

2nd NCWG MEETING
Monaco 26-29 April 2016

Paper for Consideration by the Nautical Cartography Working Group (NCWG)
Showing Virtual AIS Aids to Navigation Out of Position on Paper Charts

Submitted by:	Australia
Executive Summary:	There is no specification for paper charts for the depiction of Virtual AIS Aids to Navigation where they are positioned over a navigational danger.
Related Documents:	S-4 – B-489.2.
Related Projects:	None

Introduction / Background

S-4 clause B-489.2 provides specification for the depiction of Virtual AIS Aids to Navigation (V-AIS) on charts. Australia has been faced with instances where the position of the V-AIS conflict with the position of a physical submerged danger (such as an isolated shoal). There is currently no specification in S-4 for resolving this conflict on the paper chart.

Analysis / Discussion

V-AIS, by their virtual nature, do not themselves constitute a danger to navigation, while in many cases the physical submerged feature that it marks, such as an isolated shoal, does constitute a danger to navigation. The general convention for physical aids to navigation such as beacons (which a vessel may damage, or be damaged if it hits) is to chart the aid in its true position, at the expense of the isolated shoal depth, which may be charted as an “out of position” sounding (INT1 – I11).

Discussions at the AHS determined that in the case of a V-AIS that is positioned upon the submerged feature that it is a danger to navigation, the V-AIS symbol (the information that is not a danger to navigation) is the symbol that should be shown out of position, allowing the full detail of the danger to be charted in true position.

There is currently no specification in S-4 for showing a charted feature out of position, other than for soundings at B-412.2. There is guidance that buoys may be shown out of position so as to avoid fouling the features that they are marking, but this allowance is made due to the floating nature of the buoy, and the actual position of the buoy is not indicated on the chart.

Australia’s solution for the situation where a V-AIS is positioned directly over a navigational danger was to offset the V-AIS symbol from the danger, and use a magenta version of the “pointer” as specified for a sounding out of position at B-412.2 to show the actual “position” of the V-AIS. For example:





Conclusions

Australia considers that guidance is required in S-4 for showing V-AIS symbols out of position so as to allow for the danger that the V-AIS is marking to be charted in full.

Recommendations

Add a new paragraph at the end of S-4 – B-489.2 similar to the following:

Where a V-AtoN is positioned directly over a submerged danger to navigation, the danger should be shown in its true position as normal. The V-AtoN should be offset from the danger, with a short magenta ‘pointer’, similar to that used for soundings (see B-412.2) used to mark the actual position of the V-AtoN. For example:



Other alternatives considered by AHS were to offset the V-AIS symbol from the danger without the pointer, or to show the magenta “halo” in true position with the “V-AIS” legend only (no centre symbol).

Justification and Impacts

This specification does not impact on ENC. In all cases the V-AIS would be encoded in its true position.

Action required of NCWG

The NCWG is invited to:

- a. **Discuss** the merits of the AHS reasoning and solution for showing V-AIS out of position.
- b. **Decide** on appropriate changes (if any) to S-4 based on the recommendations above.