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COMMISSION STAFF WORKING DOCUMENT

Union submission to the International Maritime Organisation's 9th session of the Sub-Committee on Navigation, Communications and Search and Rescue on the proposed revision of Recommendation ITU-R M.1371-5, including the proposal on deactivation or cancellation protocol for AIS-enabled locating devices

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PURPOSE

This Staff Working Document contains a draft Union submission to the International Maritime Organization's (IMO) 9th session of the Sub-Committee on Navigation, Communications and Search and Rescue (NCSR 9). The IMO has indicatively scheduled NCSR 9 from 21 to 30 June 2022.

The draft submission provides comments on the proposed revision of Recommendation ITU-R M.1371-5 on '*Technical characteristics for an automatic identification system (AIS) using time division multiple access in the VHF maritime mobile frequency band*¹', including on the proposal on deactivation or cancellation protocol for AIS-enabled locating devices.

The IMO performance standards for AIS, as contained in Resolution MSC.74(69) Annex 3, are referencing the Recommendation ITU-R M.1371 for the definition of technical characteristics. Both NCSR 8 and IMO/ITU Expert Group 17 have received liaison statements from ITU-R Working Party 5B, containing proposals concerning the revision of Recommendation ITU-R M.1371-5. Hence, IMO/ITU EG 17 encouraged interested Member States and organizations to submit proposals concerning the revision of Recommendation ITU-R M.1371-5, the possible removal of the channel management or of the Long Range component of AIS as well as a method to identify the deactivation or cancellation process for AIS-enabled locating devices and other issues to NCSR 9, as appropriate.

EU COMPETENCE

Navigation is listed as an item in Section 4 of Commission Implementing Regulation (EU) 2021/1158². The Implementing Regulation concerns design, construction and performance requirements and testing standards for marine equipment. It is based on the empowerment of the Commission to indicate, through implementing acts, the design, construction and performance requirements for marine equipment falling within the scope of Directive 2014/90/EU on marine equipment³, in accordance with Article 35(2) thereof.

In light of all of the above, the present draft Union submission falls under EU exclusive competence.⁴ This Staff Working Document is presented to establish an EU position on the matter and to transmit the document to the IMO prior to the required deadline of 15 April 2022.⁵

¹ International Telecommunication Union – Radiocommunication (ITU-R) Recommendation M.1371-5 '*Technical characteristics for an automatic identification system (AIS) using time division multiple access in the VHF maritime mobile frequency band*' (02/2014), <https://www.itu.int/rec/R-REC-M.1371-5-201402-I/en>

² OJ L 254, 16.7.2021, p. 1

³ OJ L 257, 28.8.2014, p. 146

⁴ An EU position under Article 218(9) TFEU is to be established in due time should the IMO Maritime Safety Committee eventually be called upon to adopt an act having legal effects as regards the subject matter of the said draft Union submission. The concept of '*acts having legal effects*' includes acts that have legal effects by virtue of the rules of international law governing the body in question. It also includes instruments that do not have a binding effect under international law, but that are '*capable of decisively influencing the content of the legislation adopted by the EU legislature*' (Case C-399/12 Germany v Council (OIV), ECLI:EU:C:2014:2258, paragraphs 61-64). The present submission, however, does not produce legal effects and thus the procedure for Article 218(9) TFEU is not applied.

⁵ The submission of proposals or information papers to the IMO, on issues falling under external exclusive EU competence, are acts of external representation. Such submissions are to be made by an EU actor who can represent the Union externally under the Treaty, which for non-CFSP (Common Foreign and Security Policy) issues is the Commission or the EU Delegation in accordance with Article 17(1) TEU and Article 221 TFEU. IMO internal rules make such an arrangement absolutely possible as regards existing agenda and work programme items. This way of proceeding is in line with the General Arrangements for EU statements in multilateral organisations endorsed by COREPER on 24 October 2011.

**RESPONSE TO MATTERS RELATED TO THE ITU-R STUDY GROUPS AND ITU WORLD
RADIOCOMMUNICATION CONFERENCE**

**Proposed revision of Recommendation ITU-R M.1371-5, including on the proposal on
deactivation or cancellation protocol for AIS-enabled locating devices**

Submitted by the European Commission on behalf of the European Union

SUMMARY

Executive summary: Both NCSR 8 and IMO/ITU EG 17 have received liaison statements from ITU-R Working Party 5B, concerning the revision of Recommendation ITU-R M.1371-5 on ‘*Technical characteristics for an automatic identification system (AIS) using time division multiple access in the VHF maritime mobile frequency band*’. This document provides comments on the proposed revision of Recommendation ITU-R M.1371-5, including on the proposal on deactivation or cancellation protocol for AIS-enabled locating devices.

Strategic direction, if applicable: 2

Output: 2.1

Action to be taken: Paragraph 5

Related documents: Recommendation ITU-R M.1371-5, NCSR 8/7/1, NCSR 8/14/1, IMO/ITU EG 17/7, IMO/ITU EG 17/7/2, IMO/ITU EG 17/9, Resolution MSC.74(96) Annex 3

Introduction

1 The IMO performance standards for AIS, as contained in Resolution MSC.74(69) Annex 3, are referencing appropriate ITU-R Recommendations for the definition of technical characteristics. The appropriate ITU-R Recommendation in place is Recommendation ITU-R M.1371. Therefore, the content of Recommendation ITU-R M.1371 interlinks with the Performance Standards. As ITU-R Working party 5B (WP 5B) has received requests for modification of technical requirements which are exceeding questions of the actual communication protocol of the AIS, ITU-R WP 5B has sent liaison statements to IMO for seeking advice on these issues.

2 NCSR 8 and IMO/ITU EG 17 have received liaison statements from ITU-R WP 5B, as mentioned above, containing proposals concerning the revision of Recommendation ITU-R M.1371-5. IMO/ITU EG 17 encouraged interested Member States and organizations to

submit proposals concerning the revision of Recommendation ITU-R M.1371-5, the possible removal of the channel management or of the Long Range component of AIS as well as a method to identify the deactivation or cancellation process for AIS-enabled locating devices and other issues to NCSR 9, as appropriate.

Discussion

3 The following views are reflected in the report of IMO/ITU EG 17:

.1 the proposed revisions present a mixture of issues related to AIS and Application Specific Messages (ASMs) that were developed long time ago by IMO;

.2 these issues would require consideration by a wider group within IMO involving, at least, communication and navigation experts and possibly other bodies within IMO; and

.3 a consolidated view should be developed by IMO on the future capability and requirements of AIS.

4 The European Union shares these views. The comments contained in the annex are offered in order to facilitate a discussion by the Sub-Committee.

Action requested of the Sub-Committee

5 The Sub-Committee is invited to consider the information provided in the annex, and take action, as appropriate.

ANNEX

Comments on the proposed revision of Recommendation ITU-R M.1371-5, including on the possible removal of the channel management or the Long Range component of AIS

Issue A –Navigational Status

1 The proposed usage of Status 9 “under way not making way” is not in line with the International Regulations for Preventing Collisions at Sea. The regulations are defining that a ship is underway when a ship is not at anchor, or made fast to the shore, or aground. Furthermore, the speed in the regulation is related to water whereas the speed used in AIS is related to the ground. Based on this, the proposed usage for Status 9 is unclear and should not be implemented. It is further noted that this would urge ships moving against the tidal current or stream of a river not making way against ground, to change their navigational status in this situation.

2 The proposed Status 13 “regional use” is unclear. The application will vary between different regions. Different usages are not predictable for the user and may cause a misjudgement of the situation. It is therefore suggested that this usage should not be implemented.

3 A streamlining of navigation Status 14 and 15 has been proposed. The different known types of devices using AIS-technology (AIS-SART, EPIRB-AIS and MOB Class M) may be covered by the wording “locating devices”. In this case a standard safety-related message would be transmitted, and the identification of the object would not be possible by the text sent as a safety related message. It has to be taken into account that at the time when this identification has been identified, it has been considered as an important information for those receiving the information. Care has to be taken that locating devices not recognized by the organization, which are not entitled to use AIS 1 and AIS 2, are clearly excluded by ITU-R M.1371. Therefore, these objects should not use AIS 1 and AIS 2 and should not transmit this message. If a more general information is preferred, then the update should be delayed until SN.1-Circ.322 has been updated accordingly.

4 Before new definitions are adopted it has to be taken into account that the navigational status is only a numerical value in the protocol. The translation from identifier to text is done in the AIS (minimum keyboard) or navigation equipment (ECIDS or Radar) presenting the information. Therefore any change in a meaning may cause inconsistencies between a meaning defined in regulations and the presentation of the information to the officer of the watch. Instead, appropriate training and information material would solve the issue and would avoid wrongly selected status information.

Issue B –Autonomous Maritime Radio Devices (AMRD)

5 The Sub-Committee, at its 7th meeting, has received a liaison statement from ITU-R WP 5B with similar content and provided an answer. As IMO did not receive a response from CIRM stating what the required time frame would be, in order to ensure that equipment capable operating with single slot messages for AtoN would be available for the vast majority of vessels, no further information should be conveyed to ITU.

Issue C – Ship Type

6 It has been proposed to implement a new message by expansion of the ship type list, and to consider reporting of dangerous cargo as well as bunker. It has further been proposed that reporting of persons on board should be divided between passengers and others.

7 If the information of dangerous cargo should be improved as suggested by ITU, a new way to communicate this would need to be identified by the Organisation. A requirement to provide such information would need to be defined with an appropriate time frame for implementation to ensure availability and to limit the cost for the ship owner.

8 It is therefore suggested to answer that the existing ship type list should be kept, until a ship type list has been developed by the Organization, and to stay with the limited capabilities of message 5 until they are replaced by new requirements.

Issue D - Channel Management

9 As AIS 1 and AIS 2 are available for AIS on a world-wide basis, and AIS 1 and AIS 2 are used by the AIS-SART within the GMDSS, the AIS should only be operated on these frequencies. Therefore, channel-management could be deleted from the list of requirements. An update of the performance standard might be appropriate.

Issue E – Transmit Power

10 AIS has been in operation for about 20 years, and the Organization has not yet received any report of a dangerous situation caused by the absence of this information. To our knowledge, VTS stations know their area of operation very well, so that AIS objects lost in this area or not visible in certain places can be easily identified, and any incorrect setting can then be reconciled with the crew. It is also noted that the change of transmit power is necessary and well understood for tankers during the loading process, as this must also be done for VHF equipment. Based on these considerations, it is suggested not to support this change.

Issue F - VDES Capability indicator

11 As the VHF Data Exchange System (VDES) is currently neither established nor recognized by the Organization, the functionality to communicate such capabilities should be implemented on the VDE channels, without using the mandatory AIS.

Issue G - Number of persons on board

12 Within the AIS framework, currently the only option to send an information about the number of persons on board is to use a defined Application Specific Message, ASM IFM (16). This message is not within the standard AIS implementation, neither within the minimum keyboard nor navigation systems such as ECDIS or radar. To enable the usage of this message by a customer who wants to have such implementation, the related interface needs to be prepared, however putting additional cost on the requesting customer. This message is limited to 8191 persons as a maximum. As this message is currently not implemented, the relating implementation cost may be quite high. Also, the available maximum number of persons may not be sufficient to reflect the actual number of persons on board, as some vessels are already exceeding this limit.

Issue H – Long Range interface

13 As LRIT is implemented and operational, and as AIS can be detected by satellite, the need for this additional interface is no longer existing. It is therefore suggested to agree to the proposed deletion of that interface.

Issue I - Message 28: Navigational Point of interest Report

14 The document received is obviously in draft status. Several items are deleted and others are under development. This new message is moving items identified as Application Specific Message (ASM) into core AIS Messages. No urgent need has been noted why this should be done. Taking into account that AIS has been developed for ship identification and navigation purposes, and that the available bandwidth in certain areas is not sufficient, no further data should be transmitted on AIS 1 and AIS 2. For this purpose of additional information ITU has reserved ASM 1 and ASM 2, which had been identified to enable the exchange of additional information on these additional channels.

15 It should be additionally noted that it is not sufficient that the transmitted objects are identified in any display standard. Equipment would need to be capable to present objects transmitted by this message. Also, the internal communication between different pieces of equipment involved would need to be defined and implemented.

16 As this message contains information normally included in MSI messages, the envisioned usage and status are unclear. A number of questions arise in this respect, for example:

- Is it planned that this data should be identified as MSI information?
- The legal status of this information is unclear and not specified. Should this data be officially recognized as MSI, should a service area be defined? If not, this would place additional burden on the mariner, as he has to verify the validity of data received.
- How should this data be distributed, as the content does not seem to be appropriate to be distributed by AIS?
- Is it planned to eliminate this data from other distribution systems?
- How can it be ensured that all mariners will receive this information if no carriage requirement is specified for this service?

Issue J - Message 29: Extend ship data report

17 Currently, this message is identified as in draft status. It has been stated that the Lloyds List identifier should be used. It is unclear how detailed the list of ship types will be. The need for this message is in question, as the Organisation does not use this categorisation, and at no time anyone has requested such categorisation, or stated that there is a need for it. In particular, the following observations are noted:

- The usefulness of high number ship-type is questionable;
- Type of fuel is in draft, standard heavy fuel is missing;
- No explanation provided regarding usage of indicators 0,1,2 and 3;
- Questionable is the need to transmit every 20 minutes the bunker status and persons on board which are commercially sensitive data and irrelevant for navigation purposes;
- Regarding the VDES capability indicator, see the comment under Issue F.

Issue K - AIS cancelation protocol for homing procedure

18 It is noted that the AIS SART is defined as a homing device within the GMDSS, and not as an alerting device as stated in the US document.

The usage of AIS 1 and 2 is limited to AMRD group A equipment (AIS-SART, MOB-AIS, EPIRB-AIS). PLB are not contained in this list. Such other equipment should not be included.

An automatic process for switching off by using an additional safety related message has been proposed:

- AIS-SART – SART ACTIVE
- AIS-SART – SART CANCEL
- Switch of the equipment afterwards

Such procedure may be added to equipment such as EPIRB-AIS, MOB-AIS, however no manual process such as SART Test and change to ACTIVE should be used. As previously stated, usage on AIS 1 and AIS 2 is subject to limiting regulation for good reason. No further types of equipment of such functionality should be added without advice of the Organisation.

Issue L - Application Specific Messages (ASM)

19 The Organization has established rules for the development of application specific messages. Some of these messages are described in IMO circulars. Further messages had been developed by other organisations, and a list of these messages and their status is held by IALA. In many documents the usefulness of this tool has been described, however the usage is not widespread. How successful a systematic implementation could be is shown by the AIS for inland waterways within Europe, which may serve as a good example for a well-thought and thorough implementation.

20 To enable maritime industry to make better use of ASM, a discussion should be encouraged on which channels messages should be transmitted, noting that the AIS channels may in certain areas be used for navigation purposes up to the AIS capacity limit. It is further noted that ITU-R has already reserved two channels for the purpose of application specific messages, which are identified as ASM 1 and ASM 2 in Appendix 18 of the ITU Radio Regulations.

21 To enable wide use of ASM, a discussion should take place in which way a wider usage could be promoted.