

INTERNATIONAL HYDROGRAPHIC  
ORGANIZATION



ORGANISATION HYDROGRAPHIQUE  
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## CHART STANDARDIZATION & PAPER CHART WORKING GROUP (CSPCWG)

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

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Date 29 April 2010

### To CSPCWG Members

Dear Colleagues,

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

Action 14 requires the Secretary and Vice Chairman to draft chart specifications for virtual AIS AtoN. Following the outcome of the IALA workshop reported in CSPCWG Letter 06/2010, I have prepared a draft specification in consultation with the Vice-Chairman (J Wootton - Australia). This is attached at Annex A.

We have considered whether the specification could be located differently in S-4, taking account of the fact that, at some time, virtual AtoN may be transmitted by a different system from AIS. However, after careful examination, we were unable to find a better location than immediately following the existing section on AIS.

Please provide any comments on the draft by 24 June 2010, using the response form at Annex B.

Yours sincerely,

Andrew Heath-Coleman  
Secretary

Annex A: Proposed additions and amendments to S-4 B-489

Annex B: Response form

**Proposed additions and amendments to S-4 B-489**

(Deletions in green, additions in red)

**B-489 AUTOMATIC IDENTIFICATION SYSTEM (AIS)**

The Automatic Identification System (AIS) is an autonomous and continuous broadcast system, operating in the VHF maritime mobile band. It exchanges information such as vessel identification, position, course, speed, etc and can also be used as an Aid to Navigation. It is in this latter application that it is useful to chart its position.

**B-489.1** An **AIS-equipped Aid to Navigation (AtoN)** may provide a positive identification of the aid. It may also transmit an accurate position, and provide additional information such as actual tidal height or local weather; details of these functions, which cannot be charted, should be provided in associated publications as appropriate. AIS transmissions must be charted using the magenta radio circle and **international abbreviation 'AIS'**, see B-480:



**S17.1** (with the letters in upright text) must be used for fixed AtoN and **S17.2** (with the letters in sloping text) must be used for floating AtoN.

**Note:** the signal may:

- actually be transmitted from a physical AtoN
- apparently be transmitted from a physical AtoN (ie a synthetic signal)
- be transmitted to represent a non-existent AtoN (ie a virtual AtoN).

~~In most cases~~ For signals transmitted from a physical AtoN and also for synthetic signals associated with a physical AtoN, the ~~magenta~~ centre position circle should be replaced by the symbol for the actual AtoN, eg a light star or buoy symbol. ~~If it is necessary to chart~~ For charting a 'virtual' AIS AtoN, where no physical AtoN exists, ~~see B-489.2 then the centre position circle (a magenta version of B22) must be used in lieu of the AtoN symbol.~~

**B-489.2** **Virtual aids to navigation.** A virtual aid to navigation (V-AtoN) does not physically exist but is a digital information object promulgated by an authorised service provider, such as AIS, that can be presented on navigational systems.

V-AtoN can be used to inform the mariner about dangers to navigation, safe waterways, areas in which extra caution may be necessary and areas to be avoided. They may also be used in places where permanent physical AtoN cannot be sited. They may be used to represent a line, area, position or other form that may be displayed graphically.

The information, including geographic position, carried by V-AtoN may be fixed or may be changed over time (dynamic), depending on the intended purpose. V-AtoN are used primarily where there is a time critical consideration. V-AtoN can provide early notification to the mariner of urgent, temporary or dynamic information.

It will not usually be practical to chart temporary or dynamic V-AtoN. However, permanently activated V-AtoN should be charted if appropriate, for the same purpose as physical AtoN. The symbol must be made up as follows:

- All parts of the symbol must be magenta, to distinguish the V-AtoN from physical AtoN. Its position must therefore be identified on the chart by a small magenta position circle with central dot (ie magenta version of B22).
- The position must be surrounded by a 3mm radius radio circle, to indicate that the AtoN is a radio-transmission.
- The purpose of the AtoN must be indicated by a magenta topmark, the same shape and size that would be used for the equivalent buoy or beacon, normally located immediately on top of the position circle. (This will be lateral, cardinal, isolated danger, safe water, special or emergency wreck marking in the IALA Maritime Buoyage System; see B-463). Exceptionally, for clarity, a special mark 'X' topmark should have a

short stem separating the 'X' from the position circle.

- A legend must be placed adjacent to the radio circle to further emphasise that it is a virtual aid (V) and to indicate the carrier of the transmission (eg AIS). At present (2010) this will be '**V-AIS**', but other means of transmission may be possible in the future which will be represented by different abbreviations.
- All text should be upright, as this is not a floating AtoN and therefore not subject to drifting, even when located in the water.
- Although AtoN have specified colour in the IALA system, colour abbreviations should not be added for a V-AtoN.

Examples:



**Response Form**

(please return to CSPCWG Secretary by 24 June 2010)

[andrew.coleman@ukho.gov.uk](mailto:andrew.coleman@ukho.gov.uk)

	Question	Yes	No
1	Do you agree with the draft revised specification for virtual aids to navigation?		
2	Do you agree with the location in S-4 for the revised specification? (If not, please suggest an alternative location below)		

Comments:

Name:

Member State: