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# *ITU*

# Report on ITU-R WP5B meeting 10th to 21st July 2023

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 10th to 21st July 2023 as physical meeting in Geneva. This was the last meeting in the study cycle 2019 to 2023. Mr. Stefan Bober represented IALA.

The main focus of the WP5B meetings was on the revision of several ITU Recommendations and the introduction of two ITU study questions, namely study questions on “VHF digital voice” and on “VDES R-Mode”. The preparation of documents for WRC-23 was completed at the previous meetings. WRC-23 will be held in Dubai, United Arab Emirates, from 20th November to 15th December 2023.

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

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

##### 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 IMO, CIRM and China.

In its liaison note, IMO agreed with

* Changes in Navigational Status description
* Introduction of MAtoN in AIS Message 21 Aids to navigation Report
* a new Single Slot AtoN Report in general but leave the technical solution to ITU
* clarification of safety related text messages for AIS-SART, MOB\_AIS and EPIRB-AIS

However, issues such as amending the existing list of ship type identifier and the possible introduction of a VDES capability indicator need further consideration by IMO.

The input have been incorporated into the document, further clarification is needed e.g. how to calculate the maximum number of data bits per slot considering bit stuffing.

The revision of Recommendation ITU-R M.1371-5 is not expected before end of 2024.

-> IALA is invited to monitor the revision of Recommendation ITU-R M.1371-5 and provide additional input to ITU WP5B as appropriate, in particular for the new Single Slot AtoN Report message.

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

WP5B finalized the work on the revision of Recommendation ITU-R M.493-15 and Recommendation ITU-R M.541-10. 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.

A liaison statement to IMO, IEC, ETSI, RTCM on the revision of Recommendation ITU-R M.493-15 and Recommendation ITU-R M.541-10 was drafted.

##### Revision of Recommendation ITU-R M.1171-0 - Radiotelephony procedures for routine calls in the maritime mobile service

WP5B finalized the work on the document. The revision deals with implementation of keywords in English language which should be used in all other official ITU languages, using the same principle already implemented in the RR Articles 32 and 33. Elimination of services no longer in practical use such as public correspondence, handling of telegrams within the maritime service and the deletion of Q-Codes for adaption of the practical use in the field.

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

WP 5B finalized 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 new report in its work on emerging digital technology.

##### New Report on operational procedures for both ship and coast stations for automatic connection system using digital selective calling communications in MF and HF bands

WP 5B finalized work on this Report. The Report describes the procedure for the automatic connection system (ACS) using digital selective calling (DSC) communications on MF and HF. The implementation of ACS will ensure simple and reliable access to the required radio links for the mariner. The results of field experiment to verify the operational procedures are given in the Annex.

##### New report on the impact of the possible introduction of a R-Mode on the VDES

WP 5B started work on a new report on the impact of the possible introduction of a range mode on the VHF data exchange system. The aim of this report is to describe the impact of R-Mode VDES.

A draft outline of the document includes the need for an Alternative Positioning Navigation and Timing system, identification of spectrum and timing requirements, a technical description of VDES R-Mode, interoperability and resource sharing of VDES R-Mode and VDES Communication Services and Testing, demonstrations and measurements, e.g. Testing of VDES R-Mode in Baltic Sea, Trondheim Fjord, China and Inland waterways.

-> IALA is invited to contribute to the development of this report.

##### New ITU study question “Coexistence of VHF data exchange system with a Ranging-Mode in the VHF data exchange system”

Depending on the decision of the ITU Radiocommunication Assembly the following questions should be studied for a possible R-Mode in VDES:

What technical conditions are necessary for a radio navigation application, such as ranging mode (R-Mode) in the VHF data exchange system (VDES) to ensure their coexistence when using a common frequency band or adjacent frequency bands with VDES?

Note: views were expressed that the timing of this document is not agreed upon and its progress will depend on outcomes decided by WRC-23.

##### New ITU study question “Introduction of Digital Voice Communications in the VHF maritime frequency channels”

Depending on the decision of the ITU Radiocommunication Assembly the following questions on Digital Voice Communications should be studied:

- What are the technical and operational characteristics and possibilities for expansion of the   
 number of VHF maritime voice channels based on the implementation of digital technology?

- What are the most appropriate ways for more efficient use of current frequencies used by VHF  
 maritime voice channels by using digital technology?

- What are the technical and operational criteria to establish the seamless migration or coexistence  
 of current analogue voice channels VHF channels next to digital channels?

##### Issue related to manufacturer IDs for devices using a freeform number identity

CIRM has the responsibility for assigning manufacturer IDs to companies producing devices using a freeform number identity in accordance with Recommendation ITU-R M.585-9, i.e., AIS-SART (970), MOB (972) and EPIRB-AIS (974). CIRM is at imminent risk of running out of numbers. An alternative manufacturer ID scheme for devices using a freeform number identity is required, as requested by CIRM. However the publication of a revised Recommendation ITU-R M.585 is expected at some time in 2026.   
WP 5B encourages CIRM to continue to reclaim Manufacturer IDs from companies that have since exited the market. WP 5B recommends that CIRM implement the temporary measure of assigning the final ID (99) to all new requesting companies until a replacement scheme is developed and published. An appropriate liaison statement to CIRM was drafted.

##### Wireless power transfer (WPT) Studies regarding WPT electric vehicle (WPT-EV)

ITU WP 1A is conducting studies on Wireless Power Transmission (WPT), namely high power WPT, i.e. WPT for charging electric vehicle, and low power WPT for portable and mobile devices. In the maritime sector, two scenarios in particular could be of interest:   
- high power WPT systems installed in the vicinity of ports and waterways, especially inland  
 waterways, might cause interference to maritime services; and  
- the installation of such systems on roll-on roll-off (ro-ro) ships including ro-ro passenger ships  
 (“ferries”) should be carefully considered taking into account the interference factor.

The Maritime Radionavigation Service in the frequency range below 325 kHz, i.e. DDNSS, and the Maritime Mobile Services for GMDSS in the MF/HF band, i.e. NAVTEX, NAVDAT, DSC need to be protected from unwanted emissions from WPT. WP 5B notes the studies for the frequency ranges 315-405 kHz, 1 700-1 800 kHz and 2 000-2 150 kHz and provides further information on the maritime services that may be affected ,to be taken into account as it progresses of the WP 1A work on WPT.

#### RELATED DOCUMENTS

* Preliminary draft revision of Recommendation ITU-R M.1371-5 (AIS)
* WD towards new report on digital voice communication in the VHF maritime band
* WD towards new report on on the impact of the possible introduction of a R-Mode on the VDES

#### IALA IS REQUESTED TO

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