

13th TSMAD MEETING

18 to 22 September 2006 - Wellington New Zealand

Proposed ENC Encoding Bulletins associated with ASLs, ESSAs and PSSAs and S-57 Supplement No 1 (Edition 3.1.1).

At previous TSMAD WGs, it was approved to issue ENC Encoding Bulletins for ASLs and PSSAs in particular. To date, this has not been done. Once the S-57 Supplement No 1 is approved, several new encoding bulletins will be required, however in the interim (before the CHRIS18 meeting the following ENC Encoding Bulletins need to be promulgated:

9. Encoding Environmentally Sensitive Sea Areas (ESSAs) and Particularly Sensitive Sea Areas (PSSAs).

These must be encoded using the object class **RESARE** with a description of the feature in INFORM and or TXTDSC.

If it is considered to be important to encode a small or narrow section of ESSA or PSSA as a point or line, it must be encoded as a small area **RESARE** feature. (**CTNARE** must not be used).

Encoders should be aware that TSMAD is finalising a new Supplement to S-57 (to be known as S-57 Supplement No 1, Edition 3.1.1), which is expected to be published later in 2006. This Supplement will include 2 new attribute values for CATREA specifically for ESSA and PSSA. It will not be mandatory for HOs to adopt Edition 3.1.1.

10. Archipelagic Sea Lanes (ASL)

The existing S-57 (Edition 3.1) does not provide appropriate means to encode an ASL axis. As a result, an encoding method has been prepared by TSMAD, allowing consistent encoding of ASLs. It is included in a new supplement to S-57. Until the release of this new S-57 Supplement No 1 (Edition 3.1.1), an ASL must be encoded as a **CTNARE**. However once the new supplement is operational, an ASL must be encoded using the new proposed objects Archipelagic Sea Lane (**ARCSLN**) and Archipelagic Sea Lane Axis (**ASLXIS**).

A review of the introduction to ENC Encoding Bulletins is also required, as there are currently still references to S-57 E4.0 (one we missed). Rather than issue a specific encoding bulletin about the proposed S-57 Supplement No1 (Edition 3.1.1), the introductory wording includes reference to this as well. Proposed changes are in red. It is suggested that a link to the revised S-57 Supplement No 1 (Edition 3.1.1) (as revised in this TSMAD Letter) should also be provided at various locations on the IHO website (replacing the previous version), including the ENC Encoding Bulletin site.

(Red text is new)

S-57 Edition 3.1 Encoding Bulletins

S-57 is ~~currently~~ the IHO standard for the exchange of digital hydrographic data. To date, it has been used almost exclusively for encoding Electronic Navigational Charts (ENCs). However, S-57 is intended to support all types of hydrographic data. In order to meet this requirement, S-57 ~~needed~~ expanding to include additional data types such as matrix data. This expansion is being conducted with the goal of issuing a ~~completely new IHO exchange standard complying with recent ISO standards relating to geographic information.~~ The new IHO exchange standard will be known as S-100. ~~Edition 4.0 version of the S-57 standard. Since~~ The work on ~~Edition 4.0~~ S-100 will incorporate ~~newly features including an IHO registry. proposed changes and~~ The existing S-57 Edition 3.1 version is now being widely used in both production and navigation systems, ~~the IHO has frozen the contents of Edition 3.1 and no further changes will be made to it.~~ ~~Edition 3.1~~ and will continue to be used to produce ENCs for the foreseeable future.

More recently, the IMO has introduced a number of new features that need to be encoded by some nations in their ENCs. These include Archipelagic Sea Lanes (ASLs) and Particularly Sensitive Sea Areas (PSSAs). The CHRIS committee has approved the adoption of a supplement to S-57 Edition 3.1, to be known as 'S-57 Supplement No1 (Edition 3.1.1)'. This supplement will include a number of new object classes and attributes to encode these and any future IMO approved features, or features that cannot adequately be encoded using existing object classes that affect safety of navigation. It is anticipated that the new Supplement will be published later in 2006, with an implementation date yet to be decided. Only HOs who need to encode ASLs, ESSAs and PSSAs (or any future IMO feature, or a new safety related feature), will need to adopt the S-57 Supplement No1 (Edition 3.1.1). Work has also commenced on the new ENC Product Specification (S-101) that will comply with the future exchange standard S-100. S-101 is not anticipated to be operational until about 2012, however it will be available before this date for operational testing.

~~In fact,~~ As the the majority of hydrographic offices, equipment manufacturers and mariners may wish to continue to produce and use ENCs conforming to S-57 Edition 3.1, even after ~~S-57 Edition 3.1.1 and S-101 are published.~~ Edition 3.1 will remain valid for as long as required for the benefit of those who wish to continue to produce and use ENCs conforming to Edition 3.1.

As more ENC data are produced and used on the increasing number of ECDIS, unanticipated issues that affect how the ENCs are displayed or used by an ECDIS may arise. These issues may be addressed by changing the way in which the ENC data are encoded. Because Edition 3.1 ~~Maintenance Documents are~~ frozen, changes cannot be made to the actual standard to address such issues.

Therefore, a system of "Encoding Bulletins" has been developed to communicate how data producers may modify their encoding practices to address these issues that affect the use of ENC data in ECDIS. Each Bulletin will explain a particular ENC/ECDIS issue, recommended procedures for addressing the issue and the consequences of not following the recommended procedures. It should be noted that the procedures described in these Bulletins are not compulsory; however it is strongly recommended that data producers follow them ~~wherever possible~~ to ensure the consistency of ENC production worldwide.

These Bulletins have resulted from proposals brought to the attention of the Transfer Standard Maintenance and Application Development Working Group (TSMAD). **New bulletins must be approved by the TSMADWG.**