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Destinataire:	Comité des représentants permanents (1 ^{re} partie)
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Objet:	Projet de soumission des États membres et de la Commission à la 9e session du Sous-comité de la navigation, des communications et du sauvetage de l'Organisation maritime internationale concernant le projet de position de l'OMI au titre de point 10 de l'ordre du jour de la Conférence mondiale des radiocommunications (WRC-23) (phonie numérique dans la bande d'ondes métriques) - <i>Approbation</i>

I. INTRODUCTION

1. Le 7 février 2022, la Commission a transmis au Conseil un document de travail des services de la Commission contenant un projet de soumission à la 9^e session du Sous-comité de la prévention de la navigation, des communications et du sauvetage (NCSR 9) de l'Organisation maritime internationale (OMI), concernant le projet de position de l'OMI au titre de point 10 de l'ordre du jour de la Conférence mondiale des radiocommunications (WRC-23) en ce qui concerne la phonie numérique dans la bande d'ondes métriques (VHF). Le délai pour transmettre la soumission au secrétariat de l'OMI est le 15 avril 2022.

2. La soumission concerne l'adoption de la position de l'OMI à la prochaine Conférence mondiale des radiocommunications (WRC-23). Elle plaide en faveur d'une digitalisation accrue des voies de radiocommunication en ondes métriques, tout en conservant, pendant une période transitoire à déterminer, certaines voies analogues dans l'intérêt des bateaux de navigation intérieur et de plaisance. L'introduction de la phonie numérique dans la bande d'ondes métriques maritime pourrait résoudre le problème de congestion des voies de radiocommunication en ondes métriques.

II. TRAVAIL DES INSTANCES PRÉPARATOIRES DU CONSEIL

3. Le groupe "Transports maritimes" a examiné le projet de soumission lors de ses réunions du 25 février et 4 mars 2022. À cette dernière réunion, le groupe est parvenu à un consensus sur le projet de soumission.
4. Le groupe a également convenu que la présidence pourrait indiquer au secrétariat de l'OMI, lors de la transmission de la soumission, que celle-ci peut être rendue publique avant le NCSR 9.
5. La question de savoir qui devrait transmettre le projet de soumission reste toutefois non résolue. La Commission considère que la soumission devrait être transmise par "la Commission européenne au nom de l'Union européenne", tandis que les États membres sont de l'avis qu'elle devrait être transmise au nom des États membres et de la Commission européenne.
6. Vu l'importance et l'urgence de la soumission, le groupe a décidé de suggérer qu'elle soit transmise au nom des États membres et de la Commission européenne, en prenant bonne note de la position de la Commission.

III. CONCLUSION

7. Compte tenu de ce qui précède, le Comité des représentants permanents est invité à approuver le projet de soumission en vue de sa transmission par la présidence à l'OMI le 15 avril 2022 au plus tard.
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SUB-COMMITTEE ON NAVIGATION,
COMMUNICATIONS AND SEARCH AND
RESCUE
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**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 Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark,
Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania,
Luxembourg, Malta, the Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain,
Sweden and the European Commission**

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 2
applicable:*

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 the 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 operational needs of maritime and inland waterway vessels, especially when navigating close to coastal or in port areas and 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 10, 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 functionalities 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.

In view of the operational needs of maritime and inland waterway vessels, especially when navigating close to coastal or in port areas, and the substantial number of privately owned leisure boats and for grandfathering reasons, channels 10, 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 functionalities 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."
