

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of

Information Sought on Sharing in the Lower 37)	WT Docket No. 24-243
GHz Band in Connection with the National)	
Spectrum Strategy Implementation Plan)	
)	
Shared Use of the 42-42.5 GHz Band)	WT Docket No. 23-158
)	
)	

COMMENTS OF THE DYNAMIC SPECTRUM ALLIANCE

The Dynamic Spectrum Alliance (DSA)¹ hereby submits these comments in response to the above-referenced Public Notice (PN) released by the Wireless Telecommunications Bureau (WTB) seeking information on sharing the 37.0-37.6 GHz band (Lower 37 GHz band) in the context of the forthcoming National Spectrum Strategy (NSS) Implementation Plan report studying “how a co-equal, shared-use framework which allows federal and non-federal operations should be implemented.”²

¹ The Dynamic Spectrum Alliance is a global, cross-industry alliance focused on increasing dynamic access to unused radio frequencies. The membership spans multinational companies, small- and medium-sized enterprises, academic, research, and other organizations from around the world, all working to create innovative solutions that will increase the utilization of available spectrum to the benefit of consumers and businesses alike. A full list of the DSA members is available on the DSA’s website at www.dynamicspectrumalliance.org/members/.

² *Information Sought on Sharing in the Lower 37 GHz Band in Connection with the National Spectrum Strategy Implementation Plan*, WT Docket No. 24-243, Public Notice, at ¶1 (rel. Aug 9, 2024) (PN).

One of DSA’s primary goals is to increase spectrum access through shared and more efficient use. Achievement of this goal is possible through the introduction of dynamic shared access – either using an automated Dynamic Spectrum Management System (DSMS) that actively manages new entrants’ access to maximize use of spectrum while ensuring protection of incumbents and facilitating coexistence among new users, or through a carefully crafted set of rules that allow new unlicensed or licensed-by-rule operations under specific circumstances and operating parameters. Such dynamic shared access approaches can help achieve the Commission’s goals of connecting everyone, stimulating innovation for next-generation broadband, and accelerating an inclusive digital economy. As the Commission looks to solve challenges of underserved communities and seeks to foster innovation across a wide range of industrial verticals, dynamic shared access can enable higher-capacity and lower-cost wireless network deployments.

In the PN, the Commission request comments on how to enable sharing between federal and non-federal users while streamlining access to and maximizing use of the Lower 37 GHz band and proposes a coordination process based on the Commission’s 70/80/90 GHz rules. While we agree with many of the underlying concepts in the proposed approach, such as the goal of ensuring meaningful access to spectrum by later entrants,³ the DSA recommends that the Commission adopt a licensing and sharing framework that has already proven to be successful at enabling federal and non-federal sharing and at maximizing access by a wide range of new users - namely a license-by-rule framework with a light-touch, automated DSMS. This same licensing and sharing framework could also be applied to the 42 GHz band to provide a harmonized approach to accessing 1100 MHz of valuable high band spectrum.

³ PN at 2.

The DSA's members have extensive experience in the development and implementation of innovative, non-exclusive licensing frameworks, supported by automated dynamic spectrum sharing solutions, including in the TV White Spaces, 3.5 GHz Citizen Broadband Radio Service (CBRS), and 6 GHz bands. We believe that the experience gained from these shared bands can be tailored to meet the specific opportunities and challenges of the Lower 37 GHz band as well as the 42 GHz band.

The DSA also believes that the introduction of new, non-exclusive licensing options supported by automated DSMS technology to coordinate specific deployment sites is the best path to support increased spectrum access and intensive use by a wide range of new users, which will in turn lead to more rapid deployment of new networks, services, and innovative business models. At its core, an automated DSMS is a software-based embodiment of the Commission's rules for protecting incumbents and facilitating coordination among users while enabling broader access and more intensive use. Automated dynamic spectrum sharing lowers transaction costs, uses spectrum more efficiently, speeds time-to-market for new services, protects incumbents from interference with greater certainty, and generally expands the supply of wireless connectivity that is fast becoming, like electricity, a critical input for other industries and economic activity.

The experience the Commission and industry have gained from implementing innovative licensing frameworks supported by automated DSMS solutions should be instructive to this proceeding. For example, sharing between terrestrial CBRS operations in the 3.5 GHz band under the Commission's Part 96 rules is relevant to both the Lower 37 GHz and 42 GHz bands. From an incumbent protection perspective there have been no reports of interference by co-channel or adjacent incumbents in the nearly five years of commercial CBRS service, which demonstrates that automated DSMS tools can effectively enforce protection of federal users while also enabling new

entrants into a band. In fact, the CBRS experience has shown that DSMS managed sharing with incumbents not only works as designed, but it is also flexible and adaptable, which enables the protection methodology to be updated and enhanced over time as real-world experience is gained and new more advanced techniques are developed.⁴ The adaptability of automated spectrum management will be important to ensure that federal operations – particularly those that are yet to be fully defined and deployed – can be effectively protected.

Likewise, from the perspective of increasing access to spectrum by a wide range of non-exclusive users, since commercial services were authorized in the CBRS band, there have been more than 400,000 CBRS devices (CBSDs) deployed by more than 1,200 different entities, most of whom operate using the opportunistic, license-by-rule CBRS GAA tier. This unprecedented growth demonstrates that the Commission’s Part 96 license-by-rule framework, supported by automated spectrum management tools, lowers barriers to entry, reduces spectrum acquisition costs, speeds time-to-market for new services, and results in more intensive and efficient spectrum usage than do exclusive licensing or legacy manual coordination approaches.

Rather than the proposed nationwide licensing framework with first-come first-served rights that relies on manual coordination, which could lead to spectrum warehousing in the absence of build-out requirements and could create barriers to entry for smaller operators and users, the DSA recommends that the Commission adopt a license-by-rule approach akin to the General Authorized Access (GAA) tier in CBRS. This license-by-rule approach with automated frequency management

⁴ See *Modified Aggregate Interference Model Announced in 3.5 GHz Band*, Public Notice, GN 17-258 and 15-319, (released Jun 12, 2024).

has proven to be a cost-effective, streamlined, and efficient way to encourage intensive use by a wide range of fixed point-to-point, fixed point-to-multipoint, as well as mobile services.

The DSA recommends that the Commission establish a license-by-rule approach and direct industry to establish through a multi-stakeholder process the co-existence criteria that an automated DSMS will use to coordinate operations and avoid congestion and interference in both the Lower 37 GHz and 42 GHz bands. Automated DSMS management can incorporate technology-based sensing and other techniques, such as MIMO (multiple-input multiple-output) and beamforming antennas, to ensure spectrum is being used efficiently and intensively by multiple operators on a sector-by-sector basis without the need to establish first-in-time rights, which could skew spectrum access in favor of larger operators and result in less intensive use. Automating the process for coordination and coexistence through proven spectrum management tools will more readily achieve the Commission’s objectives of accommodating a variety of use cases spectrum and making spectrum “available expeditiously for deployment with the need to protect both federal and non-federal operations in the band from harmful interference.”⁵


Conclusion

The DSA appreciates the opportunity to comment on the Commission’s PN on sharing the 37.0-37.6 GHz band (Lower 37 GHz band) in the context of the forthcoming National Spectrum Strategy (NSS) Implementation Plan report. The DSA and its members have extensive experience in implementing innovative licensing frameworks, such as the CBRS license-by-rule model, supported by automated DSMS tools. This combination enables federal and non-federal sharing, lowers

⁵ PN at 2.

barriers to entry, results in more efficient and intensive spectrum use, speeds time-to-market for new services, and generally expands the supply of wireless connectivity. We look forward to working with the Commission and industry to apply this experience to both the Lower 37 GHz and 42 GHz bands.

Respectfully submitted,



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