

5th IHO HSSC Meeting Shanghai, China, 5-8 November 2013

Paper for Consideration by HSSC

Response to Finland's comments on S-58

Submitted by:	TSMAD Chair
Executive Summary:	This paper is in response to Finland' issues and concerns with the proposed new version of S-58 and its relationship with S-57.
Related Documents:	HSSC5-05.1H - Comments by Finland to the status of S-57, scope of S-58 and the authority between S-57 and S-58 HSSC3-05.1B - Review of S-58 Recommended ENC Validation Checks HSSC4-05.1J - Proposed Revision to S-57 S-58 Edition 4.2.0 S-58 edition 5.0.0
Related Projects:	

Introduction / Background

This paper is an attempt to answer the issues and concerns expressed by Finland.

Analysis/Discussion

The fact that Finland has raised legitimate concerns with the new content of S-58 is, without question, acceptable. However, it is puzzling that these criticisms have been made at this late stage and to this Committee, particularly as there have been two opportunities this year for TSMAD members (of which Finland is one) to review and propose amendments to the new edition before submission of the final draft to HSSC 5. It is regrettable that Finland did not take these opportunities, or the opportunity to take an active part in discussions at TSMAD meetings, to raise the concerns now raised, or to propose amendments.

Because of the importance of S-58 and the need to review it in detail, I sent the following letter to TSMAD M.S.s in February of this year. Key statements in the letter have been highlighted in a bold font.

QUOTE

To: TSMAD Members

Date 27 February 2013

S-58

Dear All,

Tom Richardson and Richard Fowle have asked me to forward a request to review S-58 (below), **the only thing I would add to this, is to stress the high importance of making sure that you make every effort to participate in the review. It's the quality of everyone's data we are trying to improve.**

Paper [TSMAD25-4.7.2](#) proposed the re-classification and re-wording of the S-58 Checks, it was agreed that these changes should be circulated to the full TSMAD for review.

In order to simplify the review of the rewording and classification the review will be broken into two phases;

Phase 1

- Review of check rewording and messages by production software manufacturers,
- Review of the classification of checks and new or amended checks by the full TSMAD membership.

Phase 2

- Review of the combined changes resulting from phase 1 in advance of TSMAD 26 for approval in advance of submission to HSSC 5.

Please find attached the classified checks for review. Please review the classification of these checks bearing in mind the TSMAD objective to establish a minimum set of mandatory checks to which an ENC must conform, as instructed by HSSC. Any proposed changes must be made using the spreadsheet provided. Only proposed changes with proper justification will be accepted, no comments. Completed reviews must be returned to Tom (Thomas.Richardson@ukho.gov.uk) by the Friday 26th April 2013.

New or amended checks agreed by the S-58 sub working group are included in green text in the attached document and should also be reviewed.

UNQUOTE

A more detailed analysis of Finland's paper (HSSC5-05.1H) is made in Annex A.

Conclusions

The issue with test 54A will be rectified, but this should really be discussed at TSMAD 27 next month. If Finland has any suggestions about improving S-58 based on the issues they have raised, these should be submitted to TSMAD 27 for discussion.

On the basis that test 54A will be rectified at TSMAD 27 prior to publication of the new edition of S-58 it is submitted that there is no obstacle to publication, which this Committee is invited to approve.

Justification and Impacts

If it is not accepted that TSMAD are the competent body to resolve these issues at TSMAD 27 there will inevitably be a delay in the approval and endorsement by HSSC and M.S.s of S-58 5.0.0 and S-57 Supplement 3.

Action Required of HSSC

- a. note this paper and act upon it accordingly.

Annex A

1. Scope of S-58

Clauses 5 – 7 in Finland's paper (HSSC5-05.1H).

The introduction to the current Edition of S-58 includes the following sentences.

"It specifies the checks that, at a minimum, producers of ENC validation tools should include in their validation software. This software will be used by hydrographic offices to help ensure that their ENC data are compliant with the S-57."

This statement firstly recognizes the need for better, more consistent validation tools and also makes an assumption that producers of ENCs would want to use these tools and want them to be consistent to a standard.

Paper HSSC3-05.1B clearly defined the current issues with S-58 and the HSSC response supported it as follows.

QUOTE

HSSC Chair summarized that:

- The ECDIS is the wrong place to check for ENC errors. - There is an important role for RENCs to perform. - It is not satisfactory that an ENC should cause an ECDIS to shut-down.

Outcomes:

- The Committee noted the two papers and the presentation.
- The Committee accepted, in principle that a minimum validation check standard for ENC should be established using the "error" category in S-58.
- The Committee agreed to restructure the S-58 standard into: errors which must be corrected in all ENCs; "warnings" that require cartographic interpretation for a satisfactory solution; and tests to be performed prior to data import in ECDIS.
- The Committee agreed that TSMAD investigate and propose how a minimum validation check standard can be achieved across all ENC providers, including the development of a use-case dataset.
- The Committee agreed that TSMAD develop, in consultation with stakeholders, a migration path, guidance and appropriate tools for establishing a minimum validation check standard.
- **Action HSSC3/06 – TSMAD** to investigate and propose how a minimum validation check standard can be achieved across all ENC providers, including the development of a use-case dataset.
- **Action HSSC3/07 – TSMAD** to develop, in consultation with stakeholders, a migration path, guidance and appropriate tools for establishing a minimum validation check standard.

UNQUOTE

During development of the new edition it became clear that restructuring the standard to return just errors and warnings was too severe and, as reported at HSSC 4, this was changed to return critical errors, errors and warnings, as defined in the new version. The critical errors checks are the minimum set of validation checks to

ensure an ENC is safe to use and remove the need for any validation in ECDIS during the SENC creation process.

It also became apparent that introducing a mechanism to ensure that distributed ENCs complied with the minimum set would be very difficult to achieve using S-57 and investigations into introducing this in S-101 are ongoing.

The result was that at HSSC 4 (paper HSSC4-05.1J) I introduced the possibility of reverting S-58 to its former location in S-57 - Appendix B1, Annex C in order to establish its importance in the production of valid ENCs. I was subsequently advised that this was not necessary and that a reference to S-58 in a S-57 supplement would be sufficient, a proposal for which has now been submitted to HSSC5 for approval.

In support of this move to improve S-58, is the recent report of an ENC being rejected by a well known and used ECDIS because of an uncorrected error in a text string. The string is specified as being encoded in plain ASCII, but contained a carriage return character. This occurred after nearly 20 years of the production of ENCs and the use of validation tools and would have been caught by a S-58 check.

Perhaps the TSMAD report should have referred to the fact that at TSMAD 26 there was discussion of a suggestion to include, in the Circular Letter requesting M.S. vote on S-58, an explanation about how this new edition is only stage one in the transition towards the certification of ENCs and potential type approval of validation software. My only excuse for not including this reference being that it has been a very busy year for TSMAD. ENC producers will, of course, not be expected to comply with the new edition until validation tools have implemented the changes.

Clause 7 of the paper tabled by Finland criticizes the Introduction part of the new edition, suggesting that some wording in the Introduction is confusing and not easily understood.

In fact the wording in question has not changed from that in the current version except for the change of the word will to must. The original wording has existed for many years now, without any complaint that it is either confusing or not easily understood. It is puzzling that this has been tabled now, and clarification of the reason for that would be welcomed.

2. Authority between S-57 and S-58

Clause 9 – 13 in Finland,s paper (HSSC5-05.1H).

It is accepted that there is an issue with test 54A which highlights the fact that S-57 cannot be easily changed to mirror an ever-changing world. This will be rectified in S-58 before publication, but a more elegant solution will not be possible until S-101 is in use. The main reason for changing the test result from a warning to an error is that buildings which are not either in an acceptable area feature, or are point geometry and not supported by a feature, will trigger an alert or indication in ECDIS if the test returns a warning.

This matter seems to have been discussed in the sidelines at TSMAD26 (which was in June 2013) but it was not brought to the main meeting. Again, it is puzzling that it was not brought to the main meeting and that it is raised now. Clarification of the reason for that would be welcomed. In response, I do not agree with the proposition that critical errors could be ignored. The all-weather covered berth conundrum was raised some years ago and was addressed in previous editions of S-58. It may be the case that participants in the June 2013 discussions were not involved at the time this matter was addressed.