November 3, 2025

MediaTek Inputs to TRAI Consultation Paper on the Auction of Radio Frequency Spectrum in the Frequency Bands Identified for International Mobile Telecommunications (IMT) (CP Dated 30th Sep'2025)

MediaTek India

Reference: Consultation Paper No.8/2025 Released by TRAI on Auction of Spectrum Date-30th Sep'25

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Sub: Response on the band plan consultation of 1427-1518 MHz

Dear Sir,

Please find enclosed our submission on the proposed band plan of 1427-1518 MHz in response to TRAI's Consultation Paper dated 30th Sep'25 on spectrum planning and auction.

Our comments address the questions (particularly Q21 and Q22) raised in Chapter IV of the consultation paper w.r.t band segmentation and block size, duplexing arrangements, harmonization with 3GPP/ITU allocations, and coexistence considerations.

Regards

Deepak Verma (Govt. Affairs)
Akshay Aggarwal (Standards & Govt. Affairs)

SPECTRUM CONSIDERATIONS 1427-1518 MHZ

Considering the given frequency range of 1427-1518 MHz, and as per the details provided in the consultation paper (Chapter II Section D 2.132) - "Out of the total 91 MHz spectrum in the 1427-1518 MHz band, 67 MHz has been identified for IMT, while 24 MHz is reserved for assignment to a government user. This band will be refarmed for IMT-based services only after 2026 and band plan is also not finalised, therefore, it is not included in the upcoming auction. Hence, TRAI is requested to recommend a possible band plan for the 67 MHz spectrum between 1427-1518 MHz considering the need to assign a continuous 24 MHz block to the Government user."

Referring figure 1 for the spectrum layout, there could be 3 possible band plans in which the spectrum can be utilized.

Option 1 – n74 (FDD): n74 is an FDD band where up to 19 MHz may be allocated for both downlink (1475-1494 MHz) and uplink (1427-1446 MHz). Within this 67 MHz range (i.e.,1427-1494 MHz), n74 band provides the smallest usable spectrum among the three options.

Option 2 – n50: Out of the total 67 MHz (1427-1494 MHz), the uplink is only partially available within 1442–1502 MHz. This is because adjacent services—MSS (Mobile-Satellite Service, 1525-1559 MHz) on the upper edge of the given range and EESS (Earth Exploration-Satellite Service, passive 1400-1427 MHz) and RAS (Radio Astronomy Service) on the lower edge of the given range impose tighter out-of-band emission requirements. However, it is important to note that asymmetric usage of uplink and downlink is defined under 3GPP specifications.

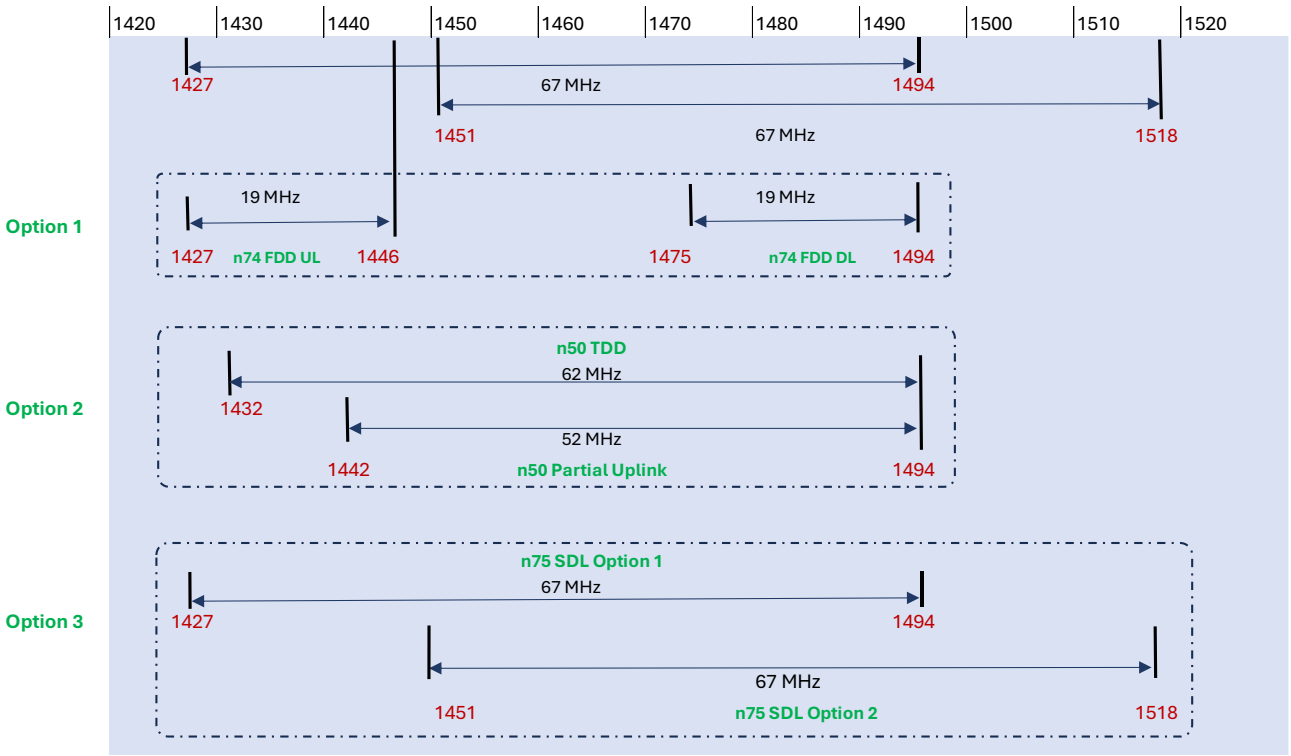

Figure 1- 1427-1518 Frequency layout

Option 3 – n75 (SDL): The n75 SDL band is already in use from ecosystem aspects. Two deployment approaches are proposed for using SDL within the 67 MHz—placing the SDL either on the lower spectrum range (i.e., 1427-1494 MHz) or on the upper edge (i.e., 1451-1518 MHz) of the spectrum.

QUESTIONNAIRE & RESPONSE

Please find here MediaTek's response on **Q21 and Q22 raised in Chapter IV** (Page 206) of the consultation paper.

Q21- Considering the need to assign a contiguous 24 MHz block in the 1427-1518 MHz range to the Government user,

(a) Which band plan and duplexing scheme should be adopted for IMT in the 1427-1518 MHz range?

MediaTek recommends considering the possible options presented under the section "Spectrum Considerations".

(b) Which range of spectrum (a contiguous block of 24 MHz) should be assigned to the Government user?

Although, 24 MHz can be allocated either on lower edge (i.e., 1427-1494 MHz) or upper edge (i.e., 1451-1518 MHz) of the given spectrum range, IMT based services can benefit more from the lower edge i.e., 1427-1494 due to a more favourable ecosystem.

Q22- Are there any other inputs/ issues related to the spectrum in the 1427-1518 MHz range? Suggestions may be made with detailed justifications.

Possible inputs are already shared and are highlighted under the section "Spectrum Considerations".