

13th TSMAD MEETING

18 to 22 September 2006 – Wellington, New Zealand

*Updated 30 Aug 06***CSPCWG Report to TSMAD13**

(following CSPCWG2 Record of the Meeting in October, 2005)

Roberts provided a report to TSMAD12 (paper TSMAD12-8.4A Rev1 and accompanying Annex A). Since TSMAD12, the official Report (minutes) of CSPCWG2 has been published and there are a number of additional items that need to be drawn to the attention of TSMAD members, relating to S-57 and for incorporation into S-100/101. This report only highlights the issues. It will be up to TSMAD to agree on what action is required (if any) and allocate actions to individuals or SubWgs. In accordance with action associated with TSMAD12 Minutes item 8.4, the associated paper TSMAD13-9.2A lists the IHO approved M-4 issues that need to be considered for the S-100 FDD in particular, but also S-101 ENC encoding. Although the first of the reviewed sections of M-4 B-400 to 429 has now been approved, its official publication has been delayed and is with the IHB. When this section is published, there will be a host of additional issues to be addressed by TSMAD, some of which are listed below. The next slab of M-4 Part B (B-430 to 439) has already been through 2 rounds of review with a third **review will be close on 26 Sep 2006**. This section is also likely to be approved and published this year (2006).

The following issues were discussed at the CSPCWG meeting that relate to matters affecting TSMAD, S-57 and or S-100/101. Please note that this report is the opinion of Roberts as a member of CSPCWG, and are not necessarily the official views of the IHO CSPCWG.

The bracketed references refer to the section number in the official CSPCWG2 Report. (This Report and associated papers can be downloaded from the IHO website (CSPCWG section) for more information, if required).

As TSMAD members are aware, the CSPCWG is undertaking the first major review of M-4, Part B, which was a foundation document for the S-57 Use of the Object Catalogue. This review is turning out to be more involved than many expected and the results so far have included new and amended symbology, new INT 1 entries, new and amended definitions, additional requirements for some features (could drive new attributes for S-100 FDD), new charting conventions, new terminology to agree with S-57 (use of 'must', 'should' and 'may'), new clauses within M-4 (which may need to be referenced for S-101 UOC equivalent), closer liaison with CSMWG regarding colours of charted features and new symbols.

When new sections of M-4 are reviewed, a CSPCWG Letter is issued, similar to IHO CLs. Members are given a timeframe to respond and often a series of questions will be sent to members for voting and approval. The CSPCWG has also included the CSMWG and TSMAD in the distribution of their letters. An action item from TSMAD12, item 8.4.1 was that the FAQ SubWg to TSMAD would review new publications by the CSPCWG. Since TSMAD12, only B-200 has been published. It is expected however that this SubWg will have considerable work to do on the publication of B-400 to 429 inclusive. At TSMAD12 we agreed to circulate and approve ENC Encoding Bulletins between meetings so that they can be issued without having to wait for a face to face meeting. This hasn't really happened, so it is suggested that TSMAD consider appointing a coordinator to lead this task (Encoding Bulletins).

Issues raised at CSPCWG 2 that impact on S-57, S-100 and S-101 are as follows. Note that these are NOT draft formal proposals in most cases, but issues that need to be examined, discussed and actioned by the FAQ SubWg and possibly others developing various profiles for S-100:

Port Security Limits (3) (new B-430.3, not finalised): although not normally charted, at least AU and NOAA are charting them on both paper and ENC's. Can be encoded as **RESARE**. Could be considered as a new enumerant for CATREA for S-100 FDD.

Fairways (8.2) (new B-434.5, not finalised): there may be a requirement for a new attribute Category of fairway for S-100 FDD. STATUS could have additional values added such as 'regulated', for some fairways. Minimum depth should be encoded as DRVAL1 (existing attribute) but there is no attribute for authorized (or recommended) maximum draught (DRVAL2 may be suitable but is not an approved attribute for **FAIRWY**). The date of survey is also required (existing attribute SUREND). Further input is expected from Finland in the finalization of B-434.5 in November, 2006.

Refuge buildings (8.3i) (proposed future B-370.8): could be considered as an additional value for FUNCTN = refuge

Ice coastline (8.3iii) (proposed addition to B-449.1 and INT 1 C25): a date for the known extents of an ice coast or glacier have been suggested. New attribute DATEND or SUREND (or both) could be added to **COALNE** for S-100.

Reporting lines (8.5.1) (new symbol INT 1 M40.2 adopted, (see BSH INT 1 Mg national symbol example) and proposed new B-488.1 will be developed in the future review of that section): Currently can be encoded as **RDOCAL**, as line is an allowable primitive. Object class wording may need some updating for S-100 to include line in the remarks. UOC 12.13 should also be updated. Could also be considered as a possible ENC Encoding Bulletin.

Vessel Traffic Management System areas (VTS) (8.5.2): currently no specific S-57 object class, so **ADMARE** is suggested as being appropriate, using INFORM and or TXTDSC. Possible candidate for a new feature for S-100 FDD **VTSARE**. Could be considered as a possible ENC Encoding Bulletin.

Synchronized and sequential lights (8.6): CSPCWG agreed that the abbreviation 'sync' was reasonably intuitive, and although sequential lights are not strictly synchronized, it was decided that the abbreviation would be used on paper charts to cover both cases. M-4, B-478.3 will be amended and a new entry in INT 1 section P will be determined. Currently S-57 has attribute STATUS = 15 (synchronized) but no entry for sequential. Do we alter the definition of synchronized to include sequential. Personally I think the two terms should remain separate and distinct. We have a binding here for S-100 between 2 attributes LITCHR and STATUS and a possible new collection object 'synchronized lights'. See also PEL below where such terms could be regarded as a light characteristic (LITCHR)?

Port Entry Lights (PEL) with oscillating sectors (8.7): M-4 B-475.7 and INT 1 P30.4 are to include PELs eventually. A draft ENC encoding bulletin has been prepared by UKHO (TSMAD13-8.1) which will be discussed separately. However for S-100 do we require a new attribute value for LITCHR for oscillating? Should it be considered for STATUS, similar to 'synchronized'? Could be another example of binding between LITCHR and STATUS.

Digital GPS stations (8.8): will be added to INT 1 S51 (similar to BSH INT 1 Sa national symbol) and M-4 will be reviewed (B-481.5). S-57 already has CATROS = 10 (DGPS) to encode these, but these new references will need to be added for S-100 FDD. **Update from the Secretary**

of the CSPCWG: Looking at the S-32 definitions for radio stations and radio beacons, the difference is not really apparent. A radio beacon is transmitted from a radio station. From a chart user perspective, the important issue is that it is a stationary, physical feature. Peter Jones (Chair CSPCWG) and I assessed again the place marker we put down for M-4 and believe it is still the most obvious place. We have to question why the attribute CATROS is allowable against **RDOSTA** but not against **RTPBCN**. It is strange that I cannot find a radiobeacon (as opposed to a radar transponder beacon) in S-57, although M-4 and INT1 lists various radiobeacons.

Charting boulders (8.9): new abbreviation 'Bo' has been adopted for seabed quality and for conspicuous intertidal (**UWTROC**) or drying features (**LNDMRK**). Boulder has now been included in M-4, B-421.2 and B-425.5 (not finally approved) and will be included in INT 1 J9.1. For S-57 boulder is included as CATLMK = 21 (large rock or boulder on land), but 'on land' should be deleted from the term for S-100 FDD. It is also included as NATSUR = 18 (boulder). **CATLMK could be considered as an additional attribute for UWTROC for S-100.**

Geographical positions conventions (9.1): CSPCWG has provided specifications on where to place the minute symbol in relation to the decimal point (of a minute). See new M-4 B-131. TSMAD may consider this format for S-100 to provide consistency across products.

Height, elevation and vertical length terminology (9.2): CSPCWG has removed part of M-4 B-302 to reduce confusion. TSMAD will need to carefully review these terms and definitions for S-100 FDD and provide consistency. Should also be referred to the IHO CHD and TSMAD needs to refer to IHO TR 2.5A in particular when reviewing these terms.

Dangerous and non-dangerous wrecks (9.3): major changes have been made to M-4 B-422.5 and 422.7 in particular (approved but not yet published), giving precedence to HOs estimating a safe clearance of all wrecks in water less than 200m. The terms 'dangerous' and 'non-dangerous' applying to wrecks, have been removed from M-4 as generally it depends on the underkeel clearance whether a wreck is dangerous or not. S-57 currently uses CATWRK to encode dangerous wrecks (value 2) and non-dangerous wrecks (value 1). Should these values be prohibited for ENC's following M-4 for paper charts? We also have QUASOU 7 = least depth unknown, safe clearance at value shown. However the only attribute value to specify 'estimated' is the spatial attribute QUAPOS (value 9). HOs may be reluctant to encode value 7 because of liability issues, as value 7 infers a safe clearance. Is a new value of QUASOU or TECSOU required such as 'estimated depth'. TSMAD may need to consider bindings between geo and spatial attributes for S-100 – QUASOU and QUAPOS as an example.

The description of this attribute 'Quality of sounding measurement' also needs to be reviewed, as HOs are now portraying 'estimated depths', which are not sounding measurements as such. Other values also are in this category eg. value reported (not surveyed).

It is suggested that all 'quality' features and attributes need to be reviewed for S-100 and perhaps the expertise of the IHO DQWG should be sought (currently in limbo).

Do we also need to consider attribute enumerants 'dangerous' and 'non-dangerous' for other features for S-100 as we use such terms with obstructions, water turbulence and underwater rocks, etc. If so, can we adopt an existing attribute such as STATUS or do we need a new attribute.

Comments by the Secretary of CSPCWG: Following all the CSPCWG discussions, we think it is very important to eradicate the term 'non-dangerous wreck' from all IHO documents. More appropriate would be 'wreck of unknown depth' and 'wreck of unknown depth considered to be dangerous to some surface vessels'. (See further comments in TSMAD13-14.1 Rev1.0)

Unsurveyed areas (9.7): a new section has been added to B-418, including a new definition which has been sent to CHD for approval. INT 1 also has new symbol I25 for unsurveyed areas. It is suggested that TSMAD use this new definition (subject to CHD approval) for the FDD for S-100 and add the new references. It is further suggested that CATZOC should not apply to

unsurveyed areas and this should be advised via an ENC Encoding Bulletin (using ‘should not’ strength of wording).

Conclusion: the rules for encoding paper charts is in a state of change. Most HOs use paper charts as the main source for ENCs. The IMO Performance Specifications for ECDIS states (in 1.4) “ECDIS should be capable of displaying all chart information necessary for safe and efficient navigation originated by, and distributed on the authority of, government authorized hydrographic offices”. (Note that ‘should’ in IMO documents means ‘must’ in S-57 speak). And in 1.7 “ECDIS should have the same reliability and availability of presentation as the paper chart published by government authorized hydrographic offices”. (Note that both sections are still in the revised draft which will be approved by IMO this year).

S-57 is frozen and is now being left behind as M-4 is further updated and developed. S-101 is not expected to be operational until at least **2012**. Is TSMAD reacting too slowly to changing specifications and are we contributing to HOs not being able to fully comply with the Performance Specifications for ECDIS. S-57 encoding rules become more complex as we issue further ‘work-arounds’ - (S-57 Supplement No1) is the latest. Is it now finally time to unfreeze the S-57 Maintenance Documents (and possibly the Use of the Object Catalogue – some members of TSMAD already believe this document is still live), so that all changes to S-57 can be located in the one update document.

The IHO CHD has started up a discussion forum at www.iho-discussions.org which already includes suggestions that will affect the S-100 FDD. Members of TSMAD with an interest in definitions are encouraged to register on this site and participate. Perhaps there also needs to be more formal arrangement made between TSMAD and CHD.

Recommendations:

TSMAD needs to start to share the work of S-100 to other related IHO WGs. It is recommended:

1. That CHRIS be asked to seek volunteers to re-form the DQWG to investigate all quality issues and prepare various sections for S-100, taking into account the work of TC211 and its ISO 19100 series of standards.
2. That CHRIS is asked to task the Tidal Committee to review all S-57 definitions relating to tides, currents, vertical datums and propose any additional features, attributes and or enumerants for S-100.
3. That CHRIS be asked to task CHD with reviewing all existing S-57 definitions, paying particular attention to those with hydrographic associations, that IHO is likely to claim as being the authority for. In addition, as TSMAD comes up with new features that need to be added to the S-100 FDD, that CHD be tasked with coming up with approved definitions.
4. That formal liaison be set up between TSMAD and CHS, particularly relating to definitions.
5. That someone within TSMAD be responsible for following the new IHO discussion site www.iho-discussions.org. and raise any relevant issues at TSMAD meetings.
6. That serious consideration be given to releasing the FDD database, appoint a register manager and start the formal proposal process for new features, attributes and enumerants for S-100 FDD **ASAP**.
7. That a coordinator be appointed within TSMAD to follow up and control the issue of ENC Encoding Bulletins, as the official contact for CSMWG and CSPCWG. Such a person could coordinate a new SubWg for ENC Encoding Bulletins and would action all CSPCWG Letters sent to TSMAD for comment and approval. If a new SubWg is approved, it may also include drafting and approving FAQs.

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2 Aug 2006