

INTERNATIONAL HYDROGRAPHIC
ORGANIZATION



ORGANISATION HYDROGRAPHIQUE
INTERNATIONALE

CHART STANDARDIZATION & PAPER CHART WORKING GROUP (CSPCWG)

[A Working Group of the Hydrographic Services and Standards Committee (HSSC)]

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Date 19 October 2010

To CSPCWG Members

Dear Colleagues,

Subject: CSPCWG6 Actions 14 (draft specification for virtual AIS Aids to Navigation)

Thank you to the 24 members who responded to WG Letter 09/2010. As you will see from the consolidated responses at Annex A, we have almost complete consensus approving the draft specification, and complete agreement for the location in S-4. Even the one dissenting vote 'does not disapprove of the proposed symbols...'.
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As usual, I have responded to comments in red on the Annex. There is no need for a further round of WG discussion on this, so we will prepare a draft CL for consulting the Member States.

Yours sincerely,

Peter G.B. Jones,
Chairman

Annex A: Consolidated responses to Letter 9/2010, with comments.

CONSOLIDATED RESPONSES TO CSPCWG LETTER 09/2010

| | Question | Yes | No |
|---|--|---|----------|
| 1 | Do you agree with the draft revised specification for virtual aids to navigation? | AU, BR, CA, DE*, DK, ES, (ESRI), FI, FR, GR, ID, IN, IT, JP, LV, NL, NO, NZ, PK, SE*, UA, UK, US(NGA), ZA | US(NOAA) |
| 2 | Do you agree with the location in S-4 for the revised specification? (If not, please suggest an alternative location below) | AU, BR, CA, DE, DK, ES, (ESRI), FI, FR, GR, ID, IN, IT, JP, LV, NL, NO, NZ, PK, SE, UA, UK, US(NGA), US(NOAA), ZA | |

COMMENTS

CANADA

Although we agree on the proposed specification, it is unlikely Canada will chart Virtual Aids to Navigation for many of the same reasons as noted by the US (NOAA).

The entire point of an aid is to have an independent external reference to assist navigation. This is almost always visual. For example we are not sure of the benefit of having a virtual AtoN mark a danger such as a rock or wreck. It would just make the chart busier and may confuse mariners into believing that there is something to be seen which may cause them to navigate more dangerously rather than the desired less. It would be better to ensure that the chart more clearly shows the danger by making it bigger or more prominent in some other way.

Chairman: Non-visual AtoN have existed for many years (eg radio aids). Buoyage authorities may increasingly use virtual-AtoN to replace physical buoys, if only on the grounds of flexibility and cost. The cartographic point regarding ‘chart clutter’ and the appropriate prominence of the dangerous feature is well made and a consideration for chart compilers. (See also the comment under India’s and US/NOAA’s responses).

GERMANY

I join the comments of Sweden.

INDIA

Since S17.1 & S17.2 solves the purpose of AIS, introducing new symbols with top marks inside the magenta circle may lead to data clusters on the medium and small scale charts. Therefore the specific purpose of AIS AtoN can be added to the respective note instead of inducting a new symbol.

Chairman: There is always a need to consider clarity of depiction on secondary scale charts and cartographic judgement is required in deciding what detail should be omitted. This does not alter the need for appropriate symbols to convey the purpose of virtual aids to navigation, which is not conveyed adequately by existing symbols S17.1 & S17.2.

SWEDEN

* For clarity there might be a need to also use the short stem for symbols with a triangle where the base of the triangle now according to the proposal connects directly to the position circle (lateral mark starboard, cardinal mark north and west). See examples below.



Without stem



With stem

Chairman: The stem was only added to the X topmark for clarity because, as the lower branches of the ‘X’ point downward, the topmark became indistinct, virtually following the circumference of the

circle. If it is felt necessary to do the same for all topmarks which have a horizontal lower edge, this would include all lateral topmarks plus north and west cardinal, ie 7 out of the 12 possible IALA topmarks. If we accepted this, then it would be logical to have a small stem for all topmarks, for consistency. However, I do not see that the versions above (with the stem) are actually clearer to interpret than the one without stem, so I conclude this is unnecessary.

US(NOAA)

NOAA does not disapprove of the proposed symbols for virtual aids to navigation for those member states who choose to chart them on paper charts, although it is highly unlikely that the user of a paper chart would understand what these symbols represent without a copy of INT 1 on board (once these symbols are introduced into INT 1) and an education campaign is conducted by each member state that intends to use these symbols. Really, if you were not a member of an IHO working group, would you know what these symbols represent?

NOAA does not intend to show virtual aids to navigation on paper charts. Consider the problems associated with showing virtual aids to navigation on a paper chart.

Huge numbers of paper chart users do not have the electronic devices required to receive the signal indicating a virtual aid. Charting an aid to navigation on a paper chart that does not physically exist and cannot be seen by these mariners in the real world is not in the best interest of the mariner. It is very possible that such mariners, using only a paper chart (and there are still plenty of such users) will think that they have missed a non-existent aid to navigation when they do not see it out the window, but it is on the paper chart. This can cause confusion and needless calls of a missing or malfunctioning aid to the buoy establishing authority, such as the Coast Guard.

The most frequently cited uses for virtual aids to navigation are quick “deployment” of the signal to temporarily indicate a condition until a permanent physical aid to navigation can be deployed. Temporary aids to navigation are rarely charted on paper charts and the apparent location of the signal can be initiated, changed, or canceled in an instant, whereas the modification of a paper chart would lag behind, leaving the paper chart user with the difficult decision of following the virtual signal (if he has the AIS receiver linked to a display; again, many don't) or the charted virtual aid.

The use of a virtual aid to navigation symbol on a nautical chart could obscure the danger that the virtual aid is marking, and many mariners (or recreational boaters) would not have the electronics needed to pick up the AIS signal of the charted virtual aid, which cannot be physically seen, and placing the paper chart user in harm's way.

The use of virtual aids for route planning on a paper chart will be of little use if the typical paper chart user cannot physically see the aid, cannot receive the signal, or the location or existence of the signal changes faster than the paper chart can be updated.

Chairman: We recognise these arguments, but they are for IMO/IALA to consider; IHO meanwhile has to decide if and how to chart virtual aids when they are deployed. It is not a new thing to chart non-visual aids; we have charted racons for example, for many years. And the problem of not obscuring other detail has been with us since charts began and is down to the skill of the cartographer. We are, however, addressing it more formally in our proposal on ‘displacement of symbols’ (see WG Letter 05/2010 and CL56/2010). It seems likely that virtual aids will be deployed (they certainly are being actively trialled in parts of Europe) and they will not all be temporary. The symbols we have produced are as intuitive as we can make them and will probably soon become well known to mariners as the deployment of virtual aids increases (if it does). So the symbols will be there, ready to use, if US, CA and anyone else decides after all that they are needed.