



24 July 2019

Attention: Spectrum Planning Division

Chairman
Malaysian Communications and Multimedia Commission
MCMC Tower 1
Jalan Impact, Cyber 6
63000 Cyberjaya
Selangor Darul Ehsan Malaysia

**RE: Response to Public Consultation on Proposed Malaysia's Position for WRC-19
Agenda Item 1.8 (Issue B)**

This submission pertains to the World Radio Conference's Agenda Item 1.8 Issue B on the addition of new satellite systems into the Global Maritime Distress and Safety System (GMDSS).

Agenda Item 1.8:

To consider possible regulatory actions to support Global Maritime Distress Safety Systems (GMDSS) modernization and to support the introduction of additional satellite systems into the GMDSS, in accordance with Resolution 359 (Rev. WRC 15).

Overview of GMDSS

GMDSS is an internationally agreed set of safety procedures, equipment types, and communication protocols governed by the IMO. The IMO has a policy of supporting the introduction of new satellite service providers into the GMDSS, which will improve diversity, redundancy, competition, and coverage. Until 2018, the IMO only recognized Inmarsat as the provider of satellite GMDSS.

Background of the IMO Process

The International Maritime Organisation (IMO) is currently considering changes to the Global Maritime Distress and Safety System (GMDSS) which is used to increase navigation safety and improve search and rescue of vessels in distress. WRC-15 adopted Resolution 359, creating agenda item 1.8 for WRC-19 to consider possible regulatory actions to support the introduction of additional satellite systems into the GMDSS (*see resolves (2)*). *Resolves 2* charges the ITU-R to take into account the activities of IMO regarding additional satellite providers for the GMDSS and conducting studies as needed.

Until May 2018, only one satellite system (Inmarsat) had been incorporated by the International Maritime Organisation (IMO) in the GMDSS "system of systems". To facilitate the incorporation of new satellite GMDSS providers, the IMO approved amendments to its Safety of Life at Sea (SOLAS) Convention, and completed its five-year program of assessment of Iridium, a global non-geostationary satellite system, formally recognising the network as a satellite GMDSS provider in May 2018.

The frequencies used by Iridium, the 1 616-1 626.5 MHz frequency band, are already allocated to the mobile-satellite service (MSS) in both the Earth-to-space and space-to-Earth directions, and have been in use for more than 20 years. Its service is expected to come into operation in January 2020.

Studies¹ done noted that the 1616-1626.5 MHz band, used by Iridium, is not currently identified for GMDSS in the Radio Regulations. However, there are existing MSS allocations in the band: A primary allocation Earth-to-space allocation covering 1610-1626.5 MHz, and a secondary space-to-Earth allocation covering 1613.8-1626.5 MHz. The Iridium system uses these in a Time-Division Duplex (TDD) mode, which means the satellite and user terminal share the same frequency channel by alternating between transmitting and receiving at each end. In practice, this method of operation also provides regulatory protection of the secondary downlink by the primary uplink.

The CPM Report identifies four Methods for Issue B:

B1: Maintain current allocations, with the addition of various minor provisions to identify their use for GMDSS (Method B1): This Method proposes no changes to the allocation table, but amendments to the associated footnotes and to Appendix 15 (List of GMDSS Frequencies) to identify GMDSS use in the band 1616-1626.5 MHz.

B2: Adopt a footnote explicitly excluding protection of GMDSS from the impact of adjacent-band emissions: This Method excludes protection of the GMDSS in the downlink direction from interference caused by satellite terminals in the adjacent band. This method is unnecessary since adjacent band protection is already prescribed in Radio Regulations Article 3², and studies in ITU concluded that *"measures are available to ensure compatible operations with existing GSO MES terminals operating in adjacent bands"*³. More importantly, Method B2 would remove all protection of the GMDSS from interference of the adjacent band (including from non-safety uses in the future), reducing the effectiveness of the agenda item.

B3: No change.

B4: Maintain current uplink allocation but upgrade the downlink allocation to primary status for use in GMDSS. This Method proposes to upgrade the secondary downlink to primary status. In order to limit adverse impact on other services by this change,

¹ See Preliminary Draft New Report ITU-R M.[GMDSS.SATREG], *"Introduction of additional mobile-satellite service systems into the GMDSS"*. Annex 2 to Document 4C/417.

² See in particular Nos. 3.6 – 3.8.

³ See Preliminary Draft New Report ITU-R M.[GMDSS.SATREG], section 4.7.

the action is proposed to be limited to the band 1621.35-1626.5 MHz, and regulatory measures adopted to protect the radio astronomy service. (These measures are currently part of Resolution 739 on RAS protection). This Method satisfies the protection of GMDSS operations but does not cover the whole band used by the Iridium network.

Proposed Views and Positions for Agenda Item 1.8

No.	Agenda Item	Proposed Malaysia (MLA) Views and Positions
21.	1.8 (issue B)	<p>Issue B: Additional Satellite in to the GMDSS</p> <p>Malaysia supports the introduction of additional GMDSS satellite provider, which could provide enhancement of maritime safety in terms of availability and robustness. Malaysia, therefore, proposes to support Method B1, on the following basis:</p> <ul style="list-style-type: none"> - B1 provides identification of GMDSS use by the satellite system approved by the International Maritime Organisation (IMO). - B1 is the simplest Method, with fewest changes to the Radio Regulations. <p>B1 recognises that these satellite systems have operated successfully for many years, and that further regulatory changes are unnecessary to ensure adequate protection of satellite GMDSS.</p>

We appreciate your consideration.

Kind regards,



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