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# *ITU*

# Report on ITU-R WP5B meeting 11th to 22nd July 2022

Note by the IALA representative Stefan Bober

#### INTRODUCTION

ITU-R Working Party 5B (WP 5B) - Maritime mobile service including Global Maritime Distress and Safety System (GMDSS); aeronautical mobile service and radiodetermination service - held its meetings from 29th March – 8th April 2022 as virtual meeting and from 11th to 22nd July 2022 as physical meeting in Geneva. This was the fifth meeting in the study cycle 2019 to 2023. Mr. Stefan Bober represented IALA.

The main focus of the WP5B meetings were to finalize the input documents for the Conference preparatory meeting (CPM) of the World Radio Communication Conference 2023 (WRC-23). CPM will be held Geneva, Switzerland from 27th March to 6thApril 2023; WRC-23 will be held in Dubai, United Arab Emirates, from 20th November to 15th December 2023.

IALA has a specific interest in Maritime mobile service including Global Maritime Distress and Safety System (GMDSS) and radiodetermination service, with particular emphasis on the development of VHF Data Exchange System (VDES), Automatic Identification System (AIS), Autonomous Maritime Radio Devices (AMRD) and e-Navigation.

#### issues related to IALA work addressed during ITU-R WP 5B

##### WRC-23 agenda item 1.11 (Modernisation of the GMDSS and implementation of e-navigation)

WRC-23 agenda item 1.11 is to consider possible regulatory actions to support the modernization of the Global Maritime Distress and Safety System and the implementation of e-navigation in accordance with Resolution 361 (Rev.WRC-19).

WG 5B finalized the draft CPM Text on WRC-23 agenda item 1.11, Issue A and Issue B, for the CPM meeting. However, the draft CPM text for Issue C will be finalized by WP 4C during its meeting in September 2022.

The following aspects to resolve Resolution 361 (Rev.WRC-19) have been proposed:

Issue A: Proposal for Global maritime distress and safety system (GMDSS) modernization;

The IMO has completed its work on the modernization of the GMDSS. As a result, the Radio Regulations need be amended to reflect this development. The following measures have been proposed:

* Deletion of the NBDP for distress and safety communications from GMDSS for MF and HF bands. However the technology of HF-NBDP for the promulgation of Maritime Safety Information remains unchanged;
* Introduction of a new Automatic Connection System (ACS) which will be implemented on the frequencies previously used by NBDP for GMDSS;
* Introduction of NAVDAT frequencies in MF and HF as part of the GMDSS, which is intended to be used in the future for MSI dissemination in digital format;
* Implementation of Automatic identification system search and rescue transmitter (AIS SART) as locating equipment for which the frequencies are protected;
* Automatic identification system search and rescue transmitter (AIS SART) as homing equipment for survival craft station. Survival craft stations may carry this equipment as an alternative to the RADAR-SART to be in line with SOLAS Chapter IV;
* Satellite Emergency position indicating radio beacons (EPIRB) in 1.6 GHz will no longer be used;

Issue B: Proposal for E-Navigation

Previous WRCs have identified the frequency bands to be utilized for VDES and NAVDAT as well as for several satellite networks which support digital communication.

E-navigation is being developed by IMO which has concluded that various existing satellite networks already support e-navigation.

The VDES and NAVDAT systems, for which IMO has agreed to develop performance standards, would also support e‑navigation by means of enabling broadcasting (by NAVDAT) and exchange of digital files (via VDES).

From the point of view of frequency regulation, the requirements for e‑navigation are thus covered.

Issue C: Introduction of additional satellite systems into the global maritime distress and safety system

An existing geostationary-satellite system operating on 1 610-1 626.5 MHz (Earth-to-space) and 2 483.5-2 500 MHz (space to-Earth) is under consideration by IMO in order to become a new GMDSS satellite provider (BeiDou Message Service System).

When the prerequisite IMO’s action to introduce a new GMDSS satellite system is satisfied, in order to support the requirement of safety of life aspects by the GMDSS the implementation of applicable provision of the Radio Regulations is needed.

##### Revision of Recommendation ITU-R M.1371-5 (Automatic Identification System - AIS)

WP 5B continued work on the revision of Recommendation ITU-R M.1371-5. The group reviewed Input documents from China and IMO.

In its liaison note, IMO agreed with the proposed

* Deletion of channel management functions, i.e. removal of the DSC functionality and the channel switching capability. However , the power change capability within Message 22 should remain;
* Deletion of the Long-range interface to other equipment;
* Introduction of a transmit power indicator, technical solution by WP 5B

However, issues such as autonomous maritime radio devices (AMRD), ship type identifiers (including dangerous cargo reporting), number of persons on board a vessel and VDES capability indicators need further consideration.

NCSR 9 has established a Correspondence Group (CG) for the revision of Recommendation ITU-R M.1371-5 to progress this work intersessionally. The CG will submit an interim report to the joint IMO/ITU EG from 5 to 9 December 2022 and a final report to NCSR 10 (tentatively 8 to 17 May 2023).

Therefor the revision of Recommendation ITU-R M.1371-5 is not expected before 2023.

* IALA is invited to monitor the expected IMO reply liaison note on revision of Recommendation ITU-R M.1371-5 and provide additional input to ITU WP5B as appropriate.

##### Revision of Recommendation ITU-R M.2135-0 (Autonomous Maritime Radio Device - AMRD)

WG 5B continued work on the revision of Recommendation ITU-R M.2135-0. Technical and operational characteristics of selected AMRD Group A and the technical and operational characteristics of AMRD Group B are now explained in more detail in the working document.

In this recommendation, AMRD Group A defines man overboard devices using VHF digital selective calling (DSC Class M) in combination with the automatic identification system technology.

AMRD Group B is divided into two type of devices: AMRD Group B using AIS technology and AMRD Group B using other than automatic identification system (AIS) technology, which are used for experimental purposes only.

Experimental devices using Channel 2006 (other than as operational Group B AMRD using AIS technology) should observe the characteristics in this recommendation to ensure compatibility with the Group B AMRD using AIS technology.

Messages have been defined for AMRD Group B using AIS technology, i.e. Position report to provide position, navigation and status information, Identity report to provide additional information required to uniquely identify the transmitting device, static information report to provide additional information about the transmitting device and Application specific message to for transmitting binary data. This recommendation reserves AIS message ID numbers 60 – 63 for the AMRD Group B communications. It is planned that the Message IDs of AMRD Group B will also be included in Recommendation ITU-R M.1371.

The document has been upgraded to preliminary draft revision

* IALA is invited to monitor the revision of Recommendation ITU-R M.2135-0 and provide additional input to ITU WP5B as appropriate.

##### Revision of Recommendation ITU-R M.2010-1 (NAVDAT system in 500 kHz) and ITU-R M.2058-0 (NAVDAT HF)

WP5B continued work on Recommendation M.2010-0 "Characteristics of a digital system, named Navigational Data for broadcasting maritime safety and security related information from shore-to-ship in the 500 kHz band”. The document has been upgraded to preliminary draft revision.

Due to lack of time WP5B did not work on the revision of Recommendation M.2058-0 "Characteristics of a digital system, named Navigational Data for broadcasting maritime safety and security related information from shore-to-ship in the maritime HF frequency band".

Both documents need to be revised before WRC-23 as they are related to agenda item 1.11 and will be incorporated by reference in the Radio Regulations.

##### Revision of Recommendation ITU-R M.493-15 and ITU-R M.541-10 (Digital selective-calling DSC)

WP5B continued the work on the documents. The proposed modifications of this Recommendations update and complement the technical characteristic of DSC for introduction of automatic connection system (ACS), as well as the deletion of references to VHF DSC EPIRB and references to narrow band direct printing for MF and HF for distress alerting, distress-relay, urgency and safety calls and the related acknowledgements as these items are deleted from SOLAS IV.

Both documents need to be revised before WRC-23 as they are related to agenda item 1.11 and will be incorporated by reference in the Radio Regulations.

##### New report on the electromagnetic interference (EMI) from LED and other sources

WP 5B finalized work on a new report on the conditions for the protection of radio receivers installed on-board vessels against electromagnetic interference from LED lighting systems and other unintended sources.

The new report

* identifies and describes the problem of EMI emanating from LED lighting systems on marine vessels and the effects of EMI on maritime safety-related systems,
* develops new technical guidance relevant to the problem and coordinate with appropriate standards groups and
* develops installation guidelines for mariners to minimize degradation from EMI to sensitive radio communications and radio navigation equipment on their vessels.
* IALA may draw the attention of its members to this new report on the electromagnetic interference (EMI) from LED and other sources

##### New report on digital voice communication in the VHF maritime band

WP 5B started work on a new report on digital voice communication in the VHF maritime band.  
The aim of this report is to investigate the possible expansion of the number of VHF maritime voice channels based on the introduction of digital technology. Analyses concerning reliability, GMDSS, mode of operation (simplex/duplex), bandwidth, range, etc. are the necessary milestones to decide on the feasibility of introduction of digital voice radio telephony in the VHF maritime mobile band.

* IALA may consider this draft new report in its work on emerging digital technology.

##### EPIRB MMSI encoding for craft associated with a parent ship

IMO NCSR 9 informed WP 5B about concerns regarding the encoding of Emergency Position Indicating Radio Beacons (EPIRB) with Maritime Mobile Service Identities (MMSIs) using the format prescribed in Recommendation ITU-R M.585 for craft associated with a parent ship.

Currently, the Cospas-Sarsat system does not recognize an MMSI format beginning with 98MID as a valid country code. Therefore, the use of the MMSI format 98MIDXXXX is treated as an unreliable alert that may delay in the response for an active distress alert.

As an interim measure, NCSR 9 advised Member States not to encode EPIRBs using the MMSI format 98MIDXXXX until a permanent solution had been found.

#### RELATED DOCUMENTS

* Preliminary draft revision of Recommendation ITU-R M.1371-5 (AIS)
* Preliminary draft revision of Recommendation ITU-R M.2135-0 (AMRD)
* New report on the electromagnetic interference (EMI) from LED and other sources
* WD towards new report on digital voice communication in the VHF maritime band

#### IALA IS REQUESTED TO

* **IALA is requested to note the report on ITU-R WP5B meeting and act accordingly.**