EUROPEAN
COMMISSION

Brussels, 7.2.2022
SWD(2022) 28 final

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 draft IMO position for agenda item 10 of the World Radiocommunication Conference (WRC-23) on VHF digital voice

Union submission to the 9th session of the International Maritime Organization's Sub-Committee on Navigation, Communications and Search and Rescue on the draft IMO position for agenda item 10 of the World Radiocommunication Conference (WRC-23) on VHF digital voice

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 a draft IMO position for agenda item 10 of the World Radiocommunication Conference 2023 (WRC-23) on very high frequency (VHF) digital voice. The draft position envisages support for the introduction of digital technology for voice communication in the maritime mobile service in the VHF frequency band and the related changes of Appendix 18 of the ITU Radio Regulations[1].

An introduction of digital voice radiotelephony in the VHF maritime mobile band has the potential to deal with the congestion of maritime VHF channels. The preliminary agenda of World Radiocommunication Conference 2027 (WRC-27) already includes a proposal to consider changes to Appendix 18 of the ITU Radio Regulations. The agenda is subject to confirmation by WRC-23.

EU COMPETENCE

Navigation and radio-communication equipment are listed as items in Sections 4 and 5, respectively, of Commission Implementing Regulation (EU) 2021/1158[2]. 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 equipment[3], in accordance with Article 35(2) thereof.

In light of all of the above, the matter 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 Radio Regulations, Edition of 2020, https://www.itu.int/en/publications/ITU-R/pages/publications.aspx?parent=R-REG-RR-2020&media=electronic

[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.

SUB-COMMITTEE ON NAVIGATION, COMMUNICATIONS AND SEARCH AND RESCUE
9th session
Agenda item 12

NCSR 9/12/X
X January 2022
Original: ENGLISH
Pre-session public release: ☒

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

Draft IMO position for agenda item 10 of WRC-23 (VHF digital voice)

Submitted by the European Commission on behalf of the European Union

SUMMARY

Executive summary:	This document suggests to the Organization to take an informed decision and develop an IMO position for agenda item 10 (concerning the agenda for WRC-27) of World Radiocommunication Conference 2023 (WRC-23) on VHF digital voice. An introduction of digital voice radiotelephony in the VHF maritime mobile band has the potential to deal with the congestion of maritime VHF channels. The preliminary agenda of World Radiocommunication Conference 2027 (WRC-27) already includes a proposal to consider changes to Appendix 18 of the ITU Radio Regulations. The agenda is subject to confirmation by WRC-23.
Strategic direction, if applicable:	2
Output:	2.1
Action to be taken:	Paragraph 15
Related documents:	ITU-R Report M.2010-1, ITU-R Recommendation M.1084, ITU-R Resolution 812 (WRC-19), ITU-R Resolution 363 (WRC-19), Appendix 18 of ITU Radio Regulations, CEPT ECC Report 329, IMO/ITU EG 17/9

Introduction

1 During the past three decades, telecommunication administrations have considered the congestion of the very high frequency (VHF) maritime mobile band. The International Telecommunication Union - Radiocommunication (ITU-R) Report M.2010-1 (“Improved efficiency in the use of the band 156-174 MHz by stations in the maritime mobile service”) has been published already in 1997. That report described several methods of improvement, analogue as well as digital. So far, none of these methods has been implemented.

2 In 2012, the most recent version of recommendation ITU-R M.1084 has been published (“Interim solutions for improved efficiency in the use of the band 156-174 MHz by stations in the maritime mobile service”), concentrating on the reduction of channel spacing of the existing analogue channels. This recommendation has also never been followed up.

3 In 2019, based on a proposal of a number of ITU-R member states, the World Radiocommunication Conference (WRC-19) has concluded with Resolution 812 (WRC-19) to include the following item in the preliminary agenda of WRC-27: “to consider improving the utilization of the VHF maritime frequencies in Appendix 18, in accordance with Resolution 363 (WRC-19)”.

4 From the text of Resolution 363 (WRC-19) dealing with voice communication, it is clear that the scope is on digital and spectrum-efficient systems. However, the Resolution 812 (WRC-19) is setting only the preliminary agenda of WRC-27. The agenda of WRC-27 is awaiting finalization by WRC-23 under agenda item 10.

5 In order to develop its position on agenda item 10 of WRC-23, the Organization thus needs to consider the issue of digitalization of voice communication in the VHF maritime mobile band.

6 In October 2021, CEPT has published ECC report 329 (“Implementation of digital voice radio telephony in the VHF maritime mobile band”), which could support the discussions on this topic within the Organization.

Discussion

7 With respect to agenda item 10 of WRC-23, two different ways forward are conceivable:

.1 The Organization takes the position that a digitalization of VHF voice communication would not be desirable nor necessary to improve the utilization of the VHF maritime frequencies, and IMO member states would oppose such a development at WRC-23 based on the agreed IMO position. If this would prevent the move towards digital voice technology for the next decades, nothing more would need to be done by the Organization in this context; or

.2 The Organization takes the position that a digitalization of VHF voice communication would be desirable, and IMO member states would support a change of ITU Radio Regulations Appendix 18 towards digital voice technology based on the agreed IMO position. As a consequence, between 2022 and 2027 a further consideration of digital voice radio telephony in the VHF maritime mobile band and a review of the relevant IMO regulatory framework would be needed.

8 It is expected that, depending on the outcome of discussions at WRC-23 and WRC-27, respectively, the number of existing analogue VHF voice communication channels will be further reduced.

9 Further, for comparison, it is noted that the VHF Data Exchange System (VDES) has been allocated VHF frequency channels by WRC-15 and WRC-19, whilst the Organization has not yet developed relevant VDES regulation or VDES performance standards. This has led to a situation where VDES channels are now part of radio frequency spectrum, which has been transferred from a status previously covered by IMO regulation to a status where no IMO regulation is currently existing.

10 A similar course of action should be avoided with the digitalization of voice communication in the VHF maritime mobile band, if the Organization would decide that this is desirable. As the number of available analogue voice channels is already low, it cannot decrease further without compensation in the form of new digital voice channels. As the current usage of the maritime VHF voice channels is subject to an extensive IMO regulatory

framework, a review of that regulatory framework is required if the underlying technology will be changed from analogue to digital and consequently will be based on a new channelling system. In particular, the development of a transition scheme is of utmost importance. For example, a prolonged transition with a temporary coexistence of analogue and digital radiocommunication may be difficult to achieve due to the lack of available frequency channels. The opposite concept of a sharp change-over from analogue to digital radiocommunication at a specific date may however cause organisational problems. In order to assess all options and aspects, this issue should be given thorough and careful consideration by the Organization.

11 A time span of five years (2022 – 2027) may perhaps not be sufficient in order to develop the basic relevant regulatory framework by the Organization. However, more time, if needed, would readily be available, because possible changes of the table of frequency channels, as contained in Appendix 18 of ITU Radio Regulations, would not be in force immediately after WRC-27. The determination of an entry-into-force date of an amended Appendix 18 is the prerogative of WRC-27. A realistic implementation period should, therefore, be determined by WRC-27 to give sufficient time for a finalization of IMO's regulatory framework in that context. In any case the entry-into-force date has to be established in a way so that sufficient time is available to adapt to the new situation in the contexts of radio-operational procedures, of equipment standardisation and, last but not least, of impact (e.g. economic) on land infrastructure. An entry-into-force date between 2035 and 2045 should be considered realistic in this respect.

12 It is obvious that the future of radiocommunication in general will be based on digital technology. However considering the substantial number of privately owned leisure boats expected to be dependent on essential analogue voice communication channels for an indeterminate period of time, and for grandfathering reasons, channels 16 and 70 could be exempted permanently from a possible reorganisation of the voice channels contained in Appendix 18. Therefore, the preservation of an analogue niche in an otherwise digital technological environment may present an additional challenge to be considered, due to the signal conversion and interfacing required. Thus, assuming a positive attitude towards the digitalization of voice communication in the VHF maritime mobile band, a draft IMO position is presented in the annex for consideration by the Sub-Committee.

13 In case the Sub-Committee takes the view that the digitalization of voice communication in the VHF maritime mobile band is desirable, the Maritime Safety Committee should be requested to assign a new work item to the Sub-Committee in order to execute the necessary work, as stated above in paragraphs 7.2 and 10, without delay. Initial priority within that consequential work should be given to the discussion of the basic functional requirements of a new digital voice communication system, and in particular to the consideration of a transition scheme, as the latter may have immediate impact on the future channel arrangement in Appendix 18.

14 The view that the Organization needs to give careful consideration to this subject, taking into account all implications for its use in the maritime domain, has also been expressed by some delegations in the 17th meeting of the Joint IMO/ITU Experts Group on maritime radiocommunication matters.

Action requested of the Sub-Committee

15 The Sub-Committee is invited to consider the information provided and the draft IMO position set out in the annex, and take action, as appropriate.

ANNEX

Draft IMO position for agenda item 10 of WRC-23

Agenda item 10

10 to recommend to the Council items for inclusion in the agenda for the next WRC, and items for the preliminary agenda of future conferences, in accordance with Article 7 of the Convention and Resolution 804 (Rev.WRC-19);

Background

Resolution 812 (Rev.WRC-19) is containing the preliminary agenda of WRC-27, inter alia "to consider improving the utilization of the VHF maritime frequencies in Appendix 18, in accordance with Resolution 363 (WRC-19)".

Resolution 363 (WRC-19) states, inter alia

- that congestion on Appendix 18 frequencies requires consideration of efficient new technologies;
- that the use of digital technologies will make it possible to respond to the emerging demand for new uses and ease congestion;

and

- resolves to invite the 2027 World Radiocommunication Conference … to consider possible changes to Appendix 18 in order to enable use in the MMS for future implementation of new technologies, for improving efficient use of the maritime frequency bands.

Digital technology is already widely used in land mobile communication. It is an established technology with known technical properties. Digital technology has the potential to accommodate more voice communication channels in the same amount of radio frequency spectrum than the currently established analogue technology. Digital technology may also offer new functionality to improve safety. It is not expected that ship-to-ship communication by (digital) voice communication will be completely replaced by (written) data communication.

A transition scheme has to be developed to guarantee the smooth introduction of digital technology and the envisaged entry-into-force of the amendments between 2035 and 2045.

With a view to the substantial number of privately owned leisure boats and for grandfathering reasons, channels 16 and 70 could be permanently exempted from a possible reorganisation of the voice channels contained in Appendix 18.

In order to obtain the maximum benefit from a move towards digital technology for voice communication, IMO commits itself to the revision of the relevant regulatory framework, in particular with a view to increase maritime safety by new functionality that may not be available with the current analogue voice communication technology and with DSC.

Action to be taken

To develop a basic concept of the use of digital technologies in the utilization of the VHF maritime frequencies in Appendix 18 for voice communication and a possible transition scheme.

Draft IMO position

IMO supports the introduction of digital technology for voice communication in the maritime mobile service in the VHF frequency band and the related changes of Appendix 18.

In order to maintain the needed flexibility, the wording of the existing preliminary agenda of WRC-27 should be amended, so that it reads: “to consider improving the utilization of the VHF maritime frequencies in Appendix 18, in accordance with Resolution 363 (WRC-19), taking into consideration the activities of IMO, as well as information and requirements provided by IMO.”