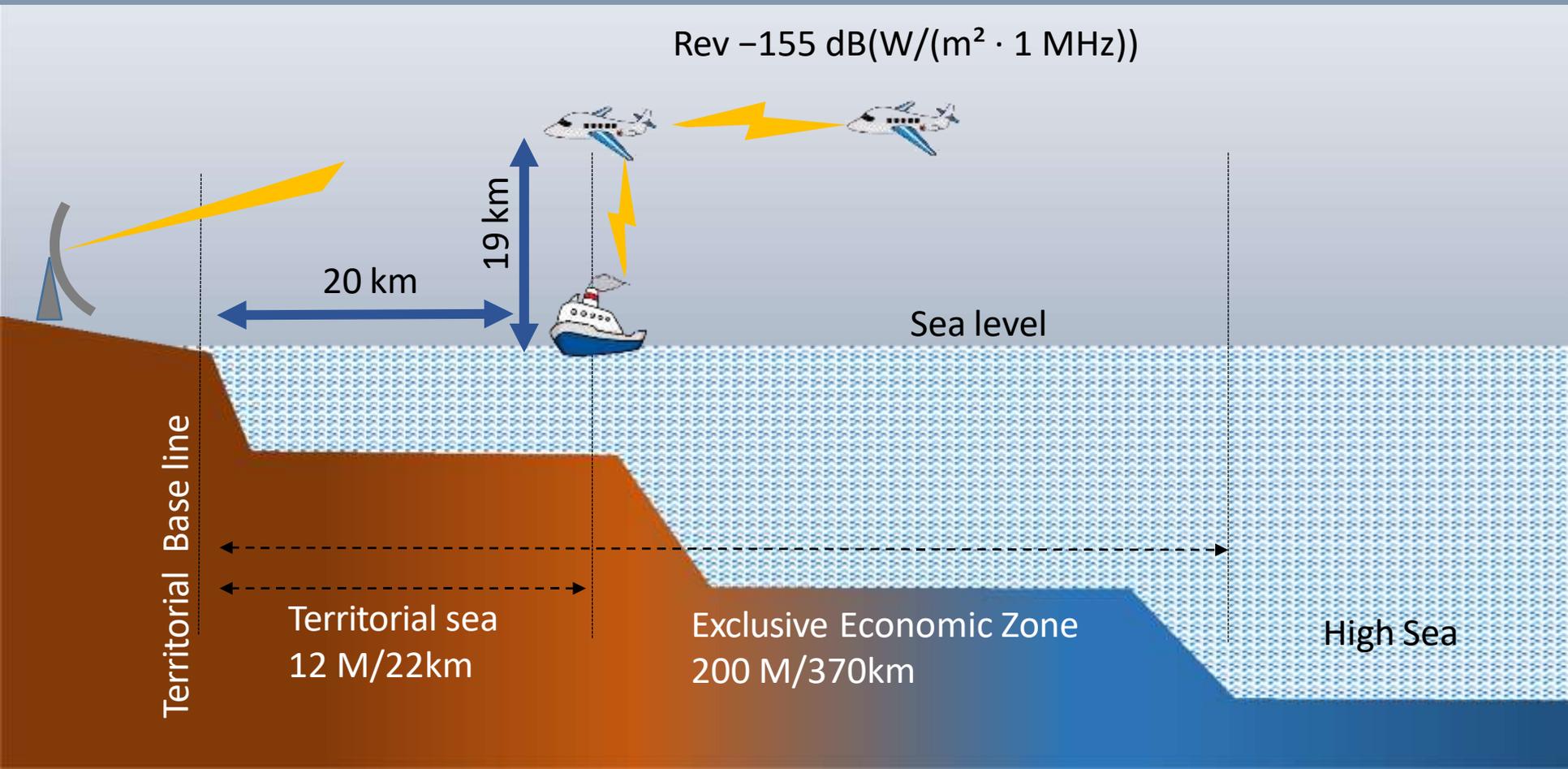


3rd India Spectrum Management Conference

Mahendra Pal Singh Alawa
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18th Oct 2023

Agenda Item 1.1 Protection to AMS & MMS in frequency band 4800-4990 MHz in International airspace/Water.

AMS uses frequency band for broadband, narrow-band, airborne data-links to support remote sensing, e.g. earth sciences, land management, energy distribution, etc., applications (ITU-R Rec M.2116)



Agenda Item 1.1 Protection to AMS & MMS in frequency band 4800-4990 MHz in International airspace/Water.

CPM 23 Method	Support
Method A (NOC)	IMT : Unhappy
Method B (NOC and existing pfd and 9.21 applies to 11 countries)	IMT : Unhappy
Method C (Review of pfd)	Does not treat all Member states equally.
Method D (Review pfd applies to all the countries including 11 countries)	Equally unhappy
Method E (Two options for country footnote 1) pfd + 9.21 and 2) 9.21	AMS/MMS : Unhappy
Method F Bilateral/Multilateral and 9.21	AMS/MMS : Unhappy

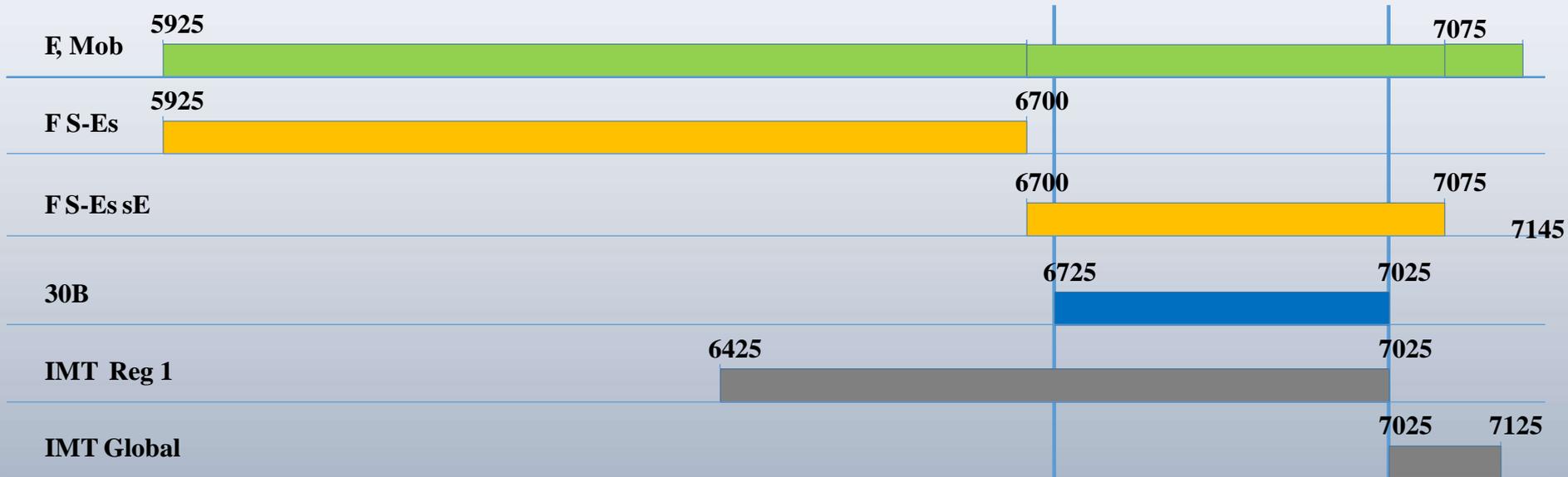
Agenda Item 1.1 Protection to AMS & MMS in frequency band 4800-4990 MHz in International airspace/Water.

Summary Table from the Moderator

REGIONAL ORGANISATION	POSITOIN
ASMG	Method A – No Change – retain the current pfd limit in No 5.441B
ATU	Method F – delete the pfd limit from No 5.441B , No 9.21 applies, bi- or multilateral agreements
CEPT	Method D – relaxed pfd limits for AMS / MMS in No 5.441B which shall apply to all countries in No. 5.441B
RCC	Method F (with some mod.) – delete the pfd limit from No 5.441B , No 9.21 applies, bi- or multilateral agreements
APT	None
CITEL	None

1.2 Identification of IMT in bands

Allocation of Radiocommunications service in a band 6425 – 7025 MHz



Band 4 (6 425- 7 025 MHz)

Sharing studies (A to T) 20 Nos. for FSS uplink out of which

14 studies (A, B, D, H, I, J, K, L, M, N, O, P, Q & R) has shown the positive margin, and

6 studies (C, E, F, G, S & T) has shown the negative margin (means interference)

Agenda item 1.2

CPM23 Study U : Summary of key differences in assumptions and results of the studies

IMT BS deployment parameters for large areas (Ra/Rb)	I/N levels with respect to the FSS criterion, dB	Interference margin***
Ra1Rb1: Ra_urb = 10% Ra_sub = 5% Rb = 1%	Ra1Rb1: Global: -15.7 to -12 dB Hemi: -13.1 to -6.6 dB Spot: -15.4 to -2.3 dB	Ra1Rb1: Global: 1.5 to 5.2 dB Hemi: -3.9 to 2.6 dB Spot: -8.2 to 4.9 dB
Ra1Rb2: Ra_urb = 10% Ra_sub = 5% Rb = 3%	Ra1Rb2: Global: -10.9 to -7.3 dB Hemi: -8.3 to -2 dB Spot: -10.9 to 2.3 dB	Ra1Rb2: Global: -3.2 to 0.4 dB Hemi: -8.5 to -2.2 dB Spot: -12.8 to 0.4 dB
Ra2Rb1: Ra_urb = 45% Ra_sub = 20% Rb = 1%	Ra2Rb1: Global: -9.4 to -5.6 dB Hemi: -6.7 to -0.3 dB Spot: -9.3 to 4 dB	Ra2Rb1: Global: -4.9 to -1.1 dB Hemi: -10.2 to -3.8 dB Spot: -14.5 to -1.2 dB
Ra2Rb2: Ra_urb = 45% Ra_sub = 20% Rb = 3%	Ra2Rb2: Global: -4.6 to -0.8 dB Hemi: -1.9 to 4.4 dB Spot: -4.6 to 8.7 dB	Ra2Rb2: Global: -14.5 to -6.1 dB Hemi: -14.9 to -8.6 dB Spot: -19.2 to -5.9 dB

Satellite Carrier:

#2 Hemi Beam (6x7 Deg),
Gain=28 dBi, T=400 K.

#4 Circular Beam (0.8 Deg)
Gain=38 dBi, T=400 K.

#12 Global Beam (17.7 Deg)
Gain=20 dBi, T=400 K.

#12 Spot Beam (2.6 Deg)
Gain=36.4 dBi, T=400 K.

Feasibility of Sharing:

Depends

*** Positive margin indicates interference is lower than the protection criterion.

Agenda Item 1.2 Band 4 & 5

Agenda item 1.2: 6 425-7 025 MHz (Region 1) & 7 025-7 125 MHz (globally)

Short summary by the Moderator

Region	Regional group	Preferred Method(s) / Common positions	
		6 425-7 025 MHz (Region 1)	7 025-7 125 MHz (globally)
1	ASMG	Method 4B → 4C*	Method 5B → 5C*
	ATU	Method 4C (alternative 2)	Method 5C (alternative 2)
	CEPT	<ul style="list-style-type: none"> Neither propose nor support an IMT identification of the frequency range 6 425-7 125 MHz but could accept it if the five conditions are fulfilled If these conditions are not fulfilled, support NOC 	
	RCC	Combination of Methods 4D and 5D	
2	CITEL	NOC in all Regions	
3	APT	No common proposal	Method 5C

* During the workshop, it was clarified that ASMG is coordinating to develop possible protection conditions for existing services.

