

**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)	

To: Chief, International Bureau
Chief, Wireless Telecommunications Bureau

**REPLY COMMENTS OF
THE WIRELESS INTERNET SERVICE PROVIDERS ASSOCIATION**

The Wireless Internet Service Providers Association (“WISPA”) hereby submits its Reply Comments in response to certain of the initial Comments supplementing the record as requested by the May 3, 2019 Public Notice (“*Public Notice*”) in the above-captioned proceeding.¹

Much of the debate among commenters revolves around whether receive-only earth stations are or are not entitled to interference protection under Title III of the Communications Act of 1934, as amended (“Act”). Those arguing that earth station registrations are “licenses” with “licensed spectrum usage rights” or that they become license equivalents as “incidental” to satellite transmission selectively omit key language from 40 years of Commission jurisprudence showing that receive-only earth stations are *not* entitled by statute to either protection from harmful interference or from the potential for “fundamental change” to their rights. That said, however, the Commission has “ancillary” authority under Title I of the Act to provide for the relocation and continuing ability of receive-only earth stations to provide vital content delivery, weather monitoring and other services reflected in the record. The Commission can and should

¹ Public Notice, *International Bureau and Wireless Telecommunications Bureau Seek Focused Additional Comment in the 3.7 to 4.2 GHz Band Proceeding*, GN Docket No. 18-122, DA 19-385, 84 Fed. Reg. 25514 (rel. May 3, 2019).

exercise that authority to relocate earth stations from the lower 200 megahertz of the band to the upper 300 megahertz of the band and, using processes it has successfully used in other spectrum proceedings, require licensees in the cleared portion of the band to cover the earth station operators' costs of "comparable facilities." Those earth station operators that choose to not relocate to the upper 300 megahertz or other spectrum bands can be compensated for fiber replacement up to the cost of "comparable facilities."

Since the beginning of and throughout this proceeding, WISPA and the Broadband Access Coalition ("BAC") have promoted a "win-win-win" plan that clears a portion of the band for terrestrial mobile 5G services, allows shared use among receive-only earth stations and fixed point-to-multipoint ("P2MP") services in the uncleared portion of the band, and preserves the ability of earth stations to function without experiencing any increase in harmful interference.² On July 15, 2019, WISPA, Google and Microsoft submitted a joint ex parte letter accompanied by a detailed co-channel coexistence technical report prepared by Dr. Jeff Reed ("Technical Report") that made a number of significant findings confirming the feasibility of co-channel coexistence and the significant business opportunity.³ Using conservative assumptions, the Technical Report concludes that (1) P2MP in shared C-band spectrum can provide gigabit broadband access for more than 80 million Americans in 78 percent of the geographic area of the country, (2) P2MP will not cause harmful interference to co-channel FSS, and (3) repacking earth stations in the upper portion of the C-band will have no effect on the results of the study.

² See, e.g., Broadband Access Coalition Reply Comments, GN Docket No. 18-122 (filed June 15, 2018) ("BAC Reply Comments") at 1-2.

³ See Letter from Claude Aiken, WISPA President/CEO, et al., to Marlene H. Dortch, FCC Secretary, GN Docket No. 18-122 (filed July 15, 2019) ("Technical Report").

Other proposals seeking to re-allocate all or most of the band for 5G use or seeking gold-plated replacement of earth station facilities are founded on dubious projections, lack transparency, complicate tried-and-true auction and relocation processes, and, most importantly, ignore the consumer benefits of expanding high-speed, fixed broadband to millions of rural, unserved and underserved Americans. By contrast, the BAC’s proposal is consistent with legal precedent, and can be implemented in large areas of the country to foster the important objective of closing the digital divide – “the Commission’s top priority.”⁴

Discussion

I. RECEIVE-ONLY EARTH STATIONS ARE PROPERLY REGULATED PURSUANT TO TITLE I ANCILLARY AUTHORITY

As WISPA and other commenters explained, long-standing Commission precedent clearly establishes that interference protection for receive-only earth stations does not arise under any provision of Title III, but is based instead on the Commission’s discretionary exercise of its ancillary jurisdiction under Title I of the Act.⁵ Conversely, a number of commenters argue that earth station registrations are “licenses” with “licensed spectrum usage rights” or that these registrations become license equivalents because they are “incidental” to satellite transmission.⁶ These commenters accordingly assert that receive-only earth stations have a statutory right to interference protection. However, these commenters selectively omit key language from 40

⁴ *Rural Digital Opportunity Fund*, Draft Notice of Proposed Rulemaking, FCC-CIR1908-01 (July 11, 2019) at 2.

⁵ See WISPA Comments at 3-5; Dynamic Spectrum Alliance Comments at 12-15 (“[T]he Commission’s 1979 Order adopted a voluntary regime, explaining that it would ... exercise its ancillary jurisdiction under Title I to make ‘protection from interference available’.”) (internal citations omitted); Comments of the Satellite Industry Association at 7 (“[T]he Commission does not even view licensing of [receive-only earth] stations as within its primary authority, instead relying on its ancillary authority to adopt governing regulations.”).

⁶ See, e.g., ACA Connects Comments at 7-9; Charter Comments at 4-7; BYU Broadcasting Comments at 6-7.

years of Commission jurisprudence showing that receive-only earth stations are *not* entitled by statute to either protection from harmful interference or from the potential for “fundamental change” to their rights. For example, these commenters ignore the clear statements made by the Commission in 1979 and again in 1986 that interference protection for a receive-only earth station would require not just registration, but also coordination with Fixed Service licensees in the band, demonstrating among other things the limited scope of protection from interference available for receive-only earth stations.⁷ Moreover, these commenters ignore the Commission’s express holding in 1979 that interference protection for receive-only earth stations was being adopted pursuant to the Commission’s Title I ancillary jurisdiction, not under Title III.⁸ As the Commission clearly stated, “we 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.”⁹

Notwithstanding the clear and consistent explanations on the limits of earth station protection, WISPA agrees that receive-only earth stations provide important services to the public and supports their ability to be able to continue to use a portion of the C-Band to provide these services without experiencing harmful interference. WISPA agrees with Verizon that “the record firmly establishes that stakeholders are on board with ensuring that repurposing the band

⁷ See *Regulation of Domestic Receive-Only Satellite Earth Stations*, 74 F.C.C.2d 205 at ¶ 38 (1979); *Deregulation of Domestic Receive-Only Satellite Earth Stations*, Second Report & Order, 104 F.C.C.2d 348 at ¶ 17 n. 2 (1986).

⁸ *Regulation of Receive-Only Satellite Earth Stations*, 74 F.C.C.2d at ¶ 31. ACA Connects and Charter further ignore the Commission’s determination in this same 1979 Order that receive-only earth stations are not “incidental” to satellite transmission. See ACA Connects Comments at 7-8; Charter Comments at 4. Specifically, the Commission held that “[w]hile 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.” *Regulation of Receive-Only Satellite Earth Stations*, 74 F.C.C.2d at ¶ 31.

⁹ *Id.*

does not disrupt content distribution and that earth station operators are made whole.”¹⁰ Just as it has ancillary authority under Title I to make interference protection available for receive-only earth stations, the Commission has the discretionary authority under its Title I ancillary jurisdiction to provide for the relocation and continuing ability of C-band earth stations to provide vital content delivery, weather monitoring and other services.¹¹

Accordingly, the Commission can and should exercise its Title I authority to relocate earth stations from the lower 200 megahertz of the band to the upper 300 megahertz of the band and, using reimbursement processes it has used on previous occasions, require new flexible use licensees in the cleared portion of the band to cover the earth station operators’ costs of “comparable facilities.” Those earth station operators that choose to not relocate could instead be partially compensated for fiber replacement up to the cost of “comparable facilities,” but fiber replacement should be made available as an option and should not be mandatory. As BYU Broadcasting points out, there are many areas where geography and/or topography make fiber deployment cost-prohibitive and impractical, if not impossible.¹² In any event, WISPA agrees with the Dynamic Spectrum Alliance that, in practice, “it will make little difference whether the Commission modifies the registration or ‘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.”¹³

¹⁰ Verizon Comments at 13.

¹¹ See, e.g., BYU Broadcasting Comments at 13-14; Raytheon Comments at 2-3.

¹² Comments of BYU Broadcasting at 2 and 17-18. BYU Broadcasting also correctly points to the “overbuild” problem that arises when viewing fiber replacement as a means to expand fiber access for rural areas, which would result in significant overcompensation to deploy fiber and fiber capacity that exceeds the needs of the relocating earth station. *Id.* at 17.

¹³ Dynamic Spectrum Alliance Comments at 15 (citing *Teledesic LLC v. FCC*, 275 F.3d 75 (D.C. Cir. 2000)).

II. THE RECORD SUPPORTS ELIMINATING THE “FULL BAND, FULL ARC” RESERVATION

There is wide support among commenters advocating for elimination of “full band, full arc” protection for receive-only earth stations, consistent with the Commission’s tentative conclusion.¹⁴ In addition to WISPA, Google and the Dynamic Spectrum Alliance and Open Technology Institute all demonstrated that “full band, full arc” protection is “inefficient”¹⁵ and “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 based on coordination rather than on actual use.”¹⁶ Open Technology Institute agreed, stating that “[t]he effective warehousing of vacant spectrum that results from full-band, full-arc coordination violates basic principles of spectrum management, particularly now that mid-band spectrum is scarce and perfectly suited to provide faster and more affordable fixed wireless broadband in underserved areas.”¹⁷ Google added that “reserving full-band, full-arc registration for the few, if any, instances in which it is justified by immediate need is consistent with the existing rules’ insistence that earth station operators are protected only for actual use and would simply make this existing policy more administrable.”¹⁸

Repacking earth stations from the lower 200 megahertz to the upper 300 megahertz of the C-band does not change this analysis or require the Commission to back away from its tentative conclusion. Contrary to the views of BYU Broadcasting, full arc protection is neither “required” nor “imperative” to maintain consistent reliable earth station operations.¹⁹ While it may be true

¹⁴ *Expanding Flexible Use of the 3.7 to 4.2 GHz Band*, Order and Notice of Proposed Rulemaking, 33 FCC Rcd 6915, 6930 (2018) (“*NPRM*”).

¹⁵ Google Comments at 9.

¹⁶ Dynamic Spectrum Alliance Comments at 9,

¹⁷ Open Technology Institute Comments at 24.

¹⁸ Google Comments at 10.

¹⁹ BYU Broadcasting Comments at 12.

that there may be less spectrum for earth stations to access, there is no evidence or example in the record that there will *no* spectrum for earth stations to access if they are required to change frequencies. The mere possibility that an earth station theoretically may, at some point, need to access other satellites does not justify preserving a policy of overprotection at the expense of coordinated and shared use that would require P2MP users to use automated frequency coordination and radio agility to change frequencies if necessary.

III. THE BAC’S COORDINATED SHARING PROPOSAL IS A “WIN-WIN-WIN”

Since the beginning of and throughout this proceeding, WISPA and the BAC have promoted a “win-win-win” plan that clears a portion of the band for terrestrial mobile 5G services, allows shared use among receive-only earth stations and fixed point-to-multipoint (“P2MP”) services in the uncleared portion of the band, and preserves the ability of earth stations to function without experiencing any increase in harmful interference. As WISPA and others explained in their initial comments, authorizing sharing among earth stations and P2MP fixed service is in the public interest and the Commission has ample authority to adopt this approach.²⁰

Not only is this approach legally sound, it is also technically feasible and will open up large areas of the country for new, fixed P2MP services. The record is clear that earth stations and terrestrial *mobile* services “are not compatible as co-channel uses,”²¹ but “FSS [earth stations] and FS coexist peacefully in the C-band because ‘[c]urrent FS use of this band is minimal’ and limited FS transmissions are infrequent and geographically isolated, enabling coordination.”²² Moreover, as explained in the letter accompanying the Technical Report, P2MP

²⁰ See WISPA Comments at 15-17; Dynamic Spectrum Alliance Comments at 12-14; Google Comments at 12-13; Comments of the Open Technology Institute at 21-23.

²¹ See Letter from Henry Hultquist, AT&T, to Marlene H. Dortch, FCC Secretary, GN Docket No. 18-122 (filed May 23, 2019) at 2-3.

²² C-Band Alliance Comments at 19 (*quoting NPRM* at ¶ 9).

use in the upper portion of the band will have no effect on flexible use operations in the lower part of the band.²³ “The same guard band that will protect earth stations from flexible use operations in the lower part of the 3700-4200 MHz band will also work as a guard band between those flexible use systems and P2MP systems in the upper portion of the band.”²⁴

This remains true even after earth stations are repacked into the upper 300 megahertz of the C-band. The Technical Report demonstrates in comprehensive detail that receive-only earth stations would typically require only about a 10-kilometer radius of co-channel interference protection, thereby making high-speed fixed broadband service available to about 78 percent of the country where more than 80 million Americans reside.²⁵ The benefits to the public are not theoretical or academic, but proven. There is a significant opportunity for the Commission to implement policies and rules that enable coordinated sharing in 300 megahertz of spectrum across a large part of the country – especially rural areas where the digital divide is the largest and where the greatest amount of C-band spectrum will be available for P2MP service. In other words, adopting the BAC plan will go a long way to achieving the “Commission’s top priority.”²⁶

Other proposals fall far short of achieving these objectives. The recent submission by ACA/CCA/Charter would allocate by reverse auction 370 megahertz or more for 5G wireless services and require earth stations to be replaced with fiber.²⁷ Though expressed as a “win-

²³ Letter from Claude Aiken, WISPA President & CEO, et al., to Marlene H. Dortch, FCC Secretary (filed July 15, 2019) at 2.

²⁴ *Id.*

²⁵ See Technical Report. The analysis is based on a statistical average. In practice, each P2MP system would be designed and coordinated on a site-specific basis, taking into account all surrounding earth stations into account to ensure their protection.

²⁶ See note 4, *supra*.

²⁷ See Letter from Ross Lieberman, ACA Connects, et al., to Marlene H. Dortch, FCC Secretary, GN Docket No. 18-122 (filed July 2, 2019).

win,”²⁸ it is not the “win-win-win” that the BAC’s plan proposes²⁹ because it sets aside no spectrum for P2MP sharing. It also presumes that there will be demand for such a huge amount of flexible use spectrum – an amount of which the mobile carriers do not agree – and would gold-plate C-band facilities above and beyond “comparable facilities” and without any demonstration that it is necessary, let alone feasible.³⁰ In fact, BYU Broadcasting, which provides video services to more than 54 million homes throughout the United States, disputes the notion “that programmers and broadcasters can quickly move content distribution to fiber or alternate satellite frequencies,” stating that “this is not viable. BYUB services many rural communities that cannot be easily reached by fiber because it is not available.”³¹ It further questions the assumption “that any fiber deployments made in the relocation will be overbuilt with sufficient overhead for both video and resident operations, instead of built in proportion to the needs of the relocating earth stations. Who would pay for the overbuilding? Would broadcasters be responsible for the cost of relocation and the additional cost of building fiber for rural residents’ use as well?”³²

The C-Band Alliance private auction proposal suffers from a glaring lack of transparency and serious questions about its legality, and would unnecessarily complicate a tried-and-true forward auction and relocation process.³³ The still-evolving C-Band Alliance private auction approach would result in unjust enrichment in violation of Section 309(j)(3) of the Act, and the

²⁸ *Id.* at 3. *See also* ACA Connects Comment at 2.

²⁹ BAC Reply Comments at 1-2.

³⁰ The C-Band Alliance also notes that clearing 500 megahertz would increase the possibility that satellite operators would “‘hold out’ in the hope of greater economic gain.” C-Band Alliance Comments at 34.

³¹ BYU Broadcasting Comments at 3.

³² *Id.* at 17.

³³ *See* Letter from Henry Gola, Counsel to CBA, to Marlene H. Dortch, FCC Secretary, GN Docket No. 18-122 (filed June 10, 2019); Letter from Bill Tolpegin, Chief Executive Officer, C-Band Alliance, to Marlene H. Dortch, FCC Secretary, GN Docket No. 18-122 (filed June 12, 2019).

Commission's general authority under Sections 4(i), 303(c) and 303(r) cannot be construed to authorize a private auction.³⁴ It presents a serious risk of litigation for being outside the Commission's authority.³⁵ Moreover, it would materially change spectrum policy as an abdication of the Commission's traditional role in managing spectrum in the public interest – not the private interests of well-heeled and influential entities. Most importantly, like the flawed ACA/CCA/Charter proposal, the C-Band Alliance proposal entirely ignores the consumer benefits of expanding high-speed, fixed P2MP broadband to millions of rural, unserved and underserved Americans.

Conclusion

The best policy option before the Commission is also the simplest one, the one that relies on Commission precedent and not on legally suspect experiments that would benefit a handful of foreign satellite companies, and the one that has more “wins” for consumers and investment. The BAC proposal would enable more than 80 million Americans to access up to 300 megahertz of mid-band spectrum, enable 200 megahertz of spectrum for flexible use and protect and reimburse receive-only earth stations in a manner that is entirely consistent with the law.

Respectfully submitted,

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³⁴ See, e.g., Competitive Carriers Association Comments at 3; Open Technology Institute Comments at 7-10; Dynamic Spectrum Alliance Comments at 4-8.

³⁵ See, e.g., Letter from Michael P. Goggin, AT&T, to Marlene H. Dortch, FCC Secretary, GN Docket No. 18-122 (filed July 16, 2019) at 2.