

## Paper for Consideration by ENCWG4

## S-58 'Critical' check test data

<b>Submitted by:</b>	S-58 Sub Working Group (lead: Denmark)
<b>(Executive Summary:</b>	This paper provides an update on the creation of Test Data sets to trigger S-58 'Critical' checks.
<b>Related Documents:</b>	S-58 Edition 6.1.0; IHO CL 47/2018; HSSC Actions 9/20, 9/21, 10/23
<b>Related Projects:</b>	-

**Introduction / Background**

S-58 Edition 6.1.0 stated that in order to support a minimum standard and the mandate of the 'Critical' validation checks a test data set would be created to assist in the certification of validation tools. After a tender process, IIC were contracted to create the required test data.

The test data has been split over 34 separate data sets (EN and ER files) containing data encoded to trigger the 135 S-58 checks classified as 'Critical' errors.

Each dataset is accompanied by a report describing the erroneous encoding and the specific critical check that it is intended to trigger.

The test data sets have been circulated to validation tool manufacturers and both RENCs for review and comment.

All comments received have been noted and where appropriate the data and accompanying documentation amended.

S-58 Edition 6.1.0, clause 1.3 Minimum Check Standard states :-

*S-57 Supplement 3 specifies that ENC data must meet the minimum validation requirements defined in this standard. At the time of publication of S-58 6.1.0 no checks are mandatory.*

*The intention is that Critical Errors will become mandatory once software conforming to S-58 6.1.0 is available and in use by ENC producers. In order to support this transition a test dataset and a mechanism to certify that the validation tools reflect the current standard has been developed. The implementation date of mandatory checks for ENC producers will be announced by IHO Circular Letter.*

IHO CL 47/2018 paragraph 4 states:-

*..... the proposed Edition 6.1.0 of S-58 has been adopted. Edition 6.1.0 of S-58 will enter into force on 01 September 2019, at which time Edition 5.0.0 will be retired.*

**Analysis/Discussion**

This meeting is requested to discuss how these data sets should be made available for use, as either:

1. An Annex to S-58;
2. A new standard (similar to S-64); or
3. As an IHO managed resource.

**Option 1** would require the publication of a new edition of S-58 and be subject to the constraints of resolution 2/2007, possibly hampering the ability to refine the test data in a timely manner. Any subsequent alterations to the test data would also impact on the maintenance cycle of S-58.

**Option 2** would not require a new edition of S-58 however would still be subject to the constraints of CL 2/2007 and all that that entails. It would also require careful management to ensure that the Test Data Sets correctly reflect any future editions of S-58. This option would allow independent editions of either standard if only 1 was affected.

**Option 3** would potentially give greater freedom for maintenance and refinement, however would still require a method of management and version control.

## **Conclusions**

Options 1 & 2 offer greater control over the integrity of the test data sets, however may not ensure that they are officially available prior to date that S-58 edition 6.1.0 enters into force.

Option 3 would ensure that the test data sets are officially available prior to the enforcement date of S-58 edition 6.1.0 enters into force,

## **Recommendations**

It is recommended that the ENCWG discuss the options fully and reach a consensus regarding the best approach to ensure this data sets are made available.

## **Justification and Impacts**

In 2014 with the publication of S-57 edition 3.1 supplement 3, it was identified that to contribute to safe navigation that ENC's should meet a minimum validation requirement.

S-58 subsequently classified errors likely to make an ENC as unusable (either through failure to load, or causing an ECDIS to crash, or presenting data which is unsafe for navigation) as 'Critical'.

The availability of these test data sets will enable HO's the ability to certify that their validation tools correctly identify the presence of any 'Critical' errors within their ENC's, which will require correction prior to distribution.

## **Action Required of ENCWG**

The ENCWG is invited to:

- a. note the contents of this paper,
- b. discuss and consider the options for publication of this resource,
- c. agree the next steps