e-NAV12 Input

Agenda item 9.1

Task Number 12

Author(s) Vice-chair

AIS AtoN

# Summary

The report of the Correspondence Group on Policy and Symbols for AIS AtoN was considered at IMO NAV 58 and a drafting group was set up. The report of the drafting group was contained in an annex to NAV58/WP.7.

Following NAV 58 the ICS contacted IALA by e-mail, expressing a number of concerns about AIS AtoN. This set off a useful exchange of views within IALA, which was captured in a response to ICS.

It was suggested that this consolidated view could usefully be set out as a series of statements that might form the basis of an IALA input to the Correspondence Group.

## Purpose of the document

This paper is provided as the basis for an input to the IMO CG on Policy and Symbols for AIS AtoN.

## Related documents

e-mail exchanges with ICS.

# Discussion

## Synthetic AIS AtoN

IALA has noted that Synthetic AIS AtoN will be included under the overall heading of ‘Physical’, accepting that the distinction is of relevance to the service provider rather than the user. This removes synthetic AIS AtoN as a separate definition, but not as a method of deployment.

Caution must be exercised to avoid the possibility of transmitting an incorrect position for a synthetic AIS AtoN. IALA Rec. A-126 states in 4.1.2.2: ‘Only a Monitored Synthetic AIS AtoN ensures the integrity of the floating AtoN, therefore the use of a Predicted Synthetic AIS AtoN is not recommended for use on floating AtoN.’

**2.2 Existing deployments**

The IALA Recommendation on AIS as an AtoN (A-126) was first published in 2007. The decision by IMO to consider policy for AIS AtoN was taken in 2011, by which time many administrations had already deployed AIS AtoN. Deployment of any AIS AtoN is subject to the usual notices and required MSI. Therefore the mariner should already be informed about such deployments, however, steps should be taken to raise awareness of AIS AtoN and to include training on their use in appropriate courses. The possible outcome of the IMO considerations of Policy and Symbols for AIS AtoN should be borne in mind when making any future deployments.

**2.3 Virtual AtoN**

It is generally accepted that Virtual AtoN can be a valuable safety measure for marking a new hazard, such as a wreck. Virtual AtoN can also be used for permanent marking of dynamic features, such as mobile shoals, ice edge, floating debris, moveable bridges.

However, the use of Virtual AtoN for marking 'permanent' (charted) features, e.g. a rock / pinnacle, when use of physical aids is impracticable, is still a matter for discussion (as agreed at the IALA workshop on virtual aids to navigation in 2010). NAV58/WP.7 Annex section 4.3.6 makes clear that unless circumstances do not permit the permanent marking by a fixed AtoN ‘the usage of virtual AtoN on an ongoing basis is not recommended’. It can be argued that once such hazards are charted, there is no longer a need for the Virtual AtoN.

The method of broadcasting Virtual AtoN (Message 21, or Application Specific Message, e.g. to mark areas) is also a matter for further discussion, as experience is gained and new applications emerge.

## 2.3 Symbology

Under the heading ‘Portrayal’ NAV 58/WP7 states:

*‘The purpose of portrayal of AIS AtoN information is to convey the meaning of the AIS AtoN information intuitively and unambiguously to all concerned through navigational or other display. Graphic portrayal of AIS AtoN information should:*

* *clearly distinguish virtual AIS AtoN from physical AIS AtoN;*
* *graphically indicate the type of the AIS AtoN in accordance with the IALA Maritime Buoyage System; and*
* *be sufficiently different from IHO chart symbols and other navigation related symbols to differentiate ENC AtoN objects from AIS AtoN.’*

The current method of portrayal shown in IEC specifications 62288 & 62388 (Navigation Displays and Radar) is a diamond, with the position of the AtoN marked by a cross at its centre. Virtual AtoN additionally have a ‘V’ superimposed inside the diamond. One proposal, included as an annex to the CG Report was to remove the superimposed ‘V’ and use dashed lines for the diamond in the case of a Virtual AtoN. Additionally, topmark symbols could be used to depict the relevant type of mark. Recommendations on symbols have been deferred to NAV 59, but the need to coordinate the IEC specifications has been recognised.

**2.4 General**

It is noted that the slow pace of updating onboard equipment may delay the spread of capability to utilise new services. The symbols for AIS AtoN (including Virtual) were first included in IEC 62288 & 62388 in 2008, but many vessels still have equipment that predates these specifications and so cannot display these symbols. It is recognised that the problem of updating equipment needs to be addressed, if the full benefits of e-Navigation are to be realised.

However, it is considered that where AIS AtoN provide a means of enhancing safety and efficiency, they should be used, even though not all vessels can see them.

IALA is committed to continued discussion of these matters with all stakeholders, so that the most effective aids to navigation service can be provided for all mariners.

# References

1. IALA Recommendation A-126, on Use of the Automatic Identification System (AIS) in Marine Aids to Navigation Services, rev. 2011.
2. IALA Recommendation 0-143, on Virtual Aids to Navigation, 2010.
3. IMO NAV 58 WP 7, 2012.

# Action requested of the Committee

The Committee is invited to consider the discussion above as the basis for an IALA input to the IMO CG on Policy and Symbols for AIS AtoN.