|  |
| --- |
| **US Radiocommunications Sector****Fact Sheet** |
| **Working Party:** WP 5B | **Document No:** USWP5B27-24-FD |
| **Ref:** Annex 11 to Document 5B/225-E | **Date:** 14 September 2021 |
| **Document Title:** PRELIMINARY DRAFT REVISION OF RECOMMENDATION ITU-R M.1371-5 Technical characteristics for an automatic identification system using time division multiple access in the VHF maritime mobile frequency band |
| **Author(s)/Contributors(s):**Jerry UlcekUS Coast Guard, Washington DCJohnny SchultzSev1Tech, Inc.Ross NorsworthyREC, Inc. | Phone : (202) 475-3607E-mail: Jerry.l.Ulcek@uscg.milPhone : (727) 403-4029E-mail: johnny.schultz@sev1tech.com Phone : (727) 515-8025E-mail: Ross\_Norsworthy@msn.com |
| **Purpose/Objective:** The purpose of this document to support the development of Recommendation ITU-R M.2135-0.  |
| **Abstract:** This document supports the development of Recommendation ITU-R M.2135 by proposing that the AIS Message ID 30 be reserved for the use of AMRD Group B devices. The details of the AIS Message ID 30 will be contained within Recommendation ITU-R M.2135. |

|  |  |
| --- | --- |
| **Radiocommunication Study Groups** |  |
|  |  |
|  |  |
| Source: Document 5B/225/Annex 11Subject: Revision of ITU-R M.1371-5 | **Document USWP5B27-24** |
| ***14 September* 2021** |
| **English only** |
| United States of America |
| preliminary draft revision of recommendation ITU-R M.1371-5 |
|  |

1. **Introduction**

This document proposes technical changes to Recommendation ITU-R M.1371-5. These proposed changes are designed to support the development of AMRD Group B devices that implement AIS technology.

1. **Proposal**

This document proposes reserving one of the AIS message types to be used by AMRD Group B devices that implement AIS technology. The details of the AIS message are provided in Recommendation ITU-R M.2135.

1. **Attachments**

The following attachment contains the proposed changes to Annex 11 of the chairman’s report with track changes, highlighted in blue. Note that only the relevant sections have been included in this proposal.

|  |  |
| --- | --- |
| **Radiocommunication Study Groups** |  |
|  |  |
|  |  |
| Source: Document 5B/TEMP/75Subject: Revision of Recommendation ITU-R M.1371-5 | **Annex 11 toDocument 5B/225-E** |
| **25 November 2020** |
| **English only** |
| Annex 11 to Working Party 5B Chairman’s Report |
| preliminary draft revision of recommendation ITU-R M.1371-5 |
| Technical characteristics for an automatic identification system using time division multiple access in the VHF maritime mobile frequency band[[1]](#footnote-1) |

(Question ITU-R 232/5)

(1998-2001-2006-2007-2010-2014-20XX)

*Editor’s note: The sections that have no proposed changes are not included.*

Annex 7

Class B automatic identification system using carrier sense time
division multiple access technology

#### 4.3.3.6 VHF data link message use

Table 42 shows how the messages defined in Annex 8 should be used by a Class B “CS” shipborne mobile AIS device.

TABLE 42

Use of VHF data link messages by a Class B “CS” automatic identification system[[2]](#footnote-2)

| Message No. | Name of message | Annex 8 reference | Receive and process (1) | Transmit by own station | Remark |
| --- | --- | --- | --- | --- | --- |
| 0 | Undefined |  |  |  |  |
| 1 | Position report (Scheduled) | § 3.1 | Optional | No |  |
| 2 | Position report (Assigned) | § 3.1 | Optional | No |  |
| 3 | Position report (When interrogated) | § 3.1 | Optional | No |  |
| 4 | Base station report | § 3.2 | Yes | No | Class B “CS” should obey the 120 NM rule. |
| 5 | Static and voyage related data | § 3.3 | Optional | No |  |
| 6 | Addressed binary message | § 3.4 | No | No |  |
| 7 | Binary acknowledge | § 3.5 | No | No |  |
| 8 | Binary broadcast message | § 3.6 | Optional | No |  |
| 9 | Standard SAR aircraft position report | § 3.7 | Optional | No |  |
| 10 | UTC and date inquiry | § 3.8 | No | No |  |
| 11 | UTC/Date response | § 3.2 | Optional | No |  |
| 12 | Safety related addressed message | § 3.10 | Optional | No | NOTE 1 – Information can also be transferred via Message 14 |
| 13 | Safety related acknowledge | § 3.5 | No | Optional | Should be transmitted if the option to process Message 12 is implemented |
| 14 | Safety related broadcast message | § 3.12 | Optional | Optional(2) |  |
| 15 | Interrogation | § 3.13 | Yes | No | Class B “CS” should respond to interrogations for Message 18 and Message 24. |
| 16 | Assigned mode command | § 3.21 | No | No | Message 23 is applicable to the “CS”  |
| 17 | DGNSS broadcast binary message | § 3.15 | Optional | No |  |
| 18 | Standard Class B equipment position report  | § 3. 16 | Optional | Yes | A Class B “CS” AIS should indicate “1” for “CS” in flag bit 143 |
| 19 | No longer required;Extended Class B equipment position report | § 3.17 | Optional | Yes | Transmit ONLY as response on base station interrogation |
| 20 | Data link management message | § 3.18 | Yes | No | Message 4 should be received and evaluated for the 120 NM rule before responding. |
| 21 | Aids-to-navigation report | § 3.19 | Optional | No | 2 slot message |
| 22 | Channel management message | § 3.20 | Yes | No | Use of that function may be different. Response based upon the station capabilities in certain regions. The 120 NM rule does not apply |
| 23 | Group assignment | § 3.21 | Yes | No | Message 4 should be received and evaluated for the 120 NM rule before responding. |
| 24 | Class B “CS” static data | § 3.22 | Optional | Yes | Part A and Part B |
| 25 | Single slot binary message | § 3.23 | Optional | No |  |
| 26 | Mult. slot binary message with Communications State | § 3.24 | No | No |  |
| 27 | Position report for long-range applications | § 3.25 | No | No |  |
| 28 | Single slot Aids-to-navigation report | § 3.27 | Optional | No |  |
| 29 | Persons on board | § 3.28 | Optional | No |  |
| 30 | Autonomous Marine Radio Device Group B report(s) | N/A | N/A | N/A | N/A |
| 31-63 | Undefined | None | No | No | Reserved for future use |
|  |

Annex 8

Automatic identification system messages

# 2 Message summary

The defined messages are summarized in Table 46.

TABLE 46

| Message ID | Name | Description | Priority | Access scheme | Communi-cation state | M/B |
| --- | --- | --- | --- | --- | --- | --- |
| 1 | Position report | Scheduled position report; (Class A []station) | 1 | SOTDMA, RATDMA, ITDMA(1) | SOTDMA | M |
| 2 | Position report | Assigned scheduled position report; (Class A []station) | 1 | SOTDMA(9) | SOTDMA | M |
| 3 | Position report | Special position report, response to interrogation; (Class A []station) | 1 | RATDMA(1) | ITDMA | M |
| 4 | Base station report | Position, UTC, date and current slot number of base station | 1 | FATDMA(3), (7), RATDMA(2) | SOTDMA | B |
| 5 | Static and voyage related data | Scheduled static and voyage related vessel data report; (Class A []station) | 4(5) | RATDMA, ITDMA(11) | N/A | M |
| 6 | Binary addressed message | Binary data for addressed communication | 4 | RATDMA(10), FATDMA, ITDMA(2) | N/A | M/B |
| 7 | Binary acknowledge-ment | Acknowledgement of received addressed binary data | 1 | RATDMA, FATDMA, ITDMA(2) | N/A | M/B |
| 8 | Binary broadcast message | Binary data for broadcast communication | 4 | RATDMA(10), FATDMA, ITDMA(2) | N/A | M/B |
| 9 | Standard SAR aircraft position report | Position report for airborne stations involved in SAR operations, only | 1 | SOTDMA, RATDMA, ITDMA(1) | SOTDMA ITDMA | M |
| 10 | UTC/date inquiry | Request UTC and date | 3 | RATDMA, FATDMA, ITDMA(2) | N/A | M/B |
| 11 | UTC/date response | Current UTC and date if available | 3 | RATDMA, ITDMA(2) | SOTDMA | M |
| 12 | Addressed safety related message | Safety related data for addressed communication | 2 | RATDMA(10), FATDMA, ITDMA(2) | N/A | M/B |
| 13 | Safety related acknowledge-ment | Acknowledgement of received addressed safety related message | 1 | RATDMA, FATDMA, ITDMA(2) | N/A | M/B |
| 14 | Safety related broadcast message | Safety related data for broadcast communication  | 2 | RATDMA(10), FATDMA, ITDMA(2) | N/A | M/B |
| 15 | Interrogation | Request for a specific message type (can result in multiple responses from one or several stations)(4) | 3 | RATDMA, FATDMA, ITDMA(2) | N/A | M/B |
| 16 | Assignment mode command | Assignment of a specific report behaviour by competent authority using a Base station | 1 | RATDMA, FATDMA(2) | N/A | B |
| 17 | DGNSS broadcast binary message | DGNSS corrections provided by a base station | 2 | FATDMA(3), RATDMA(2) | N/A | B |
| 18 | Standard Class B equipment position report | Standard position report for Class B []station to be used instead of Messages 1, 2, 3(8) | 1 | SOTDMA, ITDMA(1),CSTDMA | SOTDMA, ITDMA | M |
| 19 | Extended Class B equipment position report | No longer required;Extended position report for Class B [] station; contains additionalstatic information(8) | 1 | ITDMA | N/A | M |
| 20 | Data link management message | Reserve slots for Base station(s) | 1 | FATDMA(3), RATDMA | N/A | B |
| 21 | Aids-to-navigation report | Position and status report for aids-to-navigation | 1 | FATDMA(3), RATDMA(2) | N/A | M/B |
| 22 | Channel management(6) | Management of channels and transceiver modes by a Base station  | 1 | FATDMA(3), RATDMA(2) | N/A | B |
| 23 | Group assignment command | Assignment of a specific report behaviour by competent authority using a Base station to a specific group of mobiles | 1 | FATDMA, RATDMA | N/A | B |
| 24 | Static data report | Additional data assigned to an MMSIPart A: NamePart B: Static Data | 4 | RATDMA, ITDMA,CSTDMA,FATDMA | N/A | M/B |
| 25 | Single slot binary message | Short unscheduled binary data transmission (Broadcast or addressed) | 4 | RATDMA, ITDMA,CSTDMA,FATDMA | N/A | M/B |
| 26 | Multiple slot binary message with Communi­cations State | Scheduled binary data transmission (Broadcast or addressed) | 4 | SOTDMA, RATDMA, ITDMAFATDMA | SOTDMA,ITDMA | M/B |
| 27 | Position report for long-range applications | Class A and Class B “SO” []station outside base station coverage | 1 | MSSA | N/A | M |
| 28 | [Single-slot aids-to-navigation report | Position and identification report for an aids to navigation] | 1 | RATDMA, ITDMA,CSTDMA,FATDMA | N/A | M ] |
| 29 | Persons on board | § 3.28 | Optional | No |  |  |
| 30 | Autonomous Marine Radio Device Group B report(s) | Reserved for reports from Autonomous Marine Radio Device Group B devices | N/A | N/A | N/A | N/A |
| 31-63 | Undefined | Reserved for future use |  |  |  |  |
|  |

1. Radiocommunication Study Group 5 made editorial amendments to this Recommendation in November 2014 in accordance with Resolution ITU-R 1. [↑](#footnote-ref-1)
2. 1 Nautical mile = 1 852 metres; 120 Nautical miles = 222 240 metres. [↑](#footnote-ref-2)