

11th TSMAD MEETING

10 – 12 November 2004, IHB, Monaco

PROPOSALS FOR S-57 HYDROGRAPHIC DATA DICTIONARY

Submitted by Australia September 2004

Executive Summary:	The CSPCWG has drafted new sections for Part B of M-4 for Archipelagic Sea Lanes, Environmentally Sensitive Sea Areas, submarine turbines, etc and HOs encoding ENC's have come across other shortfalls with the existing S-57 E3.1 object catalogue. Australia has made several proposals for such objects, attributes and enumerators which are attached as separate submissions. As S-57 is frozen, some of the new objects now being shown on paper charts cannot be encoded in S-57 E3.1 ENC data sets. A mechanism must be urgently developed to permit such features to be included in ENC's.
Actions to be taken:	Consider Australia's suggestions for addition to the S-57 E4.0 Hydrographic Data Dictionary, and if agreed, follow up action will be required for the associated product specifications. Develop a mechanism to be able to add at least new objects to S-57 ENC's in the short term, before S-57 E4 is released.
Related Documents:	M-4, B-435.10, B-435.11, B-437 (all new proposals in final draft stage for member states' approval), S-57 (Ed 3.1) Appendix A Chapter 1, Object Catalogue S-57 (Ed 3.1) Appendix A Chapter 2, Attributes TSMAD4-8.1A (Feb 1999) Discussion paper on maritime boundaries and associated areas by Australia Dave Monahan and Sue Nichols paper titled "Hydrography's Role in Marine Boundary Delimitation" from <i>Hydro INTERNATIONAL</i> , November 2002. CHRIS15-5B Instructions for submission of proposals to CHRIS subsidiary bodies. (Copies of references will be supplied on request)

1. Introduction / Scope

Australia is an active member on both the IHO CSPCWG and TSMAD and has been creating ENC's for several years. As S-57 E3.1 is frozen, the maritime community continues to develop and come up with new requirements for nautical products such as the paper chart, ENC's and RNC's. This proposal addresses newly adopted chart features within M-4 as well as several proposals for enhancement of

the capability of S-57 to enable encoding of additional information of importance to the mariner on various nautical products. The proposal also recommends that a mechanism be developed as soon as possible to permit new objects to be encoded within S-57 E3.1 ENC data sets.

2. Analysis / Discussion

2.1 The proposal to provide a mechanism to encode new objects in S-57 E3.1 ENCs is probably outside the current Work Plan for the group, but should be added as a high priority issue

2.2 All of these proposals for new objects, attributes and enumerators are within the scope of the TSMAD Terms of Reference and Work Plan already approved by CHRIS.

2.3 The adoption of additional objects, attributes and enumerators within S-57 and the ENC Product Specification in particular, will drive requirements for the C&SMWG to consider enhancing S-52, Appendix 2 in particular, which in turn may lead to software changes to ECDIS.

2.4 Hydrographic Offices are responsible to provide accurate and up to date information to the mariner. As new requirements emerge, the IHO must update its standards and specifications to provide the mechanisms required to encode and supply such data on nautical products, using S-57. It is Australia's opinion that the effort required to provide this new and additional information to the mariner is not only essential, it will enhance the safety of marine navigation.

3. Benefits

Provide flexibility to the S-57 standard and enhance the safety of marine navigation.

4. IHO Working groups' involved

4.1 CSPCWG has already initiated some of these new objects by drafting proposals for addition to M-4. Many are in the final stages of approval by member states.

4.2 TSMAD will need to evaluate each proposal on its own merits and develop a mechanism to unfreeze S-57 E3.1.

4.3 C&SMWG will need to enhance S-52 to provide colours and symbols, look-up tables and possibly conditional procedures for the portrayal of any new features approved by TSMAD for ENCs. It will be necessary to clearly distinguish what will be required for the revised ENC Product Specification, as only these features will need to be reviewed by the C&SMWG.

4.4 CHRIS will need to be involved in any proposal to unfreeze S-57 E3.1 because of the implications to the wider maritime community.

4.5 IEC TC80 MT1 may be required to introduce additional tests for some of the new features and possibly test ECDIS systems to ensure they are capable of displaying new features approved in the unfreezing of S-57.

4.6 IHO S-32 WG may be required to review any new definitions introduced by the approval of any of the Australian proposals for addition to S-32. (As far as we know this group has not reviewed the S-57 E3.1 definitions yet?)

5. Priority

The unfreezing of S-57 is regarded as a high priority as is the provision for some of the proposed new objects and attributes relating to Archipelagic Sea Lanes and Environmentally Sensitive Sea Areas. Other issues such as the addition of existing attributes to other objects and some of the new enumerators may be accommodated within S-57 E4.0 data dictionary, provided the time scales for the release of E4.0 does not blow out beyond 2006.

6. Target Completion Date

Approval of new ENC objects and the unfreezing of S-57 by the end of 2005 at the latest.

7. Action Required

7.1 TSMAD develop a mechanism for the unfreezing, defrosting and thawing of S-57 and advise CHRIS accordingly.

7.2 TSMAD approve (or otherwise) the proposed additions to the S-57 E3.1 and E4.0 Hydrographic Data Dictionaries.

8. Attachments:

Formal proposals have been included using the S-57 Extensions sub-group templates (with additions) for the following new objects:

Archipelagic Sea Lane (**ARCSLN**)

Archipelagic Sea Lane axis (**ASLXLN**)

Beacon in general (**BCNGEN**) previously approved as an extension.

Buoy in general (**BOYGEN**) previously approved as an extension.

Environmentally Sensitive Sea Area (**ESSARE**)

Maritime Boundary (**MARBDY**) incomplete and needs more work, but concept for discussion.

Amended objects **BCNSPP** and **BOYSPP** to be IALA special purpose, no longer the catch all beacons and buoys.

New attributes include:

Authority (AUTHTY)

Category of marine area or maritime boundary/limit/zone (CATMAR) also needs more work but suggested as concept to fit with ESSARE and MARBDY as they all need to be discussed together.

Legislation (LEGISN)

Additional existing attribute to existing objects:

DRGARE add SUREND

SWPARE ass SUREND

New enumerators for:

STATUS