Additional Instructions when Applying for a Private Aid to Navigation with an Automatic Identification System

The use of Automatic Identification System (AIS) as/on a Private AtoN (PATON) is permissible on a case-by-case basis. Applicants intending to deploy an AIS PATON – in addition to all the information in the pertinent blocks of either CG-2554 or CG-4143 Forms – must provide in the application's REMARKS section the following:

1. The AIS make and model, and its use as either a Physical, Synthetic (SAIS) or Virtual (VAIS) AIS AtoN. The use of a SAIS on a private floating AtoN is not permissible. Applicants using a CG Form 4143 may list SAIS and/or VAIS in the REMARKS section of the form.

2. Federal Communications Commission (FCC) identification number (which should be found on the device serial number label). **Note, only FCC certified AIS are permissible**. For a listing of FCC-certified AIS devices, select *EQUIPMENT CLASS--AIS* at apps.fcc.gov/oetcf/eas/reports/GenericSearch.cfm.

3. The AIS Type, i.e. I, II, or III. See the International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA) Guideline G1095, *Application of AIS AtoN on Buoys.*

4. It's positioning source, which should be GPS for a floating AtoN or a surveyed (2drms) position for fixed AtoN.

5. It's dimensions in meters, i.e., ABCD values where A+B+C+D>0, except Virtual AtoN which should be coded as A=B=C=D=0. See IALA Recommendation R0126, *The Use of The AIS In Marine Aids to Navigation Services* for further guidance.

6. It's transmit power, which should not exceed 12.5 watts.

7. It's antenna height above mean water (in meters).

8. The Type of AtoN, either Code 1 (Reference Point), 2 (RACON or Mobile AIS), 3 (Fixed Structure, i.e., offshore platform wind turbine; its ABCD values should the denote the dimensions of the structure), 28 (Isolated Danger) or 30 (Special Mark). For a listing of all Type of AtoN codes, see AIS message 21 (AIS AtoN Report) at www.navcen.uscg.gov/ais-aton-report.

9. It's reporting rate and access scheme of its broadcasts, i.e., nominally every 3 minutes on alternating AIS channels using Radom Access Time Division Multiple Access (RATDMA), not Fixed Access Time Division Multiple Access (FATDMA). See IALA Recommendation R0126, *The Use of The AIS In Marine Aids to Navigation Services* for further explanation.

10. A brief description of its purpose; concept of operation; how will it be monitored; and, whether and why they desire to broadcasts other messages beside its AIS message 21, e.g., environmental reports using AIS messages 6, 8, 25 or 26 – Application Specific Messages (ASM).

    a. DAC, FI and ASM descriptions and details for most current ASMs can be found at www.iala-aism.org/asm. Guidance on the use of ASMs is set forth in International Maritime Organization's IMO *Safety of Navigation Circular 289*, *Guidance on The Use of ASMs* and IALA *G1095*, *Implementation of ASMs*.

    b. Applicants should be aware that in addition to an AIS message 21, a floating AIS PATON should broadcast a AIS message 12 (AIS Safety Related Broadcast Message) when ((sqrt (Chain Length² - Water Depth²)) * 110%) meters from its assigned position, that states: OFF-POSITION.

    c. AIS PATON that intend to report their "health" status using AIS AtoN Status bits per IALA *R0126*, should also broadcast a AIS message 12, accordingly stating: LIGHT OUT and/or RACON OUT, as applicable.

    d. Other uses of AIS Safety Related Message are permissible, using preformatted text, for unique safety related purposes (e.g., broadcasting a AIS message 14 (AIS Safety Related Addressed Message) stating: i.e., CAUTION: STAY CLEAR and/or WARNING: STAY CLEAR to forewarn a vessel on an allision course with platform or tower; when approaching a regulated area; appearing to anchor over a pipeline or cable, etc.

Incomplete applications will not be considered. Applicants, prior to making such a considerable investment, are encouraged to submit a USCG sponsored NAVCEN Historical AIS Data Request at www.navcen.uscg.gov/contact/ais-historical-request, to gain a greater awareness of how many vessels will benefit from your PATON. Also, note, **AIS PATONs require FCC licensing, which the FCC will not grant without a paying their fees and its USCG-assigned Maritime Mobile Service Identity (MMSI)**. So, upon USCG preliminarily approval, the applicant will be promptly returned their application, with its USCG-assigned MMSI number(s), which the applicant should include in their filing in the FCC's Universal Licensing System (ULS) at www.fcc.gov/wireless/universal-licensing-system for an experimental or radiodetermination station license; and, should also include this statement in the pertinent REMARKS section of the FCC ULS process:

Pursuant to Section 1.95 of the Commission's Rules, we request a waiver of 47 CFR 80.393 and 80.1101 which does not currently accommodate use of AIS AtoNs. The purpose of the rules would not be served or would be frustrated by application to the instant case. In view of unique or unusual actual circumstances of the instant case, application of the rules would be inequitable, unduly burdensome, or contrary to the public interest, and the applicant has no reasonable alternative. Therefore, a grant of the requested waiver would be in the public interest.

IMO and IALA publications mentioned above can be found at www.navcen.uscg.gov/ais-references.