



Hydrographic Services and Standards Committee

Proposal by the  
TSMAD WG Chairman

Proposed Revision to S-57

# Introduction

- ✦ S-57 was frozen in 2000 which led to two other consequential changes being introduced
  - S- 58 replaced S-57 Appendix B1 Annex C
  - Encoding bulletins developed to continue providing encoding solutions in place of Appendix B1 Annex A which in turn was a driver for change to S-58
- ✦ HSSC3 instructed TSMAD to restructure S-58 and define a minimum set of checks to ensure error free delivery of ENC's
- ✦ The pros and cons of ECDIS kernels employing S-58 based validation processes



# Analysis / Discussion – S-58

- ✦ Validation of ENC's unregulated
- ✦ Un-validated ENC's could be produced and distributed
- ✦ ECDIS malfunctions due to errors in data
- ✦ Resides outside regulations provided by IHO, IMO, IEC etc.
- ✦ Inconsistencies between validation tools



# Analysis / Discussion – S-58

- ✦ More effective residing in S-57 and adds importance to the need for delivering error free data
- ✦ In line with the unfreezing of the UoC
- ✦ Title gives an impression that validation is optional rather than essential



# Analysis / Discussion – Validation in ECDIS

- ✦ Can we accept that validating ENC's in ECDIS is a necessary backstop? Probably yes, but -
  - it perpetuates the issue of updating of software versions in ECDIS
  - leading to misalignment with up to date production tools and potentially presenting users with error notices for perfectly valid data.
  - the user is confronted with long lists of errors and warnings which can only undermine confidence in what is probably perfectly valid data
  - such validation significantly lengthens loading time of data thus degrading the user experience
  - What does the mariner do if the ECDIS rejects a cell?



# Analysis / Discussion – Validation in ECDIS

- ✦ A compromise can be achieved
  - the exercise to restructure S-58 presents an opportunity to consider allowing the critical error subset of checks to be used in ECDIS
  - these errors threaten either safety of navigation or the correct functioning of ECDIS
  - the user should be presented with a clear message if a critical error is detected
- ✦ In support of this recommendation, IHO should develop an open source validation plugin, updatable with machine readable versions and freely available to all service providers



# Action required of HSSC

- ✦ The HSSC is recommended to: Note this paper and consider its implications prior to the completion of a new version of S-58 in 2013.



# Action requested of HSSC

HSSC is requested to:

**Endorse** S-99 edition 1.1.0.

**Recommend** to MS that S-99 edition 1.1.0 be adopted forthwith to replace the existing edition 1.0.0 dated January 2011.

