INTERNATIONAL SAILING FEDERATION
International Regulations Commission

Report on the IALA* VIRTUAL AIDS TO NAVIGATION WORKSHOP
rev 1.0

25-28 January St Germain en Laye, France
Alan Green, Chairman Int Regs Commission 2nd February 2010

Aids to Navigation (AtoNs) are devices external to a ship, which assist a
navigator eg lighthouses, buoys, etc. Virtual Aids to Navigation (VAtoNs)
are those which do not physically exist but are displayed on bridge equipment
(and on shore control equipment) by electronic means. A long-established
form of VAtoN is a racon, a transponder (typically fitted to a buoy or beacon)
which shows a unique signal on a radar display when interrogated by a ship’s
radar.

With the advent of AIS the possibilities for VAtoNs has become almost
endless. The purpose of the Workshop was to consider a way forward in
which under international agreement with guidance from IALA the
development and usage of VAtoNs would follow a prescribed and uniform
best practice. The resultant draft recommendations and draft guidelines are
available at ftp://193.251.3.91 username ftpuser pw siren** These will
eventually go to IMO for information and approval.

Even in SOLAS ships using class “A” AIS, there are many different types of
equipment and not all can display VAtoNs. Class “B” AIS (most commonly
used by small craft) also has many variations. In theory all AIS receivers can
receive VAtoN data, though few (if any) displays for Class “B” including VAtoN
capability, are yet available.

Most of the delegates were familiar with SOLAS ships and regulations but
were ready to consider the needs of other mariners. I (and others)
emphasised that many craft are out there without AIS now and indeed some
will never have AIS – therefore those craft must always be informed by other
means of the feature that has given rise to the deployment of a VAtoN. Whilst
one speaker showed a beautiful set of proposed symbols (each representing
a variation of a physical Aid to Navigation, like a buoy) the majority agreed
that an open mind was needed to the possibility of creating definitions by eg
lines or areas, and not just points. (From the small craft point of view the
good news is that it was accepted that, since the description of a feature to be
the subject of a VAtoN would also have to be sent by text – eg NAVTEX – it
must be kept simple and easy to plot by hand).
Areas could be defined within which eg yacht racing or concentrations of fishing vessels might be temporarily present. (I cautiously enquired how a maritime or lighthouse authority might react to a request for a VAtoN as a yacht racing aid (eg as a mark, or committee vessel station)? – there is a direct parallel here with the establishment of a “special mark” which an authority could deploy if they so decided – so it would seem that such usage is possible. Whether it would be really useful in yacht race management perhaps remains to be seen.)

Some Virtual Aids could be dynamic – eg marking lanes amongst drifting ice in the North-West Passage.

There was keenness by some to set up VAtoNs as permanent features but the majority came down firmly behind the view that a VAtoN must be a temporary device and that (with a few exceptions) once a feature was charted it must no longer be represented as a VAtoN.

Many more details were considered including standard colouring, shape and size and how the symbol could be made to appear on the display screen without interfering with other features. In the ftp files there is a comprehensive summary of the Workshop, the list of delegates, and also the excellent presentations given.

The Workshop was held at a critical stage in the development of AIS. The 42 delegates represented national maritime authorities, lighthouse authorities, technical experts, ship owners and masters, and –for the first time- ISAF. This was valuable recognition of the importance of representation of leisure seafarers in this kind of forum and I am certain we will be invited to participate in similar events in future. The Workshop was conducted with great efficiency by IALA.

Alan Green
Chairman, International Regulations Commission ISAF

ftp files: please take the line called “workshop 01/28/2010” and follow it from there. The link is for ISAF/Int Regs Commission access and not for publication. If anyone has difficulty with any of this please let me know – A.

*IALA is the International Association of Lighthouse Authorities.