Check description | Check message | Check solution | Conformity to: | Cat |
| 18b | For each area object which have one outer boundary, that it is referenced first. | Area object with one outer boundary which is not referenced first. | Amend geometry so that the outer boundary be is referenced first. | Part 3 (4.7.3.2) and (4.7.3.3). | C |
| 51b | For each COALNE object which is COINCIDENT with a SLCONS object of type area WITHIN-a LNDARE-AND where WATLEV is not populated or encoded with the values (2) [always dry] or (1) [partly submerged at high water] that is WITHIN an area LNDARE | COALNE and SLCONS with illogical values of WATLEV overlap. | Amend objects so that they do not overlap or amend WATLEV values. | Logical consistency. | W |
| 89a | For each master object which references the same slave more than once. | Master object references the same slave more than once. | Remove duplicate reference to slave object. | Part 3 (6.3); Appendix B.1 (3.9) & Appendix B.1 Annex A 12.1.2. | C |
| 89b | For each slave object which is reference by more than one master object. | Slave object has more than one master. | Remove a master from slave object. | Part 3 (6.3); Appendix B.1 (3.9) & Appendix B.1 Annex A 12.1.2. | C |
| 95 | If the COMT subfiled subfield of the DISD and DSPM fields contains text which is not lexical level (0). | COMT subfield contains text which is not lexical level (0). | Amend text to conform to lexical level (0). | Part 3 (2.4). | E |
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| 2.2 Checks relating to ENC Product Specification | | | | | |
| No | Check description | Check message | Check solution | Conformity to: | Cat |
| | | | | | |
| 505 | If objects of type M_COVR, M_NSYS, OR M_QUALCOVR do not exist within the dataset. | Mandatory meta objects are missing; | Include mandatory meta objects M_COVR, M_QUAL and M_NSYS or M_QUAL | 3.4 | C |
| 517d | For a collection feature record which references another master feature. | Collection feature references another master feature. | Remove reference to a master feature. | 3.9 and Appendix B1, Annex A (15), and Part 3 (6.2) | E |
| 520b | If the text within any NATF field is not lexical level (0), (1) or (2), AND DSSI-NALL is not with (0) (1) or (2). | NATF field text is not Lexical level (0), (1) or (2) or NALL is not encoded correctly. | Correct text in the NATF fields or amend NALL sub field. | 3.11 and 3.5.5 | E |
| 522 | For all objects where NOBJNM is 'notNull' AND OBJNAM is 'Null' OR Ø not present. | Object name in national language is populated without Object name. | Populate Object name. | 3.11.1 | E |

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|------|---|--|---|--------|---|
| 524 | Where DUNI does not equal 1 [metres]. | DUNI does not equal 1 [metres]. | Ensure DUNI equals 1 [metres]. | 4.4 | C |
| 525 | Where PUNI does not equal 1 [metres]. | PUNI does not equal 1 [metres]. | Ensure PUNI equals 1 [metres]. | 4.4 | C |
| 549 | For each DEPARE or DRGARE objects which is are not WITHIN the combined coverage of M_QUAL objects. | DEPARE or DRGARE objects not covered by an M_QUAL object. | Ensure full coverage of M_QUAL objects over DEPARE or DRGAREs. | 3.4 | E |
| 560b | For all objects with the same FOID where the geometric primitives are of type Point OR are not of the same geometric primitive. | Objects with the same FOID are of type point or have geometric primitives of a different type. | Ensure point objects do not have the same FOID and that line and area objects which share FOIDs have the same geometric primitive type. | 3.1 | C |
| 572 | For all objects where NINFOM is 'notNull' AND INFORM is 'Null' OR OR not present. | Information in national language is populated without Information. | Populate Information. | 3.11.1 | E |
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2.3 Exchange Set Level Checks

| No | Check description | Check message | Check solution | Conformity to: | Cat |
|------------|---|--|---|---------------------|-----|
| 1009 (532) | If the text and graphic file names are NOT unique, OR NOT with extension (e.g. .TXT and .TIF). for new editions and re-issues. | Text and graphic file names with incorrect incorrect format/name. | Use correctly formatted and named text and graphic files. | Appendix B.1 5.6.4. | C |
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2.4 Checks relating to Use of the Object Catalogue for ENC

| No | Check description | Check message | Check solution | Conformity to: | Cat |
|------|--|--|--|----------------|-----|
| 1597 | For each RIVERS object where it's geometric primitive EQUALS OVERLAPS a SEAARE object. | RIVERS object overlaps a SEAARE object. | Amend SEAARE object. | 4.7.6 | E |
| 1604 | For each COALNE object which is COINCIDENT with a LNDRGN object where CATLND equals (15) [salt pan] AND CATCOA on the COALNE object does not equal (2) [flat coast]. | COALNE object adjacent to LNDRGN with CATLND = salt pans does not have CATCOA = flat coast. | Amend CATCOA on COALNE object to (2) [flat coast]. | 4.7.9 | W |
| 1614 | For each object of type TUNNEL which CONTAINS any non-hydrographic object. (for this check hydrographic objects are DEPARE, DEPCNT, DRGARE, LNDARE) | TUNNEL contains non Hydrographic object. | Delete objects within TUNNEL which are unnecessary. | 4.8.3 | W |
| 1663 | For each WRECKS objects where the attribute values do not correspond to the table below; | WRECKS object with illogical attribute combination. | Amend attributes in accordance with the logical values defined in the table. | 6.2.1 | W |
| | VALSOU | WATLEV | CATWRK | | |

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|--|---|---|---|-------------------------------|------------|-----------|
| | Undefined | 3 or unknown | 1, 2, 3 or unknown | 2 or undefined | Undefined | Undefined |
| | | 4 or 5 | Any value | 2 or undefined | Undefined | Undefined |
| | | 1 or 2 | 4, 5 or unknown | Undefined | Any value | Undefined |
| | Unknown | 3 or unknown | 1, 2, 3 or undefined | 2 or undefined | Undefined | Undefined |
| | | 4 or 5 | Any value | 2 or undefined | Undefined | Undefined |
| | | 1 or 2 | | Undefined | Any value | Undefined |
| | < 0 | 4 | Any value | 7 | Undefined | Undefined |
| | | 4 | Any value | 1, 3, 4, 6, 8, 9 or undefined | Undefined | Any value |
| | 0 | 5 | 1, 2, 3 or undefined | 7 | Undefined | Undefined |
| | | 5 | Any value | 1, 3, 4, 6, 8, 9 or undefined | Undefined | Any value |
| | > 0 | 3 | 1, 2, 3 or undefined | 7 | Undefined | Undefined |
| | | 3 | 1, 2, 3 or undefined | 1, 3, 4, 6, 8, 9 or undefined | Undefined | Any value |
| 1722a | For each navigational aid equipment object which is not a slave to a navigational aid structure object OR another navigational aid equipment object. NOTE: CRANES, FLODOC, FORSTC, FSHFAC, HULKES, PONTON, OBSTRN, PYLONS, SILTNK and WRECKS objects must be considered as possible structure objects, in addition to the list given in Annex A (12.1.1). | Equipment object which is not a slave of a structure or another equipment object. | Amend equipment object to slave. | 12.1.2 and 12.1.1 | W | |
| 1723 | For each point object forming the same navigational aid which does not point to the same spatial object. | Object forming a navigational aid does not point to the same spatial object. | Ensure all components point to the same spatial object. | 12.1.2 | C | |
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| 2.5 Checks relating to allowable attribute values for particular object classes | | | | | | |
| No | Check description | Check message | Check solution | Conformity to: | Cat | |
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