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| From: | IALA representation at ITU |
| Reference: | IALA ENAV WG 3 Comms |
| | 07 March 2019 |

Report of the ITU Conference Preparatory Meeting, Geneva, February 18th to 28th, 2019

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| Int. Organization: | International Telecommunication Union – World Radiocommunication Conference 2019 (WRC-19): |
| IALA interest: | Maritime mobile service including Global Maritime Distress and Safety System (GMDSS) and radiodetermination service |
| Specific: | <ul style="list-style-type: none"> - WRC-19 agenda items 1.8 Issue A: Global Maritime Distress Safety System (GMDSS) modernization – navigational data system on HF and MF (NAVDAT) - WRC-19 agenda item 1.9.1: Autonomous maritime radio devices (AMRD) - WRC-19 agenda item 1.9.2: Satellite component of the VHF Data Exchange System (VDE SAT) |
| Meeting | <p>ITU CPM meeting, Geneva, February 18th to 28th, 2019</p> <p>Second session of the Conference Preparatory Meeting (CPM) for the purpose of preparing the CPM Report to the World Radiocommunication Conference 2019 (WRC-19) and to address preparatory studies for the following Conference</p> |
| IALA participation | Stefan Bober |

1 REPORT OF THE MEETING RELATED TO IALA SPECIFIC INTEREST

1.1 WRC-19 AI 1.8 Issue A: Global Maritime Distress Safety System (GMDSS) modernization NAVDAT

NAVDAT is a digital system named Navigational Data for broadcasting maritime safety and security related information from shore-to-ship in the 500 kHz band. NAVDAT is counted as an enhancement of existing NAVTEX and could be considered as a potential entity in the next generation of GMDSS.

AI 1.8 Issue A addressed the allocation of the 495-505 kHz frequency band for the maritime mobile service for both MF and HF NAVDAT applications.

To satisfy Issue A under WRC-19 agenda item 1.8, three methods are presented to be reflected in the Radio Regulations.

- The first method is no change.
- The second method includes frequencies to be used for medium frequency (MF) and high frequency (HF) navigational data (NAVDAT) systems, in support of GMDSS modernization.
- The third method is similar to the second one with the following conditions:
NAVDAT transmits only from coastal stations. Their usage is subject to agreement to be obtained with affected administrations.

1.2 WRC-19 AI 1.9.1: Autonomous maritime radio devices (AMRD)

The aim of this agenda item is to prevent unregulated operation of autonomous maritime radio devices (AMRD) in order to ensure the integrity of GMDSS and AIS.

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The AMRD are grouped and identified as AMRD Group A that enhance the safety of navigation and AMRD Group B that do not enhance the safety of navigation. The assignment of radio channels for AMRD Group B is proposed.

Four methods to satisfy this agenda item were developed in addition to the method no change.

- Method A considers amendments to the footnote f) in RR Appendix 18 to allow AMRD Group A to operate on certain channels.
- Under Method B, there are three approaches to consider the harmonization of the spectrum use for AMRD Group B.
 - Method B1 proposes the use of channel 2006 as listed in RR Appendix 18 for AIS technology.
 - Method B2 proposes the use of channel 2006 in RR Appendix 18 for AIS technology and channels 2078, 2019 and 2079 in RR Appendix 18 for non-AIS technology.
 - Method B3 proposes the use of channel 2006 in RR Appendix 18 for AIS technology and channels 2078, 2019 and 2079 in RR Appendix 18, for non-AIS technology, with an e.i.r.p. limitation inserted in the RR.

1.3 WRC-19 AI 1.9.2: Satellite component of the VHF Data Exchange System (VDE SAT)

The aim of this agenda item is new frequency allocations to the satellite component of the VHF Data Exchange System (VDE SAT) to support the digital evolution of maritime radio communications.

ITU-R has undertaken studies for possible new allocations to the maritime mobile-satellite service (MMSS) (Earth-to-space) and (space-to-Earth), preferably within the frequency bands 156.0125-157.4375 MHz and 160.6125-162.0375 MHz of RR Appendix 18. The results of the sharing and compatibility studies are contained in Recommendation ITU-R M.2092-0 which was developed in the WRC-15 study cycle, and Report ITU-R M.2435-0, which has been developed in this study cycle.

Six methods have been developed to satisfy WRC-19 agenda item 1.9.2. The main differences between the methods are the frequency plan and pfd-mask to be imposed on the MMSS (space-to-Earth) emissions, which are further described in Report ITU-R M.2435-0.

Method A: no change to the Radio Regulations. As a result there will be no frequency allocations to the satellite component of VDES (VDE-SAT).

Method B

This method proposes new primary allocations to the maritime mobile-satellite service (MMSS) (Earth-to-space) and (space-to-Earth) using frequency plan alternative 2.

The coordination mechanism with respect to terrestrial services under RR No. 9.14 is introduced with two options for the pfd-mask.

Method C

This method uses the same frequency plan as Method B but with new secondary allocations for the MMSS (Earth to-space) and (space-to-Earth).

Due to the proposed secondary status of the allocation to the MMSS, there is no coordination required between the MMSS and terrestrial services and therefore there is no need to make any modifications to Appendix 5 of the RR.

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Method D

This method is the same as Method C except with the addition of a pfd limit in RR Article 5 in order to protect the terrestrial services. This method includes two options, and the description of the pfd masks.

Method E

This method proposes new secondary allocations for the MMSS (Earth to-space) and (space-to-Earth) subject to agreement in accordance with No. 9.21 of the RR to be limited to the use of the VDES satellite component to ensure compatibility with existing services.

Method F

This method proposes new primary allocations to the MMSS (Earth-to-space) and (space-to-Earth) using frequency plan based on alternative 3. Details on the pfd-mask for coordination of MMSS (space-to-Earth) with respect to terrestrial services are provided.

Following Figures illustrate the Methods proposed for agenda item 1.9.2 (VDE SAT):
(Courtesy of Mr. Yoshio Miyadera)

Table 1: Methods proposed in WRC-19 agenda item 1.9.2

| Method | Option | Frequency plan | Satellite allocation | Coordination | previous method from input to CPM |
|--------|--------|-------------------|----------------------|--------------|-----------------------------------|
| A | - | No change | None | - | A |
| B | 1 | Alternative 2 | Primary | pfd mask 1 | B |
| | 2 | Alternative 2 | Primary | pfd mask 2 | E |
| C | - | Alternative 2 | Secondary | - | C |
| D | 1 | Alternative 2 | Secondary | pfd mask 3 | D |
| | 2 | Alternative 2 | Secondary | pfd mask 4 | (proposed as G) |
| E | - | Alternative 2 | Secondary | RR No 9.21 | (new) |
| F | - | Alternative 3 rev | Primary | pfd mask 1 | F with modification |

Figure 1: Visualization of frequency band of the VHF Maritime Mobile Band (Radio Regulation Appendix 18) highlighting frequency plan alternatives 1 to 3 for WRC-19 agenda item 1.9.2

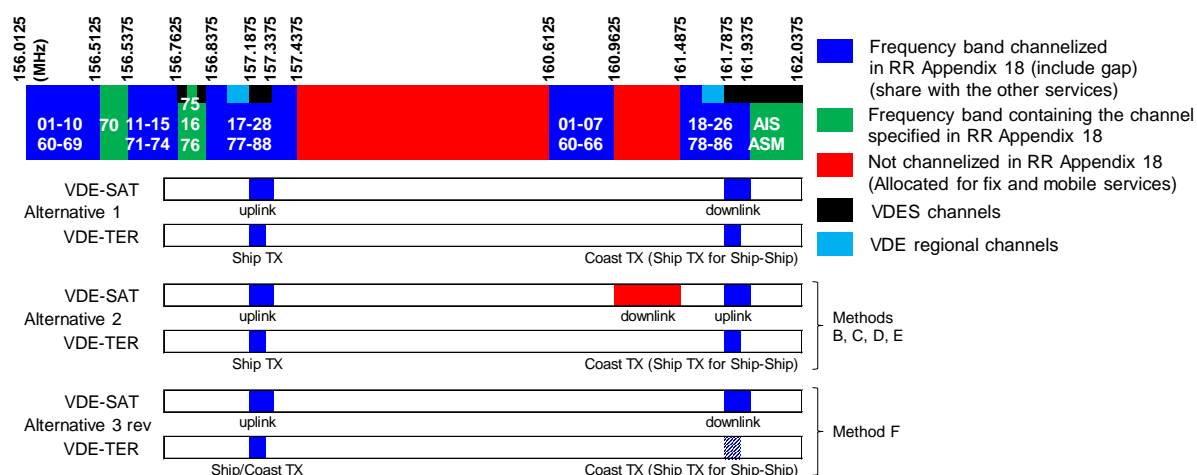
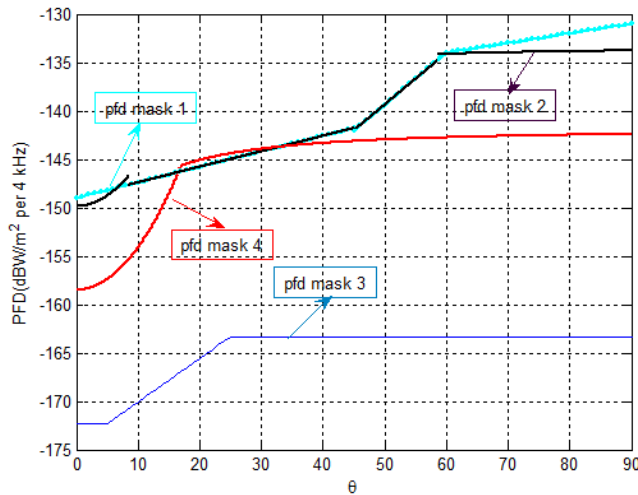


Figure 2: Visualization of different pfd-masks proposed in WRC-19 agenda item 1.9.2



pfd mask 1 : provided in Recommendation ITU-R M.2092-0

pfd mask 2 : provided in Annex 2 of Report ITU-R M.2435-0

pfd mask 3 : provided in section 6.1.2.2.3.2 of Report ITU-R M.2435-0

pfd mask 4 : provided in section 6.1.2.2.2 of Report ITU-R M.2435-0

2 IALA IS REQUESTED TO

Note the IALA report of the Conference Preparatory Meeting, February 18th to 28th, 2019

IALA may consider an update to its position on proposed method for WRC-19 agenda item 1.9.2 (VDE SAT) taking into account the results of the CPM meeting. IALA may select one method to be recommended in the communication with its members.