



CHART STANDARDIZATION & PAPER CHART WORKING GROUP (CSPCWG)

[A Working Group of the Committee on Hydrographic Requirements for Information Systems – CHRIS]

Chairman: Peter JONES
Secretary: Andrew HEATH-COLEMAN

UK Hydrographic Office
Admiralty Way, Taunton, Somerset
TA1 2DN, United Kingdom

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Telephone:
(Chairman) +44 (0) 1823 337900 ext 3020
(Secretary) +44 (0) 1823 337900 ext 3656
Facsimile: +44 (0) 1823 325823
E-mail: peter.jones@ukho.gov.uk
andrew.coleman@ukho.gov.uk

To CSPCWG Members

Date 11 June 2008

Dear Colleagues,

Subject: CSPCWG4 Actions 17 - Symbol library

At the 4th CSPCWG meeting in November 2007:

Action 17 charged the Secretary to draft WG letter asking for views on a way forward on proposal for a symbol library.

This letter is to progress this action.

The discussion at CSPCWG4 on the symbol library subject was in response to paper CSPCWG4-10.1A, submitted by Australia, a copy of which is at Annex A. The resultant note of the discussion in the record of the meeting is as follows:

Acknowledging that there may be slight differences between the chart symbols shown in M-4 and those in the three language versions of INT 1, the meeting discussed whether an international symbol library was desirable and achievable. Possible options were:

- to adopt M-4 as 'the international symbol library' (which is effectively the UK symbol library);
- add an annex to M-4 which would serve as a symbol library and collection of INT1 terms and descriptions in English, French and Spanish;
- engage a contractor to produce a symbol library separate from M-4;
- maintain status quo, ie no formal symbol library; all HOs free to prepare their own, or adopt those they prefer from other HOs, or use whatever is available from software companies. It was noted, for example, that CARIS has its own symbol library, and also those of France, UK and others, are available.

No definite way forward was decided, except to ask for opinions from the full CSPCWG.

Some additional comments may help in your consideration of this matter.

- a) It has already been agreed that whenever new symbols are designed by the CSPCWG, exact dimensions would be specified within M4 to ensure that symbols are more consistent between HOs. However, in some cases, such as the seaplane symbol, it will be impossible to specify exact dimensions for part of the symbol.

- b) Most established hydrographic offices have already developed their own symbol sets, most recognizably similar to the versions in M-4 and not likely in anyway to confuse the chart user. There is no reason why such offices should not continue to use their own versions of the symbols, although where they do differ significantly from those used by the majority of hydrographic offices, it would be a benefit to the user to change to a more conforming symbol.
- c) Most of the symbols in M-4 have been generated by UK (as current editors of M-4) and are either symbols from UK's version of INT1 (GB5011), or derived from them. The older graphics in M-4, before conversion to the new format, were mainly old raster files; large in terms of memory and poor quality in terms of image. It was necessary to replace them with vector files, which are much more compact and print a much cleaner image. UK's symbol library was readily available when converting M-4 and it was not considered at the time that there was a need for an international symbol library. Nevertheless, UK is content to license its symbols freely to anyone who asks to use them in connection with nautical charts and publications
- d) The second option in the CSPCWG4 record above was a compromise suggestion proposed by the INT1 subWG. A preferred solution is to produce a tri-lingual, non-national, version of INT1, but it is not expected that any resources would be available to undertake such a considerable task. Even the proposed Annex would be a major task, not to be undertaken lightly or possible at least until completion of the current revision of M-4.
- e) The third option in the CSPCWG4 record would require significant financial resources, the identification of a competent contractor and some person from within the IH community as an advisor and verifier of their work. It is doubtful if there would then be sufficient use made of such an international symbol library to justify the use of resources.

I would be grateful to receive your views on the above, particularly in response to the four options from the CSPCWG4 meeting record, by 6 August 2008. A response form is available at Annex B. It is possible following that that the subject may be discussed again at the 5th CSPCWG meeting in November.

Yours sincerely,



Andrew Heath-Coleman
Secretary

Annex A: CSPCWG4-10.1A: Proposed adoption of the M-4 symbols as the IHO paper chart symbol library.

Annex B: Response form.

CSPCWG4-10.1A

Paper for Consideration by CSPCWG**Proposed adoption of the M-4 symbols as the IHO paper chart symbol library**

Submitted by:	AU
Executive Summary:	As the CSPCWG adopts new symbols, it is imperative that an official IHO symbol be released to IHO member states for adoption onto their own charts, and to chart production software manufacturers.
Related Documents:	Chart Specifications of the IHO (M-4), Official INT1s
Related Projects:	CSPCWG task E – maintenance of M-4 supplementary publications INT1, INT2 and INT3. Proposed principles of CSPCWG (paper CSPCWG4-07B)

Introduction / Background

Following the CSPCWG Report to CHRIS18, there was some discussion about the authority of the Chart Specifications of the IHO (M-4) and it is Australia's understanding that M-4 is the specification and that INT1 is supplementary to M-4. Following CSPCWG Letter 06-2007 it would appear that the CSPCWG Chairman and Secretary do not regard M-4 as the 'symbol library' for paper charts. Accordingly, if this is the case, the official INT1s cannot be regarded as the 'symbol library' for paper charts either, as they all have differences. As the DE INT1 is the official English INT1, AU has up until this time, adopted the German symbols for use on INT and Aus paper charts and RNCs. We knew there were significantly (in some cases) different symbols in M-4, but as the original publication was so old, we disregarded the symbols shown in it and adopted the DE INT1, being far more recent. Now that M-4 is undergoing a complete review, including the adoption of UKHO symbols, AU believes it needs to be made clear to all IHO member states which set of symbols should be adopted and used for paper charts. This is very important when new symbols such as the sea plane landing area is adopted, as those member states with these charted features will need to add this new symbol and hopefully chart production software houses will also adopt these for their own systems. AU has raised the matter before that it is a huge duplication of work if every MS has to design and implement new symbols. This was one of the reasons for specifying the dimensions of all new symbols in M-4 as we carry out the review.

Analysis / Discussion

We know that historically many MS have slightly different paper chart symbols. But as more and more MS move towards producing paper charts by digital methods and software, we have an opportunity to standardise our symbols into digital symbol libraries. This is precisely what the IHO CSMWG has done over the last couple of years for ECDIS. They have produced a symbol library showing the exact dimensions and colours for every ECDIS symbol (see S-52 Presentation Library Addendum (Edition 3.3), which is freely downloadable from the IHO website. The CSMWG is now moving towards producing a symbol library in compliance with the ISO 19100 series of standards which will eventually go into the proposed IHO registry as a new symbol register.

When the CSPCWG introduce a new symbol for the paper chart, we promulgate it as an update to M-4 via an IHO Circular Letter. This usually has the proposed new or revised wording as well as any new symbol included. As MS adopt the new specifications, often the new symbol will be added to national and official INT1s and the IHO is now promulgating Notice to mariners Corrections for the official INT1s. However there has never been any specific advice as to which symbol is the official one. As CHRIS has now agreed that M-4 is the specification, surely the symbols included within it must be considered as the official paper chart symbols until such time as a separate (or inclusive) paper chart symbol library is actually produced.

As the new editions of M-4 are now adopting the UKHO symbols, the CSPCWG members need to agree that these are suitable for adoption as the official IHO paper chart symbols. These could be reviewed as part of the on-going review of the whole of M-4 Part B. This in turn must lead to the official INT1s also adopting these symbols leading to improved consistency in paper charts. The implications for such a decision are huge for many MS but if a staged approach was adopted, starting off with all new or revised symbols, the process can be

looked at as a long term solution. More and more MS are adopting commonly used chart production tools which are now including symbol libraries. Gradually paper chart symbols will become more consistent.

If adopted there is also an additional benefit to those MS who still rely on 'one-off' software solutions and who contract out such work. Once there is IHO advice as to what is the official paper chart symbol set, there can be no argument on what is or isn't an 'official' IHO chart symbol.

Conclusions

The world is moving towards digital symbol libraries. The IHO is moving towards a registry and various registers to hold, maintain and develop its hydrographic features and symbols. It is likely that once the IHO registry is operational, many of the CHRIS WGs may be tasked to produce a digital symbol library for their products. This will lead to more consistent portrayal of hydrographically related products.

The IHO is about supporting one another and consistency in navigational products. We have produced charts for more than 200 years with many of the original symbols still being used today. It's time to use our authority in these matters and declare what the official IHO paper chart symbol set is.

Recommendations

1. That the CSPCWG issue an IHO Circular Letter to all MS advising that M-4 is to be used to construct new or revised paper chart symbols.
2. That full dimensions be provided for all new and revised symbols introduced to M-4.
3. That the official INT1s adopt the M-4 symbols over the next 2 years.
4. That the CSPCWG consider as a long term goal, to produce an official digital symbol library.

Justification and Impacts

Our priority must be to maintain and review the IHO chart specifications and we mustn't detract from this important task. However in the longer term we should encourage the use of our symbols for any hydrographic features and any product, not just for the traditional paper chart.

Action required of CSPCWG

The CSPCWG is invited to agree to the above recommendations.

CSPCWG Letter 09/2008 - RESPONSE FORM

(Please return to CSPCWG Secretary as soon as possible, not later than 06 August 2008)

andrew.coleman@ukho.gov.uk

Extract from Record of 4th CSPCWG meeting:

Acknowledging that there may be slight differences between the chart symbols shown in M-4 and those in the three language versions of INT 1, the meeting discussed whether an international symbol library was desirable and achievable. Possible options were:

Option	Proposal	YES	NO
1	to adopt M-4 as 'the international symbol library' (which is effectively the UK symbol library)		
2	add an annex to M-4 which would serve as a symbol library and collection of INT1 terms and descriptions in English, French and Spanish		
3	engage a contractor to produce a symbol library separate from M-4		
4	maintain status quo, ie no formal symbol library; all HOs free to prepare their own, or adopt those they prefer from other HOs, or use whatever is available from software companies. It was noted, for example, that CARIS has its own symbol library, and also those of France, UK and others, are available		

Please indicate your preference in the third column above, and add any comments below. Please indicate in the 'YES' column your order of preference (1,2...), and in the 'NO' column tick (✓) any option you consider should not be pursued.

Comments:

Name.....

Member State.....