

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

In the Matter of)	
)	
Expanding Flexible Use of the)	GN Docket No. 18-122
3.7 to 4.2 GHz Band)	
)	
Petition for Rulemaking to Amend and Modernize)	
Parts 25 and 101 of the Commission’s Rules to)	
Authorize and Facilitate the Deployment of)	RM-11791
Licensed Point-to-Multipoint Fixed Wireless)	
Broadband Service in the 3.7-4.2 GHz Band)	
)	
Fixed Wireless Communications Coalition, Inc.,)	RM-11788
Request for Modified Coordination Procedures in)	
Band Shared Between the Fixed Service and the)	
Fixed Satellite Service)	

COMMENTS OF DYNAMIC SPECTRUM ALLIANCE

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July 3, 2019

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INTRODUCTION

The Dynamic Spectrum Alliance (“DSA”)¹ supports the Federal Communications Commission’s proposal to both clear and share portions of the 3.7 to 4.2 GHz band². As the Commission explained in its July 2018 Notice of Proposed Rulemaking (NPRM)³, the Commission's efforts to make this mid-band spectrum available for more flexible use will help close the digital divide by providing wireless broadband connectivity across the nation and secure U.S. leadership in next-generation services, including fifth-generation (5G) wireless and the Internet of Things.

Improving the rules that govern this band can position companies nationwide to employ advances in wireless technology and state-of-the-art spectrum sharing techniques to use this band to deliver broadband to more Americans in more places than ever before possible.

To achieve these goals DSA recommends that the Commission: (1) permit fixed point-to-multipoint operations throughout the band, (2) amend the outdated full-band, full-arc coordination regime, and (3) assign new flexible-use licenses through a public auction rather than delegating assignment to a private administrator engaging in opaque individual transactions.

In this document, DSA submits additional comments on the issues requested by the Commission stating that: (1) a private auction is a bad policy and the commission lacks the legal

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 DSA members is available on the DSA’s website at www.dynamicspectrumalliance.org/members/.

² See *International Bureau and Wireless Telecommunications Bureau Seek Focused Additional Comment in 3.7-4.2 GHz Band Proceeding*. A Proposed Rule by the Federal Communications Commission on 06/03/2019, GN Docket No. 18-122, RM-11791, RM-11778, DA 19-385 (rel. June 3, 2019) (PR).

³ See *Expanding Flexible Use of the 3.7-4.2 GHz Band, Order and Notice of Proposed Rulemaking*, 33 FCC Rcd 6915 (2018), 83 FR. 42043 (Aug. 20, 2018) (Order), 83 FR. 44128 (Aug. 29, 2018) (NPRM).

authority to authorize it; (2) full-band, full-arc coordination is bad policy and not supported as a legal matter; (3) the Commission has clear legal authority to auction 200 MHz of C-Band, to reimburse incumbent costs, and to modify FSS licenses and registrations as needed; and (4) a large amount of unused spectrum is available in C-band for sharing now and even after FSS incumbents are consolidated. Access to this valuable spectrum can be managed through dynamic databases that exist today, allowing coordination for both licensed and opportunistic sharing, as well as ensuring the most efficient use of the band in favor of rural and underserved communities that stand to benefit the most if the FCC authorizes coordinated point-to-multipoint sharing.

DISCUSSION

I. A Private Auction is Bad Policy and the Commission Lacks the Legal Authority to Authorize It

As DSA and multiple parties have argued in this proceeding, the CBA private auction proposal is bad policy and clearly violates Section 309(j) of the Communications Act. Such an unprecedented and risky change from the Commission's long-standing tradition of spectrum auctions should not be undertaken without explicit Congressional approval. The authorization of an opaque private auction and unnecessary windfalls would create a counterproductive precedent that denies the public a fair return, encourages incumbents in other bands to resist moving or sharing to promote efficiency, interferes with transparency and public oversight, and seems very likely to lead to protracted legal challenges.

FCC authorization of a private auction in this context would set a dangerous precedent, suggesting that incumbent licensees should always resist giving up or sharing unused spectrum unless the Commission agrees to give them *all* the public revenue that until now has always, with few exceptions, flowed back to the public, as Section 309(j) clearly intends. Regulators around

the world have learned from the Commission’s successes that public and transparent auctions are the best method of assigning spectrum rights when sharing is not possible.

Reinterpreting the Communications Act to authorize an unprecedented private auction would deter more efficient spectrum band sharing in particular. This is manifest in the C-Band Alliance’s adamant opposition to the consideration and testing of coordinated shared use of unused frequencies in the band, even in the most remote rural areas. Any incumbent who believes it can spin spectrum it received free into a multi-billion-dollar windfall will likewise oppose consolidating or sharing underutilized bands.

As discussed further below, the Commission has fulsome authority to modify licenses and to relocate incumbent licensees if it clearly serves the overall public interest. Grossly underutilized bands can be consolidated to clear spectrum for auction, and the frequency assignments of incumbents shifted as necessary, without resorting to a private auction or an unnecessarily generous windfall at public expense. This is the path Congress took when it twice enacted legislation that enabled the consolidation of the TV bands to free up flexible-use spectrum in the 600 MHz and 700 MHz bands for auction to the mobile industry.⁴

In 2002 President George W. Bush signed the Auction Reform Act, reversing the Commission’s first effort to conduct an “incentive auction,” in part because roughly half of the 700 MHz auction proceeds (as much as \$10 billion) effectively would have been diverted from the Treasury to a consortium of broadcast station licensees that had never paid for the spectrum.⁵

⁴ See Comments of the Public Interest Spectrum Coalition, *Expanding Flexible Use of the 3.7 to 4.2 GHz Band, Order and Notice of Proposed Rulemaking*, GN Docket No. 18-122, FCC 18-91, at 27-31 (Oct. 29, 2018).

⁵ *Spectrum Reform Act of 2002*, Pub. L. No. 107-195, 47 U.S.C. §309(j)(15)(C)(iv), available at <https://www.congress.gov/bill/107th-congress/house-bill/4560/text?overview=closed>. The Act’s findings stated: “The Commission's rules governing voluntary mechanisms for vacating the 700 Megahertz band by broadcast stations . . . should advance the transition of digital television **and must not result in the unjust enrichment of any incumbent licensee.**” *Id.* at Section 2(6)(B) emphasis added.

The resulting 700 MHz auction – accompanied by the modification of broadcast station licenses – generated nearly \$20 billion in revenue, all of which went to the Treasury and none to band incumbents.

In 2012, responding to a Commission proposal to further consolidate the TV broadcast band to clear flexible-use spectrum for mobile broadband, Congress enacted incentive auction legislation that authorized a mix of incentive payments and cost reimbursements.⁶ The law provided for a public auction, including a reverse auction designed specifically to compensate only as many broadcast licensees as necessary and to place them in competition with one another to ensure that incentive payments would only be as large as necessary to clear spectrum nationwide.⁷ The vast majority of incumbent TV stations in the 600 MHz band were moved to new channels without receiving an incentive payment. Payments to most stations was limited to an actual cost reimbursement set aside from auction revenue in a relocation fund.

Congress did not add incentive auction authority to Section 309(j) in 2012 because it intended to give the Commission the authority to give away tens of billions of dollars in public revenue with no return to the Treasury. Under Section 309(j)(3) of the Communications Act, the Commission is required to promote a number of objectives in developing a competitive bidding methodology and specifying the characteristics of licenses to be assigned by auction, including:

⁶ *Middle Class Tax Relief and Job Creation Act of 2012*, Pub.L. 112–96, Subtitle D—Spectrum Auction Authority, § 6402, (enacted Feb. 22, 2012), codified at 47 U.S.C. § 309(j)(8)(G) (“Spectrum Act”), available at <https://www.congress.gov/112/plaws/publ96/PLAW-112publ96.pdf>.

⁷ § 309(j)(8)(G)(ii); Spectrum Act § 6402. Under the Act’s incentive auction authority, “at least two competing licensees must participate in a reverse auction to determine the amount of compensation for voluntarily relinquishing spectrum usage rights.” *NPRM* at 33-34, n. 150, citing § 309(j)(8)(G)(ii).

(C) **recovery for the public of a portion of the value** of the public spectrum resource made available for commercial use **and avoidance of unjust enrichment** through the methods employed to award uses of that resource;⁸

Under the Act, if “mutually exclusive applications are accepted for any initial license” then “the Commission shall grant the license or permit to a qualified applicant through a system of competitive bidding . . .”⁹ A threshold issue under Section 309(j) is whether the exclusive flexible-use licenses that would be assigned in the cleared portion of C-band are subject to competing (and hence “mutually exclusive”) demand, or whether “engineering solutions, negotiation, threshold qualifications, service regulations, and other means to avoid mutual exclusivity in application and licensing proceedings.”¹⁰

A private auction is not the “negotiation” of mutual coexistence in a band that Congress intended. Indeed, C-band is an example of a shared band where engineering coordination, and “negotiation” among operators when appropriate, eliminates the need for an auction. In C-band today, FSS incumbents share the band through coordination with co-primary Fixed Service point-to-point links, thereby avoiding “mutual exclusivity” and the requirement of competitive bidding under Section 309(j). A private auction or negotiated sale to mutually exclusive bidders is an entirely different approach not contemplated by the Act. If the “negotiation” exception to mutual exclusivity in Section 309(j) is satisfied by authorizing a private auction or a privately-negotiated sale as the mechanism to avoid mutual exclusive uses of the band, then the exception swallows the rule and 309(j)(1) is rendered meaningless.

⁸ 47 U.S.C. §309(j)(3)(A) - (D), emphasis added.

⁹ 47 U.S.C. §309(1).

¹⁰ 47 U.S.C. §309(j)(6)(E).

It has also been suggested that the Commission “has ample authority under Sections 303(c), 303(r) and 4(i) of the Communications Act” to authorize a private sale or auction that “ensure[s] that earth station owners receive incentive-based compensation and that taxpayers, too, receive a portion of the value created by repurposing the spectrum.”¹¹ These general provisions cannot possibly provide the authority for a public or private auction that is not consistent with the explicit provisions of Section 309(j). Section 303(c) simply gives the Commission the general authority to allocate bands to services and to assign specific frequencies to individual users. And both Sections 303(r) and 4(i) are respectively known as the ‘necessary and proper’ clauses of Title III and of the Communications Act more generally. None of these general provisions address *how* a license is to be issued in the face of mutually exclusive demand, a situation inherent in exclusive flexible-use licensing. As the D.C. Circuit stated in *Cellco Partnership v. FCC*, “the Commission may not rely on Title III’s public interest provisions without mooring its action to a distinct grant of authority in that Title.”¹² And no general provision can supersede the specific authority and mandates that Congress spelled out in great detail in Section 309(j).

Finally, DSA is very concerned about the impact of a private auction on spectrum access, competition and consumer choice. In every previous auction it has been the Commission – through notice and comment rulemaking – that determines critical details such as the geographic areas and channel size of licenses, as well as auction procedures, bidding credits and other features that promote equity and post-auction competition. Will a group of non-U.S. companies

¹¹ *Ex Parte* Letter from Scott Harris, Counsel to the Small Satellite Operators, GN Docket No. 18-122, at 2 (March 25, 2019).

¹² *Cellco Partnership v. FCC*, 700 F.3d 534, 543-544 (D.C. Cir. 2012).

be allowed to define the choices for the only large tranche of mid-band spectrum the Commission brings to market? Will the auction be as fully transparent as prior FCC auctions?

Judging by the CBA's recent private auction proposal, the impact will be skewed to maximize its own auction revenues. For example, based on its recent auction framework filing, the combination of PEAs and a combinatorial, sealed-bid auction for aggregate areas as large as the nation as a whole appears biased squarely toward steering the spectrum to the largest national carriers and no other potential business model. Only a FCC designed and supervised auction can ensure the sort of fair and policy-driven auction that Congress intended.

II. Full-band, Full-arc is Bad Policy and Not Supported as a Legal Matter

DSA has consistently argued during the course of this proceeding that the full-band, full-arc coordination regime is extremely spectrally inefficient and defeats the Commission's own efficient spectrum management goals, as the *NPRM* acknowledges.¹³ For instance, the Associated Press' 975 receive-only C-band earth stations are all fixed on a single transponder using just 23 MHz of spectrum.¹⁴ Yet new terrestrial providers under the current regime would nevertheless have to coordinate with those existing licensees as if they used the entire 500 MHz along the entire geostationary arc from the earth station location. As numerous commenters have pointed out, because full-band, full-arc coordination effectively blocks shared terrestrial uses of the band based on the possibility that an earth station may one day need to switch between transponders or satellites rather than basing coordination on actual use, such a regime greatly

¹³ See *Expanding Flexible Use of the 3.7 to 4.2 GHz Band, Order and Notice of Proposed Rulemaking*, 33 FCC Rcd. 6915, 6923-25, ¶ 17 (2018) ("NPRM").

¹⁴ Petition for Rulemaking to Amend and Modernize Parts 25 and 101 of the Commission's Rules to Authorize and Facilitate the Deployment of Licensed Point-to-Multipoint Fixed Wireless Broadband Service in the 3700 - 4200 MHz Band, Petition for Rulemaking, RM-11791, 22 & note 42 (filed June 21, 2017) ("BAC Petition").

reduces the opportunity to connect via terrestrial deployments rural and other underserved areas-- a key public policy goal in the U.S.

Fortunately, the Commission has the legal authority to end the full-band, full-arc registration regime and should expeditiously exercise its authority to do so. Under Part 25 of the Commission’s rules, C-band space station operators have the right to transmit signals and connect to Commission-authorized earth stations.¹⁵ Receive-only earth stations do not have an independent right to be free from interference, rather they complete the space-to-earth link from actual transmitted signals.¹⁶ Coordination requirements for earth station operators and terrestrial fixed service providers serve the purpose of ensuring that signals from space stations can reach consumers free from harmful interference via the earth station.¹⁷ The Part 25 earth station registration requirements make clear that the purpose of such a regime is protection from terrestrial “interference,” not a wholesale reservation of rights to hundreds of MHz of unused spectrum as inherent in the full-band, full-arc coordination regime.¹⁸

Even though the Commission has allowed full-band, full-arc coordination in the past, it can rectify the situation by exercising its authority under Section 316 of the Communications Act that allows the Commission to modify station licenses.¹⁹ Under Section 316 authority, when the Commission acts in the public interest, it can undertake actions to modify existing licenses as long as it provides notice and the modification does not fundamentally alter the ability of

¹⁵ See 47 C.F.R. § 25.102(a).

¹⁶ See 47 C.F.R. § 25.102(b).

¹⁷ See 47 CFR § 25.131(c).

¹⁸ See 47 CFR § 25.131(b).

¹⁹ See 47 U.S.C. § 316(a)(1) (“Any station license . . . may be modified by the Commission either for a limited time or for the duration of the term thereof, if in the judgment of the Commission such action will promote the public interest, convenience, and necessity...”).

existing licensees to provide service. In this case, the public interest is clear: **more efficient use of spectrum and enabling terrestrial sharing with existing FSS operations to benefit rural and other underserved communities.**

Furthermore, fixed wireless and point-to-multipoint sharing of C-band will not fundamentally alter existing licensees' and earth station operators' ability to provide service, as they are already using far less than the entire 500 MHz of C-band spectrum. This is particularly true because light-weight dynamic databases can easily coordinate terrestrial links with existing uses, as discussed further below.

III. The Commission has Clear Legal Authority to Auction 200 MHz of C-Band, Reimburse Incumbent Costs, and Modify FSS Licenses and Registrations as Needed

Since the CBA satellite operators have conceded that 200 MHz can be cleared within 36 months nationwide without disrupting or diminishing their current C-band business, the Commission can adopt a relatively rapid and straightforward reorganization of the band within its existing legal authority while avoiding both an unjust windfall and a disruption of incumbent C-band services. The most straightforward approach that is clearly within the Commission's legal authority may be a forward auction that consolidates FSS incumbents into the upper portion of the band and requires auction winners (as a licensing condition) to reimburse incumbents for any eligible and reasonable costs.

Unlike a private auction, which would clearly violate Section 309(j), the courts have consistently upheld the Commission's authority to reorganize bands, modify licenses, and authorize mechanisms that reimburse incumbents' costs. There is also precedent for the Commission to authorize winning bidders to voluntarily negotiate premium payments to incumbents in exchange for expedited clearance.

A. Registered FSS Earth Stations can be Consolidated into the Upper Portion of C-Band While Maintaining Interference Protection

The *Public Notice* requests comment on the enforceable interference protection rights of registered receive-only earth stations and whether their registrations qualify as “licenses” for the purpose of Section 316 and Section 309(j)(8)(G). In short, the Commission has made it clear for 40 years that although receive-only earth stations that duly register and coordinate with co-primary Fixed Service (FS) licensees obtain a reliance interest in interference protection, they do not hold a Title III license. The Commission in fact rejected the notion that receive-only earth stations are entitled to a license under Section 301 and, instead, employed its ancillary authority under Title I to grant them interference protection for the purpose of facilitating the growth of FSS on a shared, co-primary basis with FS licensees. As a result, receive-only earth stations possess neither the “station license”²⁰ nor the “licensed spectrum usage rights”²¹ necessary to have Title III rights cognizable under Section 316 and Section 309(j), respectively.

The CBA correctly recited the Commission’s series of Orders, most definitively in 1979, that granted receive-only earth stations coordinated interference protection while making clear they are ineligible for a license under Section 301.²² Section 301 requires the Commission to issue a license to authorize the “use” of spectrum for the specific purpose of “transmission.” Section 301 states: “No person shall *use or operate* any apparatus for the *transmission* of energy or communications or signals by radio . . . except under and in accordance with this Act and with

²⁰ 47 U.S. Code § 316.

²¹ 47 U.S. Code § 309(j)(8)(G).

²² *Ex Parte* Letter from C-Band Alliance to Marlene H. Dortch, FCC, GN Docket No. 18-122, at 2-3 (March 7, 2019).

a license in that behalf granted under the provisions of this Act.”²³ In 1979 the Commission concluded that receive-only earth stations are not “incidental” to transmission and therefore do not require a license under Section 301. The Commission reasoned, in pertinent part:

By definition, receive-only earth stations do not transmit. While it might be argued that receiving facilities are incidental to radio transmission, the full extension of that argument would be unreasonable because it would require that all television and radio receivers be licensed as well as receive-only earth stations. We therefore conclude that licensing of receive-only earth stations is not mandated by the Act.²⁴

Based on its conclusion that Section 301 did not require receive-only stations to be licensed, the Commission’s 1979 Order adopted a voluntary regime, explaining that it would instead exercise its ancillary jurisdiction under Title I to make “protection from interference available.”²⁵ “[W]e continue to believe that the power to regulate receive-only earth stations is ancillary to our other regulatory responsibilities to maximize effective use of satellite communications.”²⁶ In subsequent decisions, the Commission reiterated that while registration afforded receive-only earth stations interference protection, it does not confer a license. In 1986 the Commission streamlined its voluntary licensing processes²⁷ and in 1991 it terminated voluntary licensing altogether and instituted voluntary registration, stating that registration would provide the same protection as the prior regime.²⁸ As a result, currently no receive-only earth

²³ 47 U.S.C. § 301 (emphasis added).

²⁴ *In the Matter of Regulation of Domestic Receive-Only Satellite Earth Stations*, 74 F.C.C.2d 205, at ¶ 31 (1979).

²⁵ *Ibid.*

²⁶ *Ibid.*

²⁷ *Deregulation of Domestic Receive-Only Satellite Earth Stations*, Second Report & Order, 104 F.C.C.2d 348 (1986).

²⁸ *Amendment of Part 25 of the Commission’s Rules and Regulations to Reduce Alien Carrier Interference Between Fixed-Satellites At Reduced Orbital Spacings and to Revise Application Processing Procedures For Satellite*

station in the band have a “license” and there has never been any suggestion in this series of Orders that the Commission had changed the conclusion it reached in its 1979 Order.

There are also important policy reasons to reject the claim that earth station registrants hold the “licensed spectrum usage rights” required to be eligible for incentive payments under Section 309(j)(8)(G). A decision that passive receive-only device owners must be paid off before the Commission can reorganize or reallocate a band if it best serves the public interest would have costly, far-reaching and negative implications for future efforts to share or consolidate underutilized spectrum. If earth station registrants are deemed to possess “licensed spectrum usage rights,” the operators of passive receivers in other bands will threaten to litigate over their rights as Title I “licenses” to payouts under Section 309(j)(8).

Finally, because receive-only FSS earth stations do not hold a “station license” under Title III, and receive their interference protection as a matter of discretion under the Commission’s Title I ancillary authority, they are also not subject to the limitations on license modifications adopted under the agency’s Section 316 authority. The Commission can at any time modify the frequencies on which receive-only earth stations receive interference protection. Indeed, even if Section 316 applied to earth station registrations, reducing the range of C-band frequencies in which earth stations are guaranteed interference protection would not represent a “fundamental change” in their rights.²⁹ Changing or reducing the frequencies used by a licensed

Communications Services, First Report and Order, 6 FCC Rcd 2806, at ¶ 4 (1991) (“the program would eliminate the issuance of a formal license . . . [which] also would obviate the need for Commission approval of assignments or transfers of control pursuant to Section 310(d) of the Communications Act.”).

²⁹ See *California Metro Mobile Communications Inc. v. FCC*, 365 F.3d 38, 45 (D.C. Cir. 2004) (“Section 316 grants the Commission broad power to modify licenses; the Commission need only find that the proposed modification serves the public interest, convenience and necessity.”); *MCI Telecommunications Corp. v. AT&T*, 512 U.S. 218, 228 (1994) (Section 316 authority to modify licenses does not contemplate ‘fundamental changes’); *Community Television, Inc. v. FCC*, 216 F.3d 1133, 1140-41 (D.C. Cir. 2000); *Cellco Partnership v. FCC*, 700 F.3d 534, 543-544 (D.C. Cir. 2012).

service is a type of modification the Commission has ordered multiple times in the past and just recently proposed again as a means of clearing underutilized 900 MHz band spectrum for auction.³⁰

In practice, it will make little difference whether the Commission modifies the registration or the ‘licensing’ rights of earth stations with respect to the range of frequencies on which they can receive without interference so long as the Commission protects their reliance interests by ensuring they can continue to receive transmissions on other channels.³¹ However, the fact that Section 316 does not constrain the authority of the Commission to modify the terms of receive-only earth station registration means that any objection that the Commission is prohibited from making a “fundamental change” to their rights would be unavailing.

B. FSS Space Stations can be Consolidated into the Upper Portion of C-band While Maintaining Current Services

Consistent with the Commission’s legal authority, the most straightforward approach to reallocating the lower portion of the band is a traditional forward auction that consolidates FSS incumbents into the upper portion of the band and requires auction winners (as a licensing condition) to reimburse incumbents for any eligible and reasonable costs. There is ample

³⁰ Notice of Proposed Rulemaking, *Review of the Commission’s Rules Governing the 896-901/935-940 MHz Band*, WT Docket No. 17-200 (rel. March 14, 2019). See also *Establishing Rules and Policies for the use of Spectrum for Mobile Satellite Services in the Upper and Lower L-band, Report and Order*, 17 FCC Rcd 2704, ¶¶ 1, 21 (2002) (relocating the Motient spectrum assignment and reducing it from 28 to 20 megahertz); *Improving Public Safety Communications in the 800 MHz Band et al.*, Report and Order, Fifth Report and Order, Fourth Memorandum Opinion and Order, and Order, 19 FCC Rcd 14969, ¶ 68 (2004) (rejecting argument Sprint must be compensated for frequency relocation on a “megahertz-for-megahertz” basis).

³¹ See *Teledesic LLC v. FCC*, 275 F.3d 75, 85-76 (D.C. Cir. 2000) (the Commission only needs to ensure that incumbents will be able to continue to operate).

precedent for this approach. Although Section 309(j) precludes the Commission from authorizing a private auction, the agency has robust authority to reorganize the band, to reallocate a portion of the band to flexible use, to modify space station licenses to consolidate the FSS higher in the band, and to require winning bidders in a subsequent auction to compensate FSS incumbents for reasonable costs and, if appropriate, additional negotiated payments for early clearing.

The Commission took a variation of this approach when it subdivided the 18 GHz band, which at the time was – like C-band – shared on a coordinated, co-primary basis between the Fixed Service and satellite services (FSS and MSS).³² The agency concluded that “separating terrestrial fixed service operations from ubiquitously deployed FSS earth stations in dedicated sub-bands would serve the public interest.”³³ Accordingly, the Commission adopted a plan to migrate FS incumbents off the lower portion of the band and authorize blanket licenses for what satellite entrants claimed would be “ubiquitous” digital broadband satellite networks that could not coordinate their earth stations with thousands of existing FS sites.

The Commission adopted a two-stage framework: During the initial two years the FS incumbents and satellite entrants were required to negotiate in good faith over the cost of “comparable facilities” in the upper portion of the band and, if an FS licensee demanded a premium to relocate early, a premium proportionate to the cost of comparable facilities could be negotiated. Satellite users were also required to compensate FS incumbents for any increased recurring costs for five years after relocation. If no agreement was reached during the initial two years, the Commission authorized involuntary relocation of FS incumbents at any time, with

³² Report and Order, *Redesignation of the 17.7-19.7 GHz Frequency Band, Blanket Licensing of Satellite, etc.*, IB Docket No. 98-172 (rel. June 22, 2000).

³³ *Id.* at ¶ 2.

satellite users required to pay actual costs for relocation up to ten years after the Order. After ten years any remaining FS incumbents must relocate without any cost reimbursement.³⁴

Teledesic LLC brought suit, challenging the Commission’s authority to condition its new licenses on an obligation to pay the costs of displaced FS incumbents. The D.C. Circuit readily upheld the Commission’s decision, noting that the FCC’s “current approach to the relocation of incumbents is not new”³⁵ and that the court had upheld previous band reorganizations in which displaced incumbents were given “comparable facilities” aimed at ensuring no disruption of their ongoing business.³⁶ More recently the Commission established rules in 2006 that required compensation for relocated Fixed Service and Broadband Radio Service incumbents through clearinghouses paid for by new Advanced Wireless Service licensees.³⁷

The Commission has ample authority under Section 316 to modify FSS space station licenses in the band to require that subject to certain conditions (e.g., cost reimbursement), after a reasonable transition period their authorization to transmit to earth stations with interference protection will be limited to the upper portion of the band. As noted in the section just above, the

³⁴ *Id.* at ¶ 5.

³⁵ *Teledesic LLC v. FCC*, 275 F.3d 75, 86 (D.C. Cir. 2001) (upholding FCC authority to require satellite operators to negotiate the payment of relocation costs of FS incumbents moved to the upper portion of the heretofore co-primary 18 GHz band).

³⁶ *See, e.g., Redevelopment of Spectrum to Encourage Innovation in the Use of New Telecommunications Technologies*, Third Report and Order, 8 F.C.C.R. 6589, 6594-95 (1993); *Microwave Relocation Cost Sharing Plan*, First Report & Order & Notice of Proposed Rulemaking, 11 FCC Rcd 8825 (1996); *Amendment of Section 2.106 of the Commission’s Rules to Allocate Spectrum at 2 GHz for Use by the Mobile Satellite Service*, Second Report and Order, 15 F.C.C.R. 12,315, 12,352 ¶ 109 (2000).

³⁷ *See Amendment of Part 2 of the Commission’s Rules to Allocate Spectrum Below 3 GHz for Mobile & Fixed Services to Support the Introduction of New Advanced Wireless Services, Including Third Generation Wireless Systems*, Ninth Report & Order, 21 FCC Rcd 4473, at 4513-19, 4526-33 (2006); *see also* 47 C.F.R. §§ 27.1160-27.1174; 47 C.F.R. §§ 27.1176-27.1190; 47 C.F.R. §§ 27.1230-27.1239.

Commission has the authority to modify licenses at any time provided it makes a public interest finding and it does not fundamentally change the license.³⁸

Changing or reducing the frequencies used by a licensed service is a type of modification the Commission has ordered multiple times in the past and reducing the range of C-band frequencies in which space stations are guaranteed interference protection would not represent a “fundamental change” in their rights, provided that satellite operators are able to continue operating essentially the same service, as the D.C. Circuit has consistently held.³⁹

IV. A Large Amount of Unused Spectrum is Available in C-band for Sharing Now and Even After FSS Incumbents are Consolidated

A. Dynamic Databases exist Today and can coordinate both Licensed and Opportunistic Sharing.

Spectrum-sharing mechanisms allow for rules that would empower fixed operations to use C-band frequencies without causing harmful interference to flexible-use or FSS licensees. Such operations could be governed by a dynamic spectrum sharing database management mechanism that would ensure that unused spectrum resources are not wasted and strengthen fixed licensees’ ability to use the band to expand broadband service.

FSS licensees argue that they need to reserve the entire 500 megahertz near every earth station to account for the chance that they will need to switch transponders or frequencies at

³⁸ See *California Metro Mobile Communications Inc. v. FCC*, 365 F.3d 38, 45 (D.C. Cir. 2004) (“Section 316 grants the Commission broad power to modify licenses; the Commission need only find that the proposed modification serves the public interest, convenience and necessity.”); *MCI Telecommunications Corp. v. AT&T*, 512 U.S. 218, 228 (1994) (Section 316 authority to modify licenses does not contemplate ‘fundamental changes’); *Community Television, Inc. v. FCC*, 216 F.3d 1133, 1140-41 (D.C. Cir. 2000); *Cellco Partnership v. FCC*, 700 F.3d 534, 543-544 (D.C. Cir. 2012).

³⁹ See, e.g., *Cellco Partnership v. FCC*, 700 F.3d at 543-544; *Teledesic LLC v. FCC*, 275 F.3d at 85-86 (“‘Comparable facilities’ does not mean . . . top-of-the-line replacement facilities [but rather] that the replacement facilities are equivalent to the existing [] facilities with respect to throughput, reliability, and operating costs . . .”).

some point in the future. But the Commission does not need to maintain the extreme full-band, full-arc coordination system to permit such changes. An automated spectrum management database would preserve this flexibility for FSS operations while still enabling vastly greater use of the band for terrestrial fixed wireless services. Commission rules already provide for similar databases in more complicated and dynamic spectrum sharing environments, such as the CBRS and broadcast television bands. The Commission is also considering the use of spectrum databases to support sharing in the 6 GHz and 37 GHz bands. Existing database technology can support coordination analyses of FSS operations, including changes to transponder and frequency use, making use of full-band, full-arc system unnecessary and wasteful.

B. Rural and Underserved Communities stand to benefit the most if the FCC authorizes Coordinated Point-to-Multipoint sharing.

The Commission could improve overall efficiency by expanding the frequencies on which broadband providers can deploy fixed point-to-multipoint (P2MP) operations to include the lower part of the band (which would house new flexible-use licensees) and the middle part of the band (which may house FSS licensees but could in the future house additional flexible-use licensees). These bands, like the upper portion of the band that remains in use for FSS, would include locations and frequencies in many parts of the country in which no licensee would operate, allowing for accommodation of fixed service that would not cause harmful interference. By combining the approach of clearing FSS in favor of flexible use licensing at the bottom of the band with the certification of a dynamic spectrum management database system to enable shared access to unused spectrum by fixed wireless across the entire band, the Commission can make every unused megahertz of spectrum in the 3.7-4.2 GHz band available for 5G terrestrial deployments, both mobile and fixed.

CONCLUSION

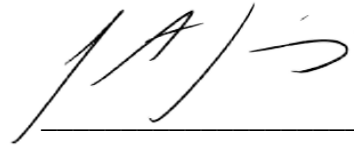
With the right rules in place, the 3.7-4.2 GHz band can support more robust and productive wireless service by flexible-use, FSS, and fixed point-to-multipoint service providers. The right Commission decisions will maximize the utility of the band, allow providers to efficiently use the spectrum, and produce transparent assignment of new licenses that advance the country's goals rather than benefit a small group of companies. DSA is concerned about the impact of a private auction may have on spectrum access in the C-Band. Both Competition and consumer preferences may also be impacted by a private auction, as it establishes a precedent for inefficient policies that limit the ability of the Commission to clear future bands. There is also the question of legal authority raised above. The Alliance recommends the FCC instead assign new flexible-use licenses through a public auction.

Even though the Commission has allowed full-band, full-arc coordination in the past, full-band, full-arc doesn't promote an efficient use of the spectrum and is not supported as a legal matter. The Commission can rectify the situation by exercising its authority under Section 316 of the Communications Act and undertake actions to modify existing licenses. In this case, the public interest is clear: more efficient use of spectrum and enabling terrestrial sharing with existing FSS operations to benefit rural and other underserved communities.

A large amount of unused spectrum is available in C-band for sharing now and even after FSS incumbents are consolidated. A decision that passive receive-only device owners must be paid off before the Commission can reorganize or reallocate a band if it best serves the public interest would have costly, far-reaching and negative implications for future efforts to share or consolidate underutilized spectrum. Finally, DSA believes that the Commission can move

expeditiously under its current authority and legal authority to auction 200 MHz of C-Band, reimburse incumbent costs, and modify FSS licenses and registrations as needed.

Respectfully submitted,



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July 3, 2019