



IHB File No. S3/8151/HSSC S-100

CIRCULAR LETTER 49/2012
14 May 2012

**RESULT OF PROPOSAL TO EXEMPT CERTAIN CHANGES TO S-100
FROM THE REQUIREMENT FOR FORMAL APPROVAL BY MEMBER STATES**

References: a) IHO CL 03/2012 dated 06 January
b) IHO Resolution 2/2007, as amended - *Principles and Procedures for Making Changes to IHO Technical Standards*

Dear Hydrographer,

1 The Directing Committee would like to thank the following forty-seven (47) Member States that replied to Reference a): Australia, Belgium, Brazil, Canada, Chile, China, Colombia, Croatia, Cyprus, Denmark, Ecuador, Estonia, Finland, France, Germany, Greece, Guatemala, Iceland, Ireland, Italy, Japan, Korea (Rep. of), Latvia, Oman, Malaysia, Monaco, Netherlands, New Zealand, Norway, Pakistan, Papua New Guinea, Peru, Poland, Portugal, Romania, Singapore, Slovenia, South Africa, Spain, Suriname, Sweden, Thailand, Tonga, Turkey, Ukraine, United Kingdom, and United States. Of these, 25 Member States voted positively that certain changes to S-100 should be exempted from the requirement for formal approval by Member States as described in Reference b); 22 voted against. 25 States provided specific comments and these are provided in Annex A.

2 At the date of Reference a) there were 80 IHO Member States with two States suspended. In accordance with paragraph 6 of Article VI of the Convention on the IHO, the majority required for adoption of a technical proposal is 40. Consequently, the proposal to exempt certain changes to S-100 from the requirement for formal approval by Member States is not adopted. This means that S-100 will continue to be maintained in accordance with the terms set out in IHO Resolution 2/2007, as amended.

On behalf of the Directing Committee
Yours sincerely,

Robert WARD
Director

Annex A: Comments by Member States

**COMMENTS BY MEMBER STATES
IN RESPONSE TO CL 03/2012**

Australia (vote = YES):

Australia votes YES to the proposal contained in IHO CL 3/2012. TSMAD should be permitted to publish new editions of S-100. However, it is considered that this delegation should be permissible only within defined constraints as detailed below. These constraints should permit responsiveness to emerging requirements from other organisations seeking to adopt S-100, while ensuring that there is no risk of adverse impact upon existing IHO product specifications. Australia therefore proposes additions to the TSMAD Terms of Reference to include criteria for determining the approval process to be followed in terms of S-100.

Australia considers that S-100 is not a product standard despite the use of an "S" designator. Its full title is "*Universal Hydrographic Data Model*". It is a tool box that guides and helps in the development of product specifications related to hydrography. It is primarily a collection of ISO 19100 series of geospatial standards. New ISO standards and extensions to existing standards can be added to this collection without affecting any existing part of the S-100 suite, while there are further measures that prevent any of these changes affecting any IHO products based on S-100. New ISO standards and extensions to existing standards to meet the needs of other non-IHO organisations do not affect the IHO's use of the existing version of that profile in S-100 based product specifications.

To give an example, S-100 contains a metadata profile (S-100 Part 4). This might, for the sake of an example, contain 90 different individual metadata elements available for use in a product specification. S-101, an IHO product specification, may specify that all 90 of these potential elements are actually used. NATO might in the future decide to base Additional Military layers on an S-100 based product specification, so decide that S-100 needs an element to allow entry of a security classification. Adding a security classification element does not in any way affect the IHO's use of the existing 90 elements in the existing metadata profile or in S-101.

Equally, S-100 includes the ISO/IEC 8211 encoding schema (S-100 Part 10a). ISO/IEC 8211 is substantially a re-use of the encoding contained in S-57 for ENC's. S-101 will specify use of this schema for ENC's made to the S-101 product specification. However, the IHO, or some other organisation, may in future wish to add KML to the suite of encodings available in S-100 ahead of starting development of a new S-10X product specification covering, for example, web mapping. An additional encoding schema would become S-100 Part 10b, then another as Part 10c etc. This inclusion would not in any way affect use of ISO/IEC 8211 for ENC's as specified in the S-101 product specification.

Component ISO standards referenced within the S-100 suite are outside IHO control. If and when a new version of a component ISO standard referenced in the Universal Hydrographic Data Model is published, TSMAD should be required to advise HSSC. Noting that the availability of a new edition of an ISO standard referenced in the S-100 toolbox does not render the previous version of the standard invalid, and that product specifications referring to a previous version of S-100 can continue to exist and operate successfully for many more years, the appropriate response from HSSC would then be to task TSMAD via their Work Program to investigate any potential benefits of realigning S-100 and any existing associated IHO product specifications to the latest versions of the ISO standards. The results of this investigation would then be reported back to HSSC and subsequently submitted to Member States for approval and adoption. Equally, the IHO may choose not to adopt a new ISO standard, instead retaining S-100 in its current form, with product specifications remaining referenced to the relevant earlier version of the amended ISO standard. The IHO, via HSSC and Member States, would therefore have complete control over the adoption of new editions of S-100 in relation to impacts on IHO product specifications in the S-10X series, and could choose, if it wished, to keep them referenced to earlier versions of S-100.

TSMAD Terms of Reference

The expertise of Member States lies in understanding the needs of mariners and the product specifications which govern how those needs are met. However, the IHO may have reached a point where submitting such conceptually complex matters as management of S-100, which is not a product specification, to the collective opinion of all Member States is unlikely to add value to the process of managing extensions to S-100. Member States are extremely unlikely to vote yes to a proposed change to S-100 if TSMAD has recommended no, but in equal parts may often follow the TSMAD

recommendation (in which case they have not value-added), or vote no and reject a TSMAD recommendation, most likely because the lack of impact upon IHO product specifications based on S-100 is not clearly understood. None of these potential outcomes are particularly helpful. The IHO should, instead, trust in the quality of the experts participating in TSMAD, within certain constraints, and accept that their in-depth technical knowledge of these particular matters far exceeds the overall average of Member States.

The parameters within which Australia proposes TSMAD operate, but which is at slight variance with CL 3/2012 are:

- TSMAD could not approve a new edition of S-100 without Member State approval if that edition involved removal or retirement of any existing component.
- TSMAD could not approve a new edition of S-100 without Member State approval if that edition involved consequential impact upon Member States.
- TSMAD could authorise revisions and extensions to S-100 via a new edition if it has confirmed:
 - that existing component parts of S-100 do not already fill the emergent requirement, and
 - that the proposed extension is in keeping with S-100, and
 - that the Chairs of all other HSSC technical working groups have been consulted to ascertain that these extensions would not adversely affect any existing IHO product specifications.
- TSMAD should be required to advise HSSC of relevant potential to amend S-100 and related IHO product specifications that may become possible in the future as a result of changes and extensions to the component ISO standards. HSSC would then add investigation to the TSMAD Work Program if considered appropriate (noting that S-100 can continue to refer to earlier versions of ISO standards for as long as the IHO reasonably requires).

Based upon these considerations, Australia votes YES to the proposal contained in IHO CL3/2012. TSMAD should be permitted to publish new editions of S-100 within defined constraints. These constraints should permit responsiveness to emerging requirements from other organisations seeking to adopt S-100, while ensuring that there is no risk of adverse impact upon existing IHO product specifications. Australia therefore proposes additions to the TSMAD Terms of Reference to include criteria for determining the approval process to be followed in terms of S-100.

Brazil (vote = NO):

There is by now no concrete elements which justify such change on the procedure.

Canada (vote = NO):

Canada has voted NO to this circular letter as a 'safeguard' from which to begin new and constructive discussion on the appropriate maintenance regime for the S-100 Universal Hydrographic Data Model (UHDM). Canada strongly believes there is middle ground between Resolution 2/2007 and the proposal of TSMAD to HSSC3.

Canada urges further discussion on the S-100 governance and maintenance. Canada strongly believes that there can be some special allowances for S-100 maintenance given the very unique nature of the UHDM which is a Standard but not a Product Specification.

Canada intentionally supported Circular Letter 87/2010 *Proposed Amendments to IHO Res. 2/2007* with the understanding that S-100 is considered a framework document intended to facilitate the creation and approval of subsequent navigational product specifications to the market.

Furthermore, the flexibility and extendibility of the S-100 UHDM design is intended to attract and facilitate product specifications and applications that are not the direct responsibility of the International Hydrographic Organization but aid and assist in the navigation and protection of the marine environment. This is the intent of the IHO S-99 Supplementary Registry. S-100 modifications proposed and implemented under these conditions may not need the full oversight of all Member States but rather through a delegated authority.

Canada wishes to note it supported Circular Letter 70/2010 *Recommendations by HSSC for IHO to adopt S-99 as an IHO Standard* believing that this rigorous structure for the management of the S-100 suite of

products fully supported the goals laid out in CL 70/2010 that this (S-99) is all very much in keeping with the philosophy behind introducing S-100 as a flexible, extensible, contemporary standard that encourages the widest possible use of hydrographic data and information standards beyond the fields of hydrography and nautical charting.

Chile (vote = NO):

According to the arrangements mentioned in Resolution 2/2007, Chile recommends to seek advice from Member States every time an amendment is required.

China (vote = NO):

IHO has a definite regulation on approval procedures of IHO standards as described in IHO Resolution 2/2007. Since S-100 standard is one of the IHO standards, it should also follow the regulations stated in IHO Resolution 2/2007. We believe the authority and confidence in IHO as a standards setting organization should be maintained.

From our point of view, the proposal of empowering TSMAD to approve revision of S-100 without seeking formal approval from Member States may reduce the reliability and influence of S-100 standards. Considering its impact on existing and potential users, any decision made for approval procedures should be cautious and reasonable.

If the change proposal of S-100 is approved as a special case this time, no one could ensure that other IHO standards will not follow S-100 by claiming to be a special case in the future; if so, the implementation of approval procedures of [other] IHO standards will then be impacted.

As above mentioned, we do not agree that the change approval process for S-100 should be considered as a special case that is not subject to the usual requirement for formal approval of any substantive changes by a majority of Member States.

Colombia (vote = NO):

It is essential to consider that when giving an authorization for new editions or updates of any standard, particularly a standard such as S-100, that such authorizations could affect future decision making for contributions that might compromise our interests as Hydrographic Office. Likewise, this could happen with delivered data or the information handled for our hydrographic production, resulting in a feeling of lack of control by the IHO.

We consider that the wisest would be, while this standard is completely established, to put any change or amendment which may arise, to a vote. In addition this is a simple way to be aware of the updates in course.

Ecuador (vote = YES):

Ecuador votes yes because this publication must be updated as quickly as the technological advances favour the change.

Finland (vote = YES):

There might be a need for additional clarification on what kind of changes TSMAD is entitled to approve. This seems to be unclear for certain parties.

France (vote = NO):

In response to CL 3, France confirms that it well understands the difficulties with which TSMAD is likely to be confronted in the maintenance of the international standard S-100, the importance of which extends well beyond the community of the IHO Member States alone. France has also noted the pertinent arguments put forward by the IHB Directing Committee as regards TSMAD's proposal of exemption.

France considers that the S-100 is based on a collection of international standards approved or examined by bodies such as ISO or IALA, which today gives it a large part of its legitimacy. It also

plays a fundamental role in maintaining a link between the derived products, the specifications of which have to be formally approved by the Member States, and those international standards created and approved elsewhere. From this we note that a simple revision of the S-100 could potentially have:

- an impact on all the derived products (even on those which are not developed under the responsibility of the IHO);
- an impact, with retroactive effect, on the international standards on which the S-100 depends.

For all these reasons, France therefore cannot approve TSMAD's proposal, as it stands. On the other hand, for the revision procedure to be as efficient as possible, France recommends that the proposal should be reconsidered as follows:

- The standards and specifications of derived products within the IHO's area of responsibility must be submitted for approval by the Member States in accordance with IHO Resolution 2/2007, once the impact has been fully examined;
- The proposed substantive modifications to the S-100 standard must be submitted to the Members of the HSSC in the first place; the HSSC would then consult, through the IHB, the other international bodies which depend on or have adopted the S-100, whenever necessary. Once a consensus has been reached between the IHO and these organizations (within which the Member States are generally represented) it would no longer be necessary to submit changes to the S-100 to the IHO Member States for approval, but simply to ensure that the HSSC, the competent IHO body, approves the new measures, and to keep the Member States informed of these changes, as well as all the IHO Working Groups concerned;
- Simple editorial corrections are incorporated as and when new editions are issued, with no need to revise the standard for these reasons alone.

Greece (vote = NO):

If S-100 is excluded from the IHO Resolution 2/2007 regime, this might put a lot of responsibility on TSMAD.

Italy (vote = YES):

S-100 is a technical standard that implies an in-depth knowledge about several subjects including data processing. It is a flexible standard and its maintenance procedure has to be fast in order to increase interest in use of S-100 by various organizations outside of the IHO dominion.

Italy supports the proposed S-100 approval process provided that all New Editions relevant to IHO, and then also the relevant IHO Product Specifications, will need also a mandate HSSC approval.

Japan (vote = NO):

S-100 is a quite important standard on which various specifications of digital products will be based. We consider that formal approval of Member States is required for changes to S-100 as TSMAD is not represented by all Member States.

Korea (Rep. of) (vote = NO):

The established process of requiring the approval of changes by all Member States may not be relatively speedy or efficient compare to the proposal by TSMAD. The Republic of Korea, however, believes that the formal practice of approval process should be maintained to draw much attention and interests of Member States to S-100.

Netherlands (vote = YES):

Netherlands have positive experiences with the dedication and comprehensive approach of TSMAD and therefore support the proposal. We suggest considering an evaluation of this special case after three years.

New Zealand (vote = YES):

New Zealand votes YES to the proposal but only within defined constraints as detailed in the Australian response to IHO CL 03/2012.

Norway (vote = NO):

We do not find the delay introduced by the formal approval by Member States to be serious enough to by-pass the agreed upon procedures.

Peru (vote = NO):

We consider that the approval process for the changes to S-100 must not be considered as a special case and must be subject to the requirement of the official approval for any essential change by a majority of the Member States. The approval (by TSMAD) of essential changes of an IHO standard would be a significant starting point with respect to the IHO approval processes which have been established and are efficient, and this does not correspond to the common practice of the approval processes used by the intergovernmental and international organizations. In addition to this, the IHB has informed that the approval of the changes to the IHO standards is surprisingly quick and efficient compared to those of all the bodies setting up international standards. This is why we do not see any reason to stop doing it.

Pakistan (vote = YES):

The changes proposed will facilitate the working group for clarification /substantive change in IHO standards.

Papua New Guinea (vote = NO):

The existing rules governing the approval of changes to S-100 are to be maintained, to be consistent with other IHO Standards.

Portugal (vote = NO):

IHPT can accept that TSMAD will be empowered to approve revisions of S-100, but it seems thoughtless that certain new editions can be approved that simply. As stated in Resolution 2/2007, *"revisions could have an impact on either existing users or future users"* and *"new editions are likely to have a significant impact on either existing users or future users of the revised standard"*. Maybe the meaning of "certain" should be clarified, otherwise it is undefined.

Singapore (vote = NO):

This would set precedence for Working Groups (WG) and committees to approve changes without Member States' (MS) consideration and review. It must be noted that not all MS' have the opportunity or funding support to attend such WG meetings. More importantly, the changes to S-100 would have an impact to other international organisations, such as IMO, IALA and UN, who use the specifications. They should be consulted as well.

Slovenia (vote = NO):

We do not see the reason to exclude this standard from the others. The usual process after a Committee's endorsement takes a few months via CL. In this time a Member State and Stakeholders can give their view on the changes in the standard. We support the idea that any Member State has the right to review and comment changes to IHO standards.

South Africa (vote = NO):

The reservations made by the Directing Committee are noted and supported.

Thailand (vote = NO):

We agree with the reasoning information provided by the Directing Committee concerning confidence of stakeholders, Resolution 2/2007, and that of the speed and efficiency of the approval process for changes to IHO standards. Therefore, the change approval process for S-100 might not be considered as a special case and shall follow the normal approval process.

United Kingdom (vote = YES):

The UKHO is surprised by the phrasing used in this CL by the IHB Directing Committee and is concerned that it may encourage MS to enter a negative vote without taking fully into account the endorsement of the proposal by HSSC3 by a clear majority of positive votes (CL paragraph 8 refers).