Số: 55 /BTK-VPIMOVN
V/v: Chính sách định hướng sử dụng
Hệ thống nhận dạng tự động AIS
trong trợ giúp hàng hải

Hà Nội, ngày 25 tháng 6 năm 2014

Kính gửi:

- Vụ Khoa học-Công nghệ (Bộ GTVT);
- Vụ Tổ chức cán bộ (Bộ GTVT);
- Cục Đăng kiểm Việt Nam;
- Cty TNHH MTV Thông tin Điện tử Hàng hải Việt Nam;
- Tổng Công ty Bảo đảm An toàn hàng hải Miền bắc;
- Tổng Công ty Bảo đảm An toàn hàng hải Miền nam;
- Các Thành viên Ban Thư ký IMO Việt Nam.

Tổ chức Hàng hải Quốc tế (IMO) gửi các Quốc gia thành viên Thông tri số MSC.1/Circ.1473 ngày 23/5/2014 về "Chính sách định hướng sử dụng Hệ thống nhận dạng tự động AIS trợ giúp trong hàng hải" (toàn bộ nội dung chính trong phụ lục đính kèm). Thông tri đã được phê chuẩn tại kỳ họp lần thứ 93 của Ủy ban An toàn hàng hải ngày 14 đến 23/5/2014.

Nội dung, mục đích Thông tri của IMO nhằm cung cấp chính sách định hướng về hệ thống AIS mà thực tiễn đang được sử dụng như những công cụ trợ giúp hữu hiệu đảm bảo đảm an toàn hàng hải cho người đi biển, các cơ quan quản lý trên bờ và đặc biệt là những nhà cung cấp dịch vụ trợ giúp hàng hải.

Văn phòng IMO Việt Nam xin gửi nguyên bản Thông tri MSC.1/Circ.1473 để Quý cơ quan, Quý thành viên xử lý theo thẩm quyền./.

Nơi nhận:
- Như trên;
- TTK - Thứ trưởng Nguyễn Văn Công (để b/c);
- Website Cục HHVN;
- Lưu: VPIMOVN.

TL. TỔNG THƯ KÝ
TRƯỞNG VĂN PHÒNG

Phan Nguyễn Hải Hà

POLICY ON USE OF AIS AIDS TO NAVIGATION

1   The Maritime Safety Committee, at its ninety-third session (14 to 23 May 2014), approved the annexed Policy on use of AIS Aids to Navigation (AIS AtoN), prepared by the Sub-Committee on Safety of Navigation at its fifty-ninth session (2 to 6 September 2013).

2   The purpose of this circular is to provide mariners and shore authorities, especially Aids to Navigation service providers, a clear policy direction on the use of AIS AtoN, which were introduced as additional and possible future applications of AIS by resolution A.917(22), as amended, and are currently starting to be used as a new practical Aids to Navigation tool for ensuring the safety of navigation.

3   Member Governments are invited to bring this Policy to the attention of all parties concerned.

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ANNEX

POLICY ON USE OF AIS AIDS TO NAVIGATION

1   Purpose

1.1.   The purpose of this Policy is to provide mariners and shore authorities, especially Aids to Navigation service providers, a clear policy direction on the use of AIS Aids to Navigation (AtoN) for ensuring the safety of navigation.

2   Scope

2.1   This document specifies the policy on the application or usage of AIS AtoN, including definition, performance standards, operational matters and other related topics.

3   Definition

3.1   AIS Aids to Navigation

An AIS AtoN is a digital aid to navigation (AtoN) promulgated by an authorized service provider using AIS Message 21 "Aids to navigation report" that is portrayed on devices or systems (e.g. Electronic Chart Display and Information System (ECDIS), radar or Integrated Navigation System (INS)). An AIS AtoN can be implemented in two ways:

  .1   Physical AIS AtoN:
            a Physical AIS AtoN is an AIS Message 21 representing an AtoN that physically exists; and

  .2   Virtual AIS AtoN
            a Virtual AIS AtoN is transmitted as a Message 21 representing an AtoN that does not physically exist.

4   Application

4.1   General principles:

  .1   establishment or operation of an AIS AtoN should be in accordance with SOLAS regulation V/13 on establishment and operation of Aids to Navigation, and, done in such a way so as to not impact the primary purpose of AIS[1]. Based on the SOLAS Convention, each competent AtoN service authority or provider has the possibility to establish or operate AIS AtoN, as they would do for a Physical AtoN, as the volume of traffic justifies and the degree of risk requires;

  .2   when considering the establishment or deployment of AIS AtoN, the competent AtoN service authority or provider should take special precaution to the primary purpose of AIS for collision avoidance, and that not all ships may carry equipment capable of transmitting or receiving AIS messages, such as leisure craft, fishing boats and warships, and some coastal stations including Vessel Traffic Services (VTS) centres, might not be fitted with AIS capability;

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[1]   MSC.74(69) – Recommendations on performance standards for an universal shipborne automatic identification system (AIS).

.3　　　　further, even if a ship carries an AIS unit, the capability to portray or to display AIS AtoN information may be limited. Some types of Class A AIS equipment, which is required by the SOLAS Convention, can for example only display alphanumeric information, such as the name of the AtoN, on a Minimum Keyboard Display (MKD)[2]. Likewise, the portrayal of information for Class B AIS equipment is optional and various legacy types of displays such as radar and ECDIS may display an AIS symbol but not necessarily an AIS AtoN symbol;

.4　　　　there is also a potential for conflict between charted AtoN and the portrayal of the same AtoN dynamically via AIS. Close coordination between the AtoN authority and the relevant charting authorities is essential;

.5　　　　consequently, not all users will benefit from the provision of AIS AtoN. Therefore, the competent AtoN authority should take careful consideration to promulgate the information as necessary to mariners and other relevant parties before the establishment or deployment of AIS AtoN is completed. **It is highly important that mariners know how to interpret, understand and use AIS AtoNs before any decision of establishment or deployment is made**; and

.6　　　　AIS AtoN could enhance the mariner's awareness on Maritime Safety Information (MSI) since AIS AtoN have the possibility to bring information almost immediately to the attention of the mariner in a relevant geographical context.

4.2　　　Application of Physical AIS AtoN:

.1　　　　a Physical AIS AtoN which is associated with a physically existing AtoN, can be implemented to provide mariners with the following service information:

- the type and the name of the AtoN;

- the position of the AtoN (must always be actual position of Physical AtoN, i.e. real-time Electronic Position Fixing System (EPFS) position for floating AtoN, especially if it is off position);

- AtoN's status, e.g. light error, RACON error, off-position indication in the case of a drifting buoy, etc. with Message 14 "Safety-related broadcast message (optional)" (if monitored); and

- other types of information through AIS Application Specific Message[3] (optional).

4.3　　　Application of Virtual AIS AtoN:

.1　　　　a Virtual AIS AtoN transmits information about an AtoN that does not physically exist. In this context, the competent AtoN authority should take every precaution to avoid confusion to the mariners. The AIS message should clearly identify this as Virtual AIS AtoN;

.2　　　　the application or usage of a Virtual AIS AtoN may be divided into two categories, temporary and permanent;

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[2]　　Where the AIS is part of an Integrated Bridge System, presentation of the AIS data would in general not be limited to the MKD.

[3]　　Refer to SN.1/Circ.289 – Guidance on the use of AIS Application Specific Messages.

Permanent application

.3   Virtual AIS AtoN **should not be used for permanently marking an object for which Physical AtoN would be possible**, but, may be considered for marking an object or feature where it is difficult or economically unreasonable to establish a Physical AtoN due to environmental constraints e.g. deep water, harsh sea conditions. Another case of the permanent application of Virtual AIS AtoN is for example marking a shoal that changes with time due to current or weather effects; and, where the object or feature is impossible to maintain as charted because of changes that occur over time;

.4   **the permanent usage of Virtual AIS AtoN** should be included in ENCs, paper nautical charts and nautical publications, and should, in general, not be duplicated as a multiple layer by AIS AtoN;

Temporary application

.5   It may also further supplement Notices to Mariners (NtMs) for some temporary and preliminary warnings and information from various sources, particularly where the warnings and information have yet to be included in the relevant ENCs due to the time it takes for the distribution of ENC updates; and

.6   attention should also be drawn to the fact that, most Hydrographic Officers (IHOs) are now including temporary and preliminary NtM information in ENCs. Where temporary and preliminary information is included in ENCs, there must be coordination between AIS AtoN and ENC updates in order to avoid multiplied/duplicated layers of information on a display concerning the same issue.

5   Performance standards

5.1   Range

An AIS AtoN should have a transmission range that provides timely detection, depending on traffic and topology of the area and degree of risk, in accordance with international recommendations.

5.2   Reporting interval

The reporting interval for Message 21 of AIS AtoN is nominally three minutes but can be changed to improve timely detection or data link efficiency in accordance with international recommendations. An AIS AtoN should be considered lost after 15 minutes, unless updated.

5.3   Other characteristics

Other characteristics of AIS AtoN should take into consideration the risks and limitations described herein, as well as appropriate international standards, recommendations and guidelines[4].

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[4]   Refer to ITU-R M.1371 and IALA Recommendation A-126 (latest revisions).

6   Operation/management

6.1   In order to avoid an unauthorized transmission of AIS AtoN, every AIS AtoN should be authorized by the competent authority.

6.2   An AtoN authority should make all necessary information relating to AIS AtoN available to all concerned.

6.3   The number of AIS AtoNs deployed in one area should be limited in order to avoid clutter on a display both onboard and ashore.

7   Monitoring

7.1   Each AIS AtoN should be monitored by appropriate means to ensure its reliability and integrity, the AtoN service provider or other relevant authority should notify all concerned immediately if this has been compromised. Although VHF Data Link (VDL) loading by an AIS AtoN is very low, the AIS VDL should be monitored by slot utilization or other appropriate means in order to ensure that the transmission of AIS AtoN does not impair ship to ship transmissions of AIS, and to detect any unauthorized transmission of AIS AtoN.

7.2   Contracting Governments should appoint a competent authority with the responsibility for protecting the integrity of the AIS VDL[5], and ensure the legal means to prevent unauthorized AIS AtoN transmissions.

8   Risks and limitations

8.1   Both AIS AtoN service providers and users should be aware of the following risks of AIS AtoN:

> .1   not all ships carry AIS and not all AIS displays can display AIS AtoN;
>
> .2   not all mariners or shore based operators may be aware of the AIS AtoN;
>
> .3   information overload may cause confusion;
>
> .4   since Physical AIS AtoN may show the real-time position of the AtoN, there can be a position difference between the AIS AtoN position and the charted AtoN position; and
>
> .5   because of the technological newness of the AIS AtoN, there may be a lack of user awareness or understanding.

8.2   AIS AtoN service providers and users should also be aware of the following limitation of AIS AtoN:

> .1   like an AIS shipborne station, the position of floating AIS AtoN depends on the Global Navigation Satellite System (GNSS) and may thus be subject to GNSS vulnerability.

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[5]   Refer to resolution MSC.347(91) *Recommendation for the protection of the AIS VHF data link*.

9   Portrayal

9.1   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 displays. 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.

9.2   Graphic portrayal systems should have the ability to filter AIS AtoN.

10   Training

10.1   It is recommended that mariners and shore-based VTS operators, as an extension of their training on the IALA Maritime Buoyage System, are introduced to AIS AtoN as defined by this policy, and portrayal on navigation related displays as defined by relevant documents, including the concept of a Virtual AIS AtoN, should be visible only on electronic displays.

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