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|  | ASIA-PACIFIC TELECOMMUNITY |  |  |
| **The APT Conference Preparatory Group for WRC-15**  |  |
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Source: APG15-4/OUT-13

**preliminary views on WRC-15 agenda item 1.16 developed by APG15-4**

**Agenda Item 1.16:**

*To consider regulatory provisions and spectrum allocations to enable possible new Automatic Identification System (AIS) technology applications and possible new applications to improve maritime radiocommunication in accordance with Resolution****360 (WRC‑12)***

**APT Preliminary Views**

1. **Preliminary Views**
* Supports ITU-R studies towards new applications using the AIS and enhanced maritime radiocommunication in the maritime mobile service in accordance with Resolution **360 (WRC-12)**.
* The implementation of the concept of the VDES which contains the VDE terrestrial component, the satellite component and the ASM component would enhance maritime radio communications.
* Modifications should not be required to existing AIS equipment on board existing vessels. New applications using AIS technology should be allowed to evolve,supported by communication primarily on the new frequencies identified by WRC-12, while protecting the integrity of the original operational purpose of AIS as the primary function on the existing AIS frequencies.
* That the frequency band identified for VDES should accommodate the expected future AIS VDL loading.
* Any change to the regulatory provisions and spectrum allocations resulting from this agenda item should not adversely impact on the capability of search and rescue aircraft to effectively communicate with vessels during disaster relief operations.
* It is needed to take full account of the outcomes of WRC-12 on digital communication channel arrangements in RR Appendix **18** for the global and regional channel allocation for VDES. Different types of VDES applications and equipment in different scenarios and operating in different frequency arrangement plan could be considered.
* Any new allocation for the future applications, including satellite application, to the frequency bands listed in the RR Appendix **18** should be based on issued ITU-R Recommendation(s).
* Transitional arrangements are required to minimize the impact of use of new applications on the existing services using frequencies listed in the RR Appendix **18**. The VDES equipment should provide backwards compatibility for existing AIS, the installation costs should be minimized and the proper transitional period should be considered.
* New VDES should not adversely impact VHF radiotelephony channels used for maritime safety at sea and ports.
* Operation of designated ASM channels should not adversely impact AIS 1 and AIS 2 channels.
* VDES Satellite downlinks should not adversely impact AIS 1 and AIS 2 channels, and terrestrial component of VDE, and incumbent services in the same frequency band.
* It is desirable to consider the possibility of VDES involvement in the future modernized GMDSS.
* The two safety-of-navigation channels, AIS 1 and AIS 2, should be protected from harmful interference and blocking. To prevent blocking of the reception of the AIS channels and ASM channels, the transmitting from ship on channels 2078, 2019, 2079 and 2020 will not be permitted.
* The two channels 2027 and 2028 should be used for new AIS applications as ASM channels, the usage of remaining channels 1027 and 1028 should be taken into account.
1. **APT Preliminary Views on methods to satisfy this Agenda item**

APT Members support methods in the Draft CPM Report to enable possible new AIS technology applications and possible new applications to improve maritime radiocommunication in accordance with Resolution **360** (WRC-12) as follows:

* **On issue of ASM designation**

Support Method A1.

* **On issue of new applications for maritime radiocommunication – terrestrial component:**

It was noted that technical studies at ITU-R WP 5B are near completion and final decisions on this issue by APT members would be developed at next APG meeting.

* **On issue of new application for maritime radiocommunication – satellite component**

It was noted that technical studies at ITU-R WP 5B are near completion and final decisions on this issue by APT members would be developed at next APG meeting.

* **On issue of VDES regional solution**

Support Method D.

* **Regulatory and procedural considerations**

Appendix **18 (Rev.WRC-12)** Table of transmitting frequencies in the VHF maritime mobile band

| Channeldesignator | Notes | Transmittingfrequencies (MHz) | Inter-ship | Port operations and ship movement | Publiccorres-pondence |
| --- | --- | --- | --- | --- | --- |
| From ship stations | From coast stations | Single frequency | Two frequency |
| … |  | … | … |  |  |  |  |
| 78 | t), u), v) | 156.925 | 161.525 |  | x | x | x |
| 1078 |  | 156.925 | 156.925 |  | x |  |  |
| 2078 | t), u), v) |  | 161.525 |  | x |  |  |
| 19 | t), u), v) | 156.950 | 161.550 |  | x | x | x |
| 1019 |  | 156.950 | 156.950 |  | x |  |  |
| 2019 | t), u), v) |  | 161.550 |  | x |  |  |
| 79 | t), u), v) | 156.975 | 161.575 |  | x | x | x |
| 1079 |  | 156.975 | 156.975 |  | x |  |  |
| 2079 | t), u), v) |  | 161.575 |  | x |  |  |
| 20 | t), u), v) | 157.000 | 161.600 |  | x | x | x |
| 1020 |  | 157.000 | 157.000 |  | x |  |  |
| 2020 | t), u), v) |  | 161.600 |  | x |  |  |
| 80 | *w), y), xx)* | 157.025 | 161.625 |  | x | x | x |
| 1080 | *w), y), xx)* | 157.025 | 157.025 | x | x |  |  |
| 2080 | *w), y), xx)* | 161.625 | 161.625 | x | x |  |  |
| 21 | *w), y), xx)* | 157.050 | 161.650 |  | x | x | x |
| 1021 | *w), y), xx)* | 157.050 | 157.050 | x | x |  |  |
| 2021 | *w), y), xx)* | 161.650 | 161.650 | x | x |  |  |
| 81 | *w), y), xx)* | 157.075 | 161.675 |  | x | x | x |
| 1081 | *w), y), xx)* | 157.075 | 157.075 | x | x |  |  |
| 2081 | *w), y), xx)* | 161.675 | 161.675 | x | x |  |  |
| 22 | *w), y), xx)* | 157.100 | 161.700 |  | x | x | x |
| 1022 | *w), y), xx)* | 157.100 | 157.100 | x | x |  |  |
| 2022 | *w), y), xx)* | 161.700 | 161.700 | x | x |  |  |
| 82 | *w), x), y)* | 157.125 | 161.725 |  | x | x | x |
| 1082 | *w), x), y)* | 157.125 | 157.125 | x | x |  |  |
| 2082 | *w), x), y)* | 161.725 | 161.725 | x | x |  |  |
| 23 | *w), x), y),*  *xxx)* | 157.150 | 161.750 |  | x | x | x |
| 1023 | *w), x), y),*  *xxx)* | 157.150 | 157.150 | x | x |  |  |
| 2023 | *w), x), y),*  *xxx)* | 161.750 | 161.750 | x | x |  |  |
| 83 | *w), x), y), xxx)* | 157.175 | 161.775 |  | x | x | x |
| 1083 | *w), x), y),*  *xxx)* | 157.175 | 157.175 | x | x |  |  |
| 2083 | *w), x), y),*  *xxx)* | 161.775 | 161.775 | x | x |  |  |
| … |  |  |  |  |  |  |  |
| 27 | *z)* | 157.350 | 161.950 |  |  | x | x |
| 1027 |  | 157.350 | 157.350 |  | x |  |  |
| 2027 |  | 161.950 | 161.950 |  | x |  |  |
| 87 | *z)* | 157.375 | 157.375 |  | x |  |  |
| 28 | *z)* | 157.400 | 162.000 |  |  | x | x |
| 1028 |  | 157.400 | 157.400 |  | x |  |  |
| 2028 |  | 162.00 | 162.000 |  | x |  |  |
| 88 | *z)* | 157.425 | 157.425 |  | x |  |  |
| AIS 1 | *f), l), p)* | 161.975 | 161.975 |  |  |  |  |
| AIS 2 | *f), l), p)* | 162.025 | 162.025 |  |  |  |  |

**Method A1**

**MOD**

*t)* In Regions 1 and 3, the existing duplex channels 78, 19, 79 and 20 can continue to be assigned. These channels may be operated as single-frequency channels, subject to coordination with affected administrations. However, existing duplex channel assignments may be preserved for coast stations and retained for vessels, subject to coordination with affected administrations. Channels 2078, 2019, 2079 and 2020 are not available for transmitting from ships. (WRC‑15)

*u)* In Region 2, these channels may be operated as single-frequency channels, subject to coordination with affected administrations.  Channels 2078, 2019, 2079 and 2020 are not available for transmitting from ships. (WRC‑15)

*v)* After 1 January 2017, in the Netherlands, these channels may continue to be operated as duplex frequency channels, subject to coordination with affected administrations.  Channels 2078, 2019, 2079 and 2020 are not available for transmitting from ships. (WRC‑15)

**MOD**

*z)* [TBD], these channels may be used for possible testing of future AIS applications without causing harmful interference to, or claiming protection from, existing applications and stations operating in the fixed and mobile services.

[TBD], these channels are split into two simplex channels. The upper legs, 2027 and 2028 respectively designated as ASM 1 and ASM 2 are used for non-navigation ASM (application-specific messages) as described in the most recent version of the Recommendation ITU-R M.[VDES].

The channels 2027 and 2028 are also allocated to the maritime mobile-satellite service (Earth‑to‑space) for the reception of ASM messages from ships as described in the most recent version of the Recommendation ITU-R M.[VDES] in which they are denominated respectively as SAT Up1 and SAT Up2. (WRC‑15)

**Method D**

**ADD**

*xx)* Assignable for wide-band digital system operation using multiple 25 kHz contiguous channels.

*xxx)* Assignable for 50 kHz bandwidth digital system operation using two 25 kHz contiguous channels.

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