

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

In the Matter of)	
)	
Expanding Flexible Use of the 3.7 to 4.2 GHz Band)	GN Docket No. 18-122
)	
Petition for Rulemaking to Amend and Modernize)	RM-11791
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 3.7-4.2 GHz Band)	
)	
Fixed Wireless Communications Coalition, Inc.,)	RM-11778
Request for Modified Coordination Procedures in)	
Band Shared Between the Fixed Service and the)	
Fixed Satellite Service)	

COMMENTS OF THE C-BAND ALLIANCE

Jennifer D. Hindin
Kathryne C. Dickerson
Henry Gola
Jeremy J. Broggi
Wiley Rein LLP
1776 K St NW
Washington, DC 20006
Its Attorneys

Bill Tolpegin
C-BAND ALLIANCE
900 17th Street, NW
Suite 300
Washington, DC 20006

July 3, 2019

TABLE OF CONTENTS

- I. INTRODUCTION AND SUMMARY1
- II. THE COMMUNICATIONS ACT ESTABLISHES A RADIO SPECTRUM LICENSING REGIME FOR THE EXPRESS PURPOSE OF LIMITING INTERFERENCE HARMFUL TO TRANSMITTED SERVICES.....5
 - A. Space Stations Licensed To Transmit In The C-Band, Along With Recipients Of Market Access, Possess Enforceable Rights Against Interference Harmful To Their Service Transmissions.6
 - B. Receive-Only Earth Stations Registered In The C-Band Do Not Have Any Independently Enforceable Right Against Harmful Interference.10
- III. THE FCC LACKS POWER TO AUTHORIZE UNILATERALLY NEW TERRESTRIAL MOBILE OPERATIONS IN THE C-BAND.15
 - A. Section 316 Obligates The FCC To Protect Service Transmissions By Members Of The C-Band Alliance.....15
 - B. The Takings Clause Confirms The FCC’s Obligation To Protect Service Transmissions By Members Of The C-Band Alliance.21
 - C. Section 316 And The Takings Clause Do Not Obligate The FCC To Protect The Non-Existent Services And Non-Enforceable Rights Of Other Satellite Operators.....21
 - D. The Voluntary Model Proposed By The C-Band Alliance Would Facilitate New Terrestrial Mobile Operations In The C-Band.....27
- IV. THE FCC LACKS POWER TO COMPENSATE RECEIVE ONLY EARTH STATION REGISTRANTS THROUGH AN INCENTIVE AUCTION OR OTHER MEANS.29
 - A. Section 309(j)(8)(G) Prohibits The Commission From Sharing Incentive Auction Proceeds With Entities That Do Not Transmit.30
 - B. Section 316 Prohibits The Commission From Utilizing An Incentive Auction Or Other Mechanism To Incentivize Receive-Only Earth Stations To Clear The C-Band.33
 - C. The Public Interest Does Not Favor An Incentive Auction That Would Share Proceeds With Receive-Only Earth Stations In The C-Band.....34
- V. CONCLUSION.....37

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

In the Matter of)	
)	
Expanding Flexible Use of the 3.7 to 4.2 GHz Band)	GN Docket No. 18-122
)	
Petition for Rulemaking to Amend and Modernize)	RM-11791
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 3.7-4.2 GHz Band)	
)	
Fixed Wireless Communications Coalition, Inc.,)	RM-11778
Request for Modified Coordination Procedures in)	
Band Shared Between the Fixed Service and the)	
Fixed Satellite Service)	

COMMENTS OF THE C-BAND ALLIANCE

I. INTRODUCTION AND SUMMARY

The foundational purpose of the Communications Act is to establish a licensing regime to enable and protect transmitting stations and the services those stations offer. To do so, the Federal Communications Commission (“FCC” or “Commission”) determines which services can transmit on which frequencies based upon the “public interest” and licenses transmission rights accordingly. This statutory regime provides the necessary certainty for communications providers to invest in technology and infrastructure, innovate, and provide services that benefit all Americans. These bedrock principles govern the legal issues raised in the Public Notice.¹

The FCC has allocated the 3.7-4.2 GHz band, commonly known as the C-band, to fixed satellite service (“FSS”) downlink (space-to-Earth) transmissions on a co-primary basis with fixed

¹ See *International Bureau and Wireless Telecommunications Bureau Seek Focused Additional Comment in the 3.7 to 4.2 GHz Band Proceeding*, Public Notice, GN Docket No. 18-122, RM Docket Nos. 11791, 11778 (rel. May 3, 2019) (DA 19-385) (“Public Notice”).

service (“FS”) transmissions. The Commission has also granted Intelsat, SES, Telesat, and Eutelsat non-exclusive licenses, and/or grants of market access, to transmit FSS signals into the United States. These four companies have invested billions of dollars in the infrastructure and systems necessary to provide C-band service, which is relied upon by nearly 120 million American households that receive programming content over the C-band.

Although the amount of spectrum available to users is finite, the communications landscape is in constant flux as new services are developed and demands evolve. The Commission’s public interest responsibilities require it to adapt its frequency allocations accordingly. The terrestrial mobile industry has identified mid-band spectrum, including the C-band, as vital for the rollout of 5G terrestrial mobile services. Swift 5G deployment promises to be a boon for the U.S. economy. But the agency is also bound to protect existing service transmissions. As the FCC recognizes, interference concerns prevent FSS and terrestrial 5G mobile services from sharing the same frequencies in the same geographic areas. Because FSS signals travel thousands of miles from space, these transmissions are particularly susceptible to interference once they reach earth. That issue, coupled with the overlapping, non-exclusive spectrum rights of the FSS operators providing service to the United States, creates significant complexity for any reallocation effort.

Responding to these unique challenges, Intelsat, SES, Telesat and Eutelsat voluntarily formed the C-Band Alliance to explore lawful solutions for repurposing a portion of the C-band in the public interest. These four companies are the only entities that transmit FSS service to the entire continental United States (“CONUS”) and, consequently, the only companies whose services the FCC must protect in this proceeding. The C-Band Alliance has come forward with a market-based approach to enable the Commission to reallocate C-band spectrum in CONUS that relies on free-market principles to reassign a portion of the spectrum to its highest and best use.

The compensation the C-Band Alliance would receive from terrestrial mobile operators for voluntarily forfeiting interference protection rights under this plan would be used to cover repacking costs and to ensure uninterrupted service for satellite operators and their customers. It would also recognize the substantial time and effort the C-Band Alliance has spent proactively to develop a fully-fledged, “whole package” solution in response to a pressing need identified by the Commission. The compensation received by the C-Band Alliance could also incentivize licensees in other bands to similarly look for ways to use their licensed spectrum more efficiently in order to make spectrum available for other services in the public interest.

Unfortunately, the prospect of potential compensation unleashed a flood of unhelpful comments from parties that do not provide FSS service transmissions in CONUS but that were eager to get compensated nonetheless. Several “small satellite operators” argued they should receive compensation even though they provide no service to the continental United States, and therefore will not incur any costs or expend any effort associated with repurposing the C-band. In addition, one terrestrial mobile operator, in an alleged effort to repurpose all 500 MHz of C-band spectrum regardless of the harm to incumbent users, speciously argued that receive-only earth stations—which do not transmit signals and therefore cannot be licensed by the Commission (but which rightfully are concerned about the continuing availability of FSS service)—somehow have a separate non-interference right that is independent of the service transmission and non-interference protection rights belonging to FSS operators that provide service in CONUS.

The C-Band Alliance appreciates the opportunity through the Public Notice to clear up these misconceptions. The Communications Act establishes a non-interference regime designed to protect service transmissions. That right is fundamental, but it can be waived or voluntarily negotiated by those who possess it. Receive-only earth stations benefit from the protection of

transmission rights but have no independent interference protections because they do not transmit signals. Accordingly, proposals that would treat these entities as somehow legally equivalent to members of the C-Band Alliance represent a fundamental misunderstanding of the Act's licensing requirements and would not serve the public interest.

Any effort to have the FCC reclaim C-band spectrum without the consent of the C-Band Alliance would run headlong into statutory and constitutional limits on the agency's authority. The Communications Act, reinforced by the Takings Clause of the U.S. Constitution, authorizes the FCC to modify transmission licenses only where the modification is in the public interest and the change is not "fundamental." Here, the record is unmistakably clear that the interference caused by the authorization of new terrestrial mobile services in the C-band would eliminate entirely the existing FSS service transmissions in the affected portion of the band. There is no doubt that this modification would work a basic and fundamental change to the authorizations utilized by the members of the C-Band Alliance in the United States. However, the members of the C-Band Alliance are prepared to enter into clearance agreements with terrestrial mobile operators whereby the members of the C-Band Alliance would voluntarily relinquish their non-interference rights and make cleared spectrum available for terrestrial 5G service. Such voluntary agreements would allow the Commission to stay within the bounds of its lawful authority. The Commission need not be concerned with the "small satellite operators" that have intervened in this proceeding, but which have no service transmissions in CONUS that could be harmed by new terrestrial mobile operations.

Any proposal that would require the FCC to hold an incentive auction with receive-only earth stations plainly is unlawful. These stations are not licensed within the meaning of the Communications Act (because they do not transmit signals) and the statute thus prohibits their

inclusion. Moreover, Section 316 prohibits including earth station registrants in an incentive auction or other mechanism that would fundamentally change the authorizations held by the members of the C-Band Alliance. Even if their inclusion were somehow lawful, an incentive auction incorporating receive-only earth stations is not a viable mechanism for clearing spectrum because it would be plagued by a hold-out problem and would take an inordinately long time, and therefore would not serve the public interest.

The correct course, therefore, is the market-based approach proposed by the C-Band Alliance.

II. THE COMMUNICATIONS ACT ESTABLISHES A RADIO SPECTRUM LICENSING REGIME FOR THE EXPRESS PURPOSE OF LIMITING INTERFERENCE HARMFUL TO TRANSMITTED SERVICES.

The Public Notice seeks “targeted comment on the extent to which satellite space station operators have enforceable rights against harmful interference from terrestrial stations in the C-band under their space station licenses and market access grants.”² Relatedly, the Public Notice asks whether “enforceable interference protection rights [are] granted to licensed or registered receive-only earth station operators against co-primary terrestrial operations.”³ The answers to these questions are derived from the text, structure, history, and purpose of the Communications Act, which establishes a licensing regime that guarantees the right of *transmission* free from “interference between stations” and provides for the enforcement of that right before the Commission and the federal courts when the service provided by the transmission is meaningfully injured.⁴

² Public Notice, at 2.

³ *Id.* at 4.

⁴ 47 U.S.C. § 303(f); *see generally FCC v. NBC*, 319 U.S. 239 (1943).

A. Space Stations Licensed To Transmit In The C-Band, Along With Recipients Of Market Access, Possess Enforceable Rights Against Interference Harmful To Their Service Transmissions.

Congress established the FCC for the “purpose of regulating interstate and foreign commerce in communication by wire and radio.”⁵ Pursuant to that mandate, the Commission regulates radio communications by “licens[ing]” the “right” to use “the channels of radio transmission” subject to “the terms, conditions, and periods of the license.”⁶ The most basic and fundamental right conveyed by an FCC license is the right to transmit free from “interference between stations.”⁷

The primacy of the non-interference right is confirmed by Congress’s rationale for enacting the licensing requirement. Spectrum is a finite resource.⁸ “[T]he available space on the electromagnetic spectrum [is] far exceeded by the number of those who would use it.”⁹ Prior to the assertion of meaningful federal control, “new stations used any frequencies they desired, regardless of the interference thereby caused to others.”¹⁰ “Existing stations changed to other

⁵ 47 U.S.C. § 151.

⁶ *Id.* § 301.

⁷ *Id.* § 303(f); *see id.* §§ 303(a)-(e), (m)(1)(E), 303(y)(2)(C), 309(j)(16)(C).

⁸ *See In re Expanding Flexible Use of the 3.7 to 4.2 GHz Band*, Order & NPRM, GN Docket No. 18-122, 33 FCC Rcd. 6915, App’x B ¶ 50 (2018) (FCC 18-91) (“NPRM”) (“The Commission finds an overriding public interest in ... facilitating access to scarce spectrum resources[.]”); *accord Turner Broad. Sys., Inc. v. FCC*, 512 U.S. 622, 638 (1994) (“broadcast frequencies are a scarce resource”) (quoting *FCC v. League of Women Voters*, 468 U.S. 364, 377 (1984) (brackets omitted)).

⁹ *PMCM TV, LLC v. FCC*, 701 F.3d 380, 384 (D.C. Cir. 2012) (quoting *NBC v. FCC*, 516 F.2d 1101, 1110 (D.C. Cir. 1974)).

¹⁰ *NBC v. United States*, 319 U.S. 190, 212 (1943). Because AM and FM terrestrial radio transmissions pre-date satellite transmissions, these basic concepts of scarcity and licensing to prevent interference were first articulated in the context of radio. However, they are equally applicable to satellite transmissions.

frequencies and increased their power and hours of operation at will.”¹¹ The result was “confusion and interference,”¹² a “cacophony of competing voices, none of which could be clearly and predictably heard.”¹³ Congress intervened to “bring about allocation of available frequencies and to regulate the employment of transmission equipment” through a licensing regime administered by the FCC.¹⁴ “Congress’ principal concern ... was to end spectrum interference.”¹⁵

The primacy of the non-interference right is underscored by the First Amendment. “[P]rior restraints on speech and publication are the most serious and the least tolerable infringement on First Amendment rights.”¹⁶ Licensing is a prior restraint.¹⁷ Transmission is a form of speech.¹⁸ Thus, were the analysis to stop there, the licensing regime would likely violate the First Amendment. Yet, to the contrary, the Act’s licensing of transmissions has been held constitutional precisely because licensing is necessary to alleviate the “problems of interference between ... signals.”¹⁹ “The right of free speech,” the Supreme Court explained, “does not embrace a right to

¹¹ *Id.*

¹² *FCC v. Sanders Bros. Radio Station*, 309 U.S. 470, 474 (1940).

¹³ *Red Lion Broad. Co. v. FCC*, 395 U.S. 367, 376 (1969); *see also* *NBC*, 319 U.S. at 212 (“The result was confusion and chaos. With everybody on the air, nobody could be heard.”).

¹⁴ *Sanders Bros. Radio Station*, 309 U.S. at 472–74.

¹⁵ *Nat’l Ass’n For Better Broad. v. FCC*, 849 F.2d 665, 674 (D.C. Cir. 1988); *see also*, *Todisco v. United States*, 298 F.2d 208, 211 (9th Cir. 1961) (“the purpose of the licensing law is to prevent interference”).

¹⁶ *Neb. Press Ass’n v. Stuart*, 427 U.S. 539, 559 (1976).

¹⁷ *See, e.g., Citizens United v. FEC*, 558 U.S. 310, 335 (2010) (finding “prior restraint” where regulation required speaker to “ask a governmental agency for prior permission to speak”); *Lusk v. Vill. of Cold Spring*, 475 F.3d 480, 485 (2d Cir. 2007) (“A law requiring prior administrative approval of speech falls within the prior restraint rubric.”).

¹⁸ *See FCC v. Fox Television Stations, Inc.*, 567 U.S. 239, 253–54 (2012).

¹⁹ *See FCC v. Nat’l Citizens Comm. for Broad.*, 436 U.S. 775, 799 (1978). Justice Ginsburg and Justice Thomas have recognized that but for the interference rationale the regime of speaker licensure and other restrictions imposed by the Act would likely be unconstitutional. *See Fox*

snuff out the free speech of others.”²⁰ Thus, the constitutional reasoning that justifies the Act’s licensing requirement also confirms the primacy of the non-interference right.

The FSS space stations afforded U.S. market access have an equivalent non-interference right to FCC licensees because these stations have been guaranteed “national treatment” under the World Trade Organization Agreement on Basic Telecommunications Services.²¹ By guaranteeing national treatment to foreign-licensed satellites that obtain U.S. market access, the Agreement ensures that these satellites will receive “treatment no less favourable” than domestically licensed satellites.²² U.S. consumers benefit from the increased competition brought about by this arrangement, and U.S.-licensed satellites also obtain reciprocal treatment by the licensing authorities in 49 other countries.²³

Television Stations, 567 U.S. at 259 (Ginsburg, J., concurring); *FCC v. Fox Television Stations, Inc.*, 556 U.S. 502, 532 (2009) (Thomas, J., concurring).

²⁰ *Red Lion Broad. Co.*, 395 U.S. at 387; see *Prayze FM v. FCC*, 214 F.3d 245, 252–53 (2d Cir. 2000) (holding unlicensed microbroadcaster unlikely to succeed on First Amendment challenge to licensing requirement in light of “the substantial government interest in allowing other broadcasters to operate free of interference”).

²¹ See *In re Amendment of the Commission’s Regulatory Policies to Allow Non-U.S. Licensed Space Stations to Provide Domestic & Int’l Satellite Serv. in the United States*, Report & Order, 12 FCC Rcd. 24094 ¶¶ 19–27 (1997) (FCC 97-399) (“*DISCO II Order*”). Under the market-access rules adopted pursuant to the WTO Telecom Agreement, the Commission does “not issue a separate, and duplicative, U.S. license for a non-U.S. space station.” *Id.* ¶ 188. Rather, to obtain U.S. market access, “non-U.S. satellite operators may ... file Petitions for Declaratory Ruling, on their own behalf, seeking a ruling as to whether the Commission will permit the non-U.S. satellite to provide service in the United States.” *In re Amendment of the Commission’s Regulatory Policies to Allow Non-U.S. Licensed Space Stations to Provide Domestic & Int’l Satellite Serv. in the United States*, First Order on Reconsideration, 15 FCC Rcd. 7207 ¶ 10 (1999) (FCC 99-325) (“*DISCO II First Reconsideration Order*”). In addition, non-U.S. operators may “obtain[] U.S. access through an application filed by an earth station operator.” *Id.*

²² *DISCO II First Reconsideration Order* ¶ 3 n.9.

²³ *Id.* ¶¶ 3–4.

A licensee's or market access holder's non-interference right is enforceable where its authorized transmission is meaningfully harmed. For example, a licensee or market access holder whose transmission is subjected to harmful interference from another transmitter may obtain a cease and desist order from the Commission ordering the harmful transmission to cease.²⁴ If the person causing the harmful interference fails to obey the FCC's order, the injured party, or the agency itself, may seek to enforce the order in federal district court.²⁵ Similarly, where the Commission grants or modifies a license in a manner that harms another licensee or holder of market access, the injured party may seek reconsideration from the Commission or judicial review from a court of appeals.²⁶ In addition to these general procedures, the FCC's rules contain numerous other special enforcement mechanisms for remediating harmful interference in particular circumstances.²⁷

²⁴ See 47 U.S.C. §§ 312(b), 333; see also, e.g., *In re Jay Peralta, Corona, N.Y.*, Forfeiture Order, 32 FCC Rcd. 7993 ¶ 2 (EB 2017) (imposing forfeiture for "causing malicious interference to the NYPD's licensed operations"); *In re Michael Guernsey*, 30 FCC Rcd. 7354 ¶¶ 2, 4 (EB 2015) (imposing forfeiture for "intentional interference to licensed communications" raised in "multiple complaints" from license operators).

²⁵ 47 U.S.C. § 401(b); see *United States v. Szoka*, 260 F.3d 516, 522 (6th Cir. 2001).

²⁶ See 47 U.S.C. §§ 402(b), 405; 47 C.F.R. § 1.106(e) (describing procedures applicable "[w]here a petition for reconsideration is based upon a claim of electrical interference"); *W. Broad. Co. v. FCC*, 674 F.2d 44, 56 (D.C. Cir. 1982) (reversing modification that would cause interference to existing licensee); *In re R&S Media*, Memorandum Opinion & Order, 19 FCC Rcd. 6300, 6307 (MB 2004) (DA 04-960) (rescinding construction permit where Bureau staff failed to follow procedures and consider potential interference to existing licensee); *In re Olympian Broad. Corp.*, Memorandum Opinion & Order, 28 F.C.C.2d 399, ¶ 6 (1971) (FCC 71-248) ("we find in this instance that since WNAB's license would be modified by WKIP's proposed operation, the petitioner must be afforded the opportunity of showing why such modification should not take place"); *In re Application of Indian River Broad. Co.*, Memorandum Opinion & Order, 45 FCC 1610, 1611 (1964) (FCC 64-662) ("Since the basis for the petition is a claim that the WIRA grant would result in objectionable interference within WFTL's normally protected service area, we find that petitioner has standing as 'a party aggrieved'").

²⁷ See, e.g., 47 C.F.R. § 25.274 (establishing procedures "to be followed in the event of harmful interference" in connection with earth station transmissions).

Thus, as Commission licensees or market access holders, the FSS space station operators transmitting in the C-band possess non-interference rights against other transmitters. As explained in Section II.B., below, these rights exist independent of earth stations. Where FSS service is meaningfully harmed by interference, FSS space station operators transmitting in the C-band may enforce their non-interference right.

B. Receive-Only Earth Stations Registered In The C-Band Do Not Have Any Independently Enforceable Right Against Harmful Interference.

Unlike Commission licensees and space station recipients of U.S. market access, receive-only earth station registrants do not possess any independently enforceable right against harmful interference because *receive-only* earth stations do not *transmit* signals. The Commission has made clear for four decades that the text, structure, and purpose of the Communications Act, as well as common sense, dictate that receive-only earth stations need not hold “licenses” within the meaning of the Act.²⁸ Accordingly, any non-interference benefits obtained by receive-only earth stations are derived from the non-interference rights of space station licensees.

²⁸ Earth stations that transmit must, of course, be licensed. And the FCC requires licenses for earth stations that seek to communicate with non-U.S. licensed space stations that have not obtained market access. *See* 47 C.F.R. § 25.131(j). The purpose of that requirement, the Commission has explained, is “to provide a vehicle by which [the FCC] could examine factors specific to the non-U.S. *satellite*.” *DISCO II Order* ¶ 201; *accord DISCO II First Reconsideration Order* ¶ 9. “In contrast, in cases where the Commission *is* licensing the space station, we see no need to continue to license the receive-only earth station operating with that satellite, even if the transmissions originate in another country.” *DISCO II Order* ¶ 202. This limited exception to the general rule provides “the necessary mechanism to make [FCC] treatment of foreign-licensed satellites comparable” to domestic satellites. *Id.* ¶ 203. Similarly, passive sensing services like earth exploration satellite service and radio astronomy services are readily distinguishable as non-communications services that observe naturally reflected and radiated electromagnetic energy. There is no transmitter to assign interference protection rights, and thus these passive services are protected through spectrum allocation and the Commission’s rules. *See, e.g.*, 47 C.F.R. § 15.712(h).

Beginning with the text of the Act, Section 301 provides that “[n]o person shall use or operate any apparatus for the *transmission* of energy or communications or signals by radio ... except ... with a license” granted by the Commission.²⁹ Section 3 defines a “license” as “that instrument of authorization required by this chapter or the rules and regulations of the Commission made pursuant to this chapter, for the use or operation of apparatus for *transmission* of energy, or communications, or signals by radio, by whatever name the instrument may be designated by the Commission.”³⁰ The plain meaning of these terms excludes receive-only earth station registrants which, by definition, do not transmit.

The structure of the Act confirms this straightforward reading of the text. Title III prohibits transmission without a license. And it delegates to the Commission the authority to, among other things, “grant,” “suspend,” “transfer,” “revoke,” “modify,” and “recover” transmission licenses in accordance with statutory procedures and substantive requirements.³¹ Nowhere among these many and specific delegations is there any prohibition against *receiving* a signal without a license, nor any command to grant a reception license. The structure of the Act thus confirms that the licensing regime pertains only to the regulation of transmission.

The purpose and history of the Communications Act are similarly instructive. As discussed above, Congress enacted the licensing requirement to stop transmitting stations from “interfering with one another.”³² In light of this well documented history—history that has often been relied upon by the Commission and the Supreme Court to support statutory and constitutional rulings—

²⁹ 47 U.S.C. § 301 (emphasis added).

³⁰ *Id.* § 153(49) (emphasis added). These statutory definitions expressly apply to Title III. *See id.* § 153 (“For the purposes of this chapter ... ‘license’ means...”).

³¹ *See id.* §§ 303, 307, 310, 312, 312a, 316, 336.

³² *See NBC*, 319 U.S. at 213; *see also supra*, at II.A.

it is beyond dispute that “the purpose of the licensing law is to prevent interference” *caused by transmission*.³³ Because no amount of passive *reception* can cause interference, it is plain that the Communications Act was not intended to license reception.

Commission precedent agrees. The Commission permits receive-only earth stations to register for interference protection as a means of guaranteeing the non-interference right of space station licensees.³⁴ Earth stations are the specific locations at which interference is “felt” or becomes noticeable because interference to the FSS space station transmission is only measurable on the ground at the earth station. Thus, earth station registration is a convenient means for verifying the specific locations where FSS signals must receive interference protection from terrestrial signals. But the Commission has made perfectly clear that these “receive-only earth station registrations are ... no[t] station licenses” that would entitle the holder to independent non-interference rights.³⁵ As the Commission explained in 1979, and as remains true today, “[b]y definition, receive-only earth stations do not transmit” and thus do not need licenses.³⁶

³³ *Todisco*, 298 F.2d at 211; *see also* *PMCM TV*, 701 F.3d at 384 (“the basic purpose of the Communications Act [is] to ensure interference-free broadcasting”); *Nat’l Ass’n*, 849 F.2d at 674 (“Congress’ principal concern ... was to end spectrum interference”); *N.Y. SMSA Ltd. P’ship v. Town of Clarkstown*, 612 F.3d 97, 100 (2d Cir. 2010) (“The field of telecommunications—the electronic *transmission* of sounds, words, and images, usually over a great distance—has long been the subject of federal regulation.” (emphasis added)).

³⁴ *See In re Regulation of Domestic Receive-Only Satellite Earth Stations*, First Report & Order, 74 F.C.C.2d 205 ¶ 31 (1979) (FCC 79-665) (“1979 Satellite Order”).

³⁵ *In re Comprehensive Review of Licensing & Operating Rules for Satellite Servs.*, Second Report & Order, 30 FCC Rcd. 14713 ¶ 306 (2015) (FCC 15-167); *see also In re Amendment of Part 25 of the Commission’s Rules & Regulations to Reduce Alien Carrier Interference Between Fixed-Satellites at Reduced Orbital Spacings & to Revise Application Processing Procedures for Satellite Commc’ns Servs.*, First Report & Order, 6 FCC Rcd. 2806 ¶ 4 (1991) (FCC 91-136) (explaining registration “eliminate[s] the issuance of a formal license”). Indeed, receive-only authorizations do not even confer an independent right to *receive* service transmissions. *See* 47 C.F.R. § 25.131(c); 47 U.S.C. § 605.

³⁶ *1979 Satellite Order* ¶ 31; *see also id.* (“such stations do not transmit radio signals and therefore cannot cause interference to other users of the radio spectrum”); *In re Amendment of the*

Furthermore, it would be “unreasonable” to regard receive-only earth stations as “facilities ... incidental to radio transmission” because that interpretation “would require that all television and radio receivers be licensed as well as receive-only earth stations”³⁷—a result plainly foreclosed by the statute and thus out of bounds to the agency.³⁸

Common sense also confirms that receive-only earth station registrants are not licensees. The purpose of registering earth stations is to facilitate coordination among the co-primary users of the C-band—FSS and FS. When a receive-only earth station submits a voluntary registration to the Commission, it confirms FSS use of the band at that location and thus provides to the Commission a basis for denying any subsequent application to license an interfering FS transmission at that location.³⁹ As part of this proceeding, the Commission opened a 90-day window for receive-only earth stations to submit or update registrations. These receive-only earth station registrations, the Notice of Proposed Rulemaking explained, would inform the agency about “existing earth station usage of C-band satellites—including location and technical data that may be necessary to mitigate harmful interference” to FSS signals—and thus assist the

Commission’s Space Station Licensing Rules & Policies, Second Report & Order, 18 FCC Rcd. 12507, 12516 (2003) (FCC 03-128) (“we do not need a licensing procedure for routine receive-only earth stations to prevent them from causing harmful interference, because such receive-only operations cannot cause unacceptable interference”).

³⁷ *1979 Satellite Order* ¶ 31.

³⁸ *See Chevron, U.S.A., Inc. v. Nat. Res. Def. Council, Inc.*, 467 U.S. 837, 842 (1984) (“If the intent of Congress is clear, that is the end of the matter”).

³⁹ *See* 47 C.F.R. §§ 25.131(d) & (f); 25.251; *see also Temporary Freeze on Applications for New or Modified Fixed Satellite Service Earth Stations and Fixed Microwave Stations in the 3.7-4.2 GHz Band 90-Day Window to File Applications for Earth Stations Currently Operating in 3.7-4.2 GHz Band*, Public Notice, 33 FCC Rcd. 3841, 3844 (IB 2018) (DA 18-398) (“The purpose of this coordination requirement is to establish the baseline level of interference that an earth station must accept in frequency bands shared by the FS and FSS on a co-primary basis. The coordination results entitle the FSS earth station to the interference protection levels agreed to during coordination, including against subsequent FS licensees.”).

Commission in determining “how much spectrum could be made available” for terrestrial 5G operations.⁴⁰

Furthermore, earth stations should not be treated as facilities “incidental to ... transmission.”⁴¹ Again, the Commission rightly rejected that view forty years ago, holding receive-only earth stations are “ancillary” and not “incidental” to transmission.⁴² Despite the insistence of some commenters, the Commission’s subsequent decision during the digital TV transition, requiring television manufacturers to inform consumers that televisions sold without digital tuners would not receive digital transmissions, is not to the contrary.⁴³ That decision did not rest on a finding that television receivers are “incidental” to transmission and therefore somehow are “licensees” subject to Title III of the Act. Rather, the decision rested squarely on separate enumerated authority in “Title I [which] authorizes the Commission to regulate devices that receive broadcast communications.”⁴⁴ The digital transmission decision is thus inapposite and cannot overcome the clear text, structure, and purpose of the Communications Act.⁴⁵

In short, unlike Commission licensees and recipients of U.S. market access, receive-only earth station registrants do not possess any independently enforceable right against harmful interference. The non-interference benefits they obtain are derived from the non-interference rights of space station licensees and market access grantees.

⁴⁰ NPRM ¶ 18; *see also id.* ¶¶ 16–25.

⁴¹ *See* Letter from Russell H. Fox, Counsel to T-Mobile USA Inc., to Marlene H. Dortch, Secretary, FCC, at 2 (filed Mar. 19, 2019) (“T-Mobile Ex Parte”) (quoting 47 U.S.C. § 153(57)).

⁴² *1979 Satellite Order* ¶ 31.

⁴³ *See* T-Mobile Ex Parte, at 2.

⁴⁴ *In re Second Periodic Review of the Commission’s Rules & Policies Affecting the Conversion to Digital Television*, Second Report & Order, 22 FCC Rcd. 8776 ¶ 16 (2007) (FCC 07-69).

⁴⁵ *See also Am. Library Ass’n v. FCC*, 406 F.3d 689 (D.C. Cir. 2005).

III. THE FCC LACKS POWER TO AUTHORIZE UNILATERALLY NEW TERRESTRIAL MOBILE OPERATIONS IN THE C-BAND.

The Public Notice also seeks comment on the scope of the Commission’s authority “to authorize new terrestrial operations in the band.”⁴⁶ The FCC has clear statutory authority to determine the nature of the services to be provided under particular classes of licenses and to assign those services to particular bands of frequencies.⁴⁷ However, as explained below, where the Commission’s exercise of that authority infringes on the non-interference rights of existing licensees (or market access holders), its authority is circumscribed by Section 316 and the Takings Clause of the U.S. Constitution.⁴⁸ The record in this proceeding is unmistakably clear: FSS and terrestrial mobile services are not compatible co-frequency uses. Thus, the Commission may not authorize unilaterally new terrestrial operations in the C-band.

A. Section 316 Obligates The FCC To Protect Service Transmissions By Members Of The C-Band Alliance.

Section 316 authorizes the Commission to “modif[y]” a station license or construction permit consistent with the “public interest, convenience, and necessity.”⁴⁹ But that authority is not unlimited. “[T]he Commission’s section 316 power to ‘modif[y]’ existing licenses does not enable it to fundamentally change those licenses.”⁵⁰ As the Supreme Court has explained, that is because

⁴⁶ Public Notice, at 3.

⁴⁷ 47 U.S.C. § 303(b), (c), (f), (r); *see Aeronautical Radio, Inc. v. FCC*, 928 F.2d 428, 441 (D.C. Cir. 1991).

⁴⁸ These limits do not apply to receive-only earth station registrants because those entities lack licensed transmissions. *See* Section II.B, *supra*.

⁴⁹ 47 U.S.C. § 316(a)(1).

⁵⁰ *Cellco P’ship v. FCC*, 700 F.3d 534, 543 (D.C. Cir. 2012) (citing *Community Television, Inc. v. FCC*, 216 F.3d 1133, 1141 (2000)).

the term “modify” authorizes “moderate” and “minor” changes, but not “basic and fundamental changes.”⁵¹

The authorization of new terrestrial operations in any portion of the C-band would undoubtedly work an unlawful “basic and fundamental” change to the licenses and market access authorizations held by the members of the C-Band Alliance. The record in this proceeding unequivocally shows that the new terrestrial operations contemplated by the Commission would cause significant interference to incumbent FSS service operations in CONUS.⁵² The reason is

⁵¹ *MCI Telecommunications Corp. v. AT&T*, 512 U.S. 218, 228 (1994) (holding FCC action unlawful).

⁵² See, e.g., Letter from Henry G. Hultquist, Vice President Federal Regulatory, AT&T Services, Inc., to Marlene H. Dortch, Secretary, FCC, GN Docket No. 18-122, at 2-3 (filed May 23, 2019) (“AT&T Ex Parte Letter”) (“There is little, if any, dispute that FSS and terrestrial mobile services are not compatible as co-channel uses.”); Comments of the C-Band Alliance, GN Docket No. 18-122, at 16 (filed Oct. 29, 2018) (“C-Band Alliance Comments”) (“As shown in Section I of the attached Technical Annex, co-frequency sharing between FSS and terrestrial mobile service in the C-band Downlink is also infeasible.... To receive communications from geostationary satellites 22,000 miles away, C-band Downlink earth station antennas are highly sensitive by design and, consequently, extremely vulnerable to interference.”); Comments of Comcast Corporation and NBC Universal Media, LLC, GN Docket No. 18-122, at 15–17 (filed Oct. 29, 2018) (“As a threshold matter, the Commission correctly concludes that co-channel sharing with mobile uses is not feasible for C-Band FSS operations.... Repacking this band would be particularly tricky given the sensitive nature of satellite signals.”); Comments of Digital Networks, LLC, GN Docket No. 18-122, at 3 (filed Oct. 29, 2018) (“co-frequency sharing between terrestrial mobile services and satellite operations is not feasible”); Comments of Extreme Reach, Inc., GN Docket No. 18-122, at 3 (filed Oct. 29, 2018) (same); Comments of North American Broadcasters Association, GN Docket No. 18-122, at 1–2 (filed Oct. 29, 2018) (“new terrestrial uses in the C-Band downlink spectrum will cause significant harm to existing satellite users.... Extensive and rigorous studies ... conclude that due to the large number and wide geographic distribution of earth stations throughout the country and the large separation requirements, sharing of frequencies is not feasible.”); Comments of QVC, Inc. and HSN, Inc., GN Docket No. 18-122, at 4 (filed Oct. 29, 2018) (“Protected C-Band Satellite Operations Remain Essential for Video Programming Services Provided to Hundreds of Millions of Americans, and Current Alternatives, Including Co-Frequency Sharing, are not Viable Options in the Short Term”); Comments of T-Mobile USA, Inc., GN Docket No. 18-122, at 8 (filed Oct. 29, 2018) (“Regulating unfettered access to the 3.7-4.2 GHz band by both terrestrial and FSS operations in the same geographic area, if feasible at all, would prove overly complex for the Commission to adopt and for terrestrial wireless providers and satellite incumbents to implement.”).

obvious: “[B]ecause the C-band satellites are in geostationary orbit approximately 36,000 km above the equator, the signals received at the earth stations are extremely weak.”⁵³ This means that even relatively low-power signals from terrestrial mobile operations would cause harmful interference to satellite transmissions, obliterating existing service to the United States. As explained above, the “basic purpose” of obtaining a license is to “ensure interference-free” service transmission.⁵⁴ Thus, authorizing terrestrial mobile operations that overpower FSS service transmissions would clearly constitute a basic and fundamental change to the authorizations held by the members of the C-Band Alliance.

If the FCC were to authorize terrestrial mobile operations in any portion of the C-band, the resulting interference to FSS operations would be catastrophic and unlike anything the Commission has ever approved using its modification authority. For example, authorizing terrestrial mobile operations in the lower 200 MHz of the C-band would completely obliterate FSS service transmissions in that portion of the band. That fact alone easily distinguishes this proceeding from the prosaic examples cited in the Public Notice. The 2011 Data Roaming Order did not work a fundamental change because it “require[d] nothing more than the offering of ‘commercially reasonable’ roaming agreements.”⁵⁵ And the 1997 Digital TV Order left affected broadcasters able to “provide essentially the same services” “under very similar terms.”⁵⁶ Here, unlike in those proceedings, the services provided by the members of the C-Band Alliance would

⁵³ NPRM ¶ 50.

⁵⁴ See *PMCM TV*, 701 F.3d at 384; see also *supra*, at II.A.

⁵⁵ *Cellco P’ship*, 700 F.3d at 544; see Public Notice, at 5 n.23.

⁵⁶ *Cnty. Television, Inc. v. FCC*, 216 F.3d 1133, 1141 (D.C. Cir. 2000); see Public Notice, at 5 n.23.

be “entirely eliminated” in the affected portions of the C-band by massive levels of interference.⁵⁷ Because interference protection is “the heart” of the Communications Act licensing regime, elimination of that protection in any significant portion of the band would be “much too extensive to be considered a ‘modification.’”⁵⁸

Interference concerns are not the only way in which authorizing new terrestrial operations in the C-band would work an unlawful basic and fundamental change to the authorizations held by the members of the C-Band Alliance. As a technical matter, the provision of service on particular frequencies within the C-band is accomplished through individual transponders tuned to those frequencies and mounted on a satellite prior to launch.⁵⁹ If terrestrial mobile operations were authorized in some portion of the C-band, the transponders tuned to those frequencies would become unusable for service transmissions to the continental United States. This would negatively impact the functionality and economic viability of the satellites carrying those transponders. It could also seriously disrupt the services relied upon by nearly 120 million American households that receive programming content over the C-band. There is no doubt that with respect to FSS service operations in the continental United States, an order authorizing terrestrial mobile operations would work an unlawful basic and fundamental change.

There is no merit to the suggestion by some parties that Section 316’s limitations on the FCC’s modification authority would not “apply if the Commission authorized additional terrestrial

⁵⁷ See *MCI Telecommunications Corp.*, 512 U.S. at 221.

⁵⁸ See *id.* at 229–31 (“For the body of a law, as for the body of a person, whether a change is minor or major depends to some extent upon the importance of the item changed to the whole. Loss of an entire toenail is insignificant; loss of an entire arm tragic. The tariff-filing requirement is, to pursue this analogy, the heart of the common-carrier section of the Communications Act.... [W]e think an elimination of the crucial provision of the statute for 40% of a major sector of the industry is much too extensive to be considered a ‘modification.’”).

⁵⁹ C-Band Alliance Comments, at 43, 48.

use that could interfere with the receipt of the signal” but did not formally alter “a satellite operator’s transmission rights.”⁶⁰ That argument relies on a purported distinction between direct and indirect license modifications that the D.C. Circuit has found both “wrong as a matter of law and patently inconsistent with the Commission’s own decision[s].”⁶¹ It is well settled that the FCC need not “literally change the terms” of an existing license for the courts to “regard ‘[the] license [as] modified for purposes of section 316.’”⁶² Section 316 is implicated whenever the Commission grants a license on the same frequency as an existing licensee providing service transmissions that would suffer interference.

Nor can any analogy be drawn between terrestrial mobile operations and the relatively minimal interference risk posed by FS operations.⁶³ FSS 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.⁶⁴ Terrestrial mobile operations are vastly different. The contemplated terrestrial 5G services would involve near-constant transmission in

⁶⁰ Public Notice, at 4; *see* Letter from Russell H. Fox, Counsel to T-Mobile USA, Inc., to Marlene H. Dortch, Secretary, FCC, GN Docket No. 18-122, at 8 (filed Apr. 11, 2019) (arguing modification authority not implicated because “satellite operators may continue to transmit using all 500 megahertz of that spectrum and serve earth stations in locations where they will continue to exist”).

⁶¹ *W. Broad. Co.*, 674 F.2d at 50 (reversing and remanding where FCC effected an indirect license modification); *see also id.* at 49 (“It has long been established that [Section 316] covers indirect as well as direct modifications of licenses.”).

⁶² *AMSC Subsidiary Corp. v. FCC*, 216 F.3d 1154, 1158–59 (D.C. Cir. 2000); *see also P & R Temmer v. FCC*, 743 F.2d 918, 927 (D.C. Cir. 1984) (“a court considering the applicability of section 316 must look beyond the form of the license document and beyond the language employed by the FCC to describe its action.... [A] ... license to broadcast on a given frequency is ‘modified’ if the FCC grants a license to another broadcaster on that frequency.” (citing *FCC v. NBC*, 319 U.S. 239 (1943))).

⁶³ FS is licensed on a co-primary basis with FSS in the C-band. *See* 47 C.F.R. § 2.106, United States Table of Frequency Allocations, non-Federal Table for the band 3.7-4.2 GHz.

⁶⁴ NPRM ¶ 9.

populated areas of the United States. “There is little, if any, dispute that FSS and terrestrial mobile services are not compatible as co-channel uses,”⁶⁵ and there is thus no comparison between FS and terrestrial mobile operations.

Moreover, certain other provisions of the Communications Act—which authorize the FCC to “revoke,” “transfer,” and “recover” station licenses under certain conditions—confirm the outer limits of a Section 316 “modification.”⁶⁶ If the Commission could effect an operational revocation or transfer through its modification authority, the statutory protections associated with those actions would be meaningless.⁶⁷

Section 316’s “public interest, convenience, and necessity” standard likewise would not support introduction of terrestrial mobile operations into the C-band.⁶⁸ The members of the C-Band Alliance have invested billions of dollars in the infrastructure and systems that today are relied upon by nearly 120 million American households (representing over 300 million people) that receive programming content over the C-band. An order clearing the lower portion of the C-band “will necessarily involve widespread changes in ... satellites, transponders, and frequencies ... as traffic loading is rearranged to compress existing services into a narrower range of frequencies.”⁶⁹ Thus, substantial portions of the investments made by members of the C-Band Alliance that facilitate actual service transmissions to millions of Americans would be squandered.

⁶⁵ AT&T Ex Parte Letter, at 2–3.

⁶⁶ See 47 U.S.C. §§ 310 (transfer), 312 (revocation) 312a (revocation for drug offenses), 336 (recovery).

⁶⁷ See, e.g., *RadLAX Gateway Hotel, LLC v. Amalgamated Bank*, 566 U.S. 639, 645 (2012) (“[I]t is a commonplace of statutory construction that the specific governs the general.”).

⁶⁸ 47 U.S.C. § 316(a)(1); see Public Notice, at 7.

⁶⁹ C-Band Alliance Comments, at 53.

B. The Takings Clause Confirms The FCC’s Obligation To Protect Service Transmissions By Members Of The C-Band Alliance.

The Takings Clause of the U.S. Constitution confirms the limits of Section 316.⁷⁰ As explained above, an order authorizing terrestrial mobile operations in the C-band would cause transponders operating on these frequencies to become unusable, effecting a taking of the equipment and spectrum used to provide service into the United States, and entitling space station operators to just compensation.⁷¹ “[P]recedent instructs that the policy of [constitutional] avoidance should ... take effect when ‘there is an identifiable class of cases in which application of a statute will necessarily constitute a taking,’” as there is here, lest the “executive encroach[] on Congress’s exclusive powers to raise revenue, and to appropriate funds.”⁷² Section 316 must therefore be construed to prevent authorization of terrestrial mobile operations in the C-band.

C. Section 316 And The Takings Clause Do Not Obligate The FCC To Protect The Non-Existent Services And Non-Enforceable Rights Of Other Satellite Operators.

Several self-proclaimed “small satellite operators” (“SSOs”) who, by their own admission, do not provide service transmission in the continental United States and, in some cases, lack the technical capability viably to do so, have sought to take advantage of any potential interference

⁷⁰ See U.S. Const. amend V.

⁷¹ See *Lucas v. S.C. Coastal Council*, 505 U.S. 1003, 1017 (1992) (“total deprivation of beneficial use is ... the equivalent of a physical appropriation”); see also *Penn Cent. Transp. Co. v. N.Y.C.*, 438 U.S. 104, 124 (1978) (recognizing partial deprivation is recoverable). Federal courts have recognized that licensees have a cognizable Fifth Amendment property interest in their licensed spectrum. See, e.g., *Alpine PCS, Inc. v. United States*, 128 Fed. Cl. 303, 309 (2016) (recognizing FCC license confers a property interest), *aff’d on other grounds*, 878 F.3d 1086 (Fed. Cir. 2018), *cert. denied*, 139 S. Ct. 78 (2018); see also *In re Atl. Bus. and Cmty. Dev. Corp.*, 994 F.2d 1069, 1074 (3d Cir. 1993) (“The Communications Act itself seems to ... impl[y] the creation of rights akin to those created by a property interest limited only by the ‘terms, conditions and periods of the license.’” (citation omitted)).

⁷² *Bell Atl. Tel. Companies v. FCC*, 24 F.3d 1441, 1445 (D.C. Cir. 1994) (quoting *United States v. Riverside Bayview Homes, Inc.*, 474 U.S. 121, 128 n.5 (1985)) (citations omitted).

coordination process to enrich themselves—despite the fact that they have no services that will be harmed by the repurposing of the C-band.⁷³ The C-Band Alliance has previously explained that the SSOs should not be permitted to engage in such rent-seeking behavior.⁷⁴

The commonsense position of the C-Band Alliance does not suggest that “the enforceable rights of a space station operator [are] dependent on, or derivative from, the rights of licensed or registered receive-only earth stations that receive that space station operator’s signal.”⁷⁵ As explained above, any non-interference benefits enjoyed by receive-only earth stations are merely derived from the non-interference rights of space station licensees. Thus, the C-Band Alliance’s position that coordination between the SSOs and terrestrial mobile operators should not be a precondition to terrestrial mobile licensing arises from the recognition that the SSOs lack any service transmissions that require protection and give rise to an enforceable right.

The SSOs concede that they lack “revenue from C-band services” to CONUS.⁷⁶ Claro/Embratel and Hispasat serve South America. Claro/Embratel’s own coverage maps show that the C-band beams emanating from Embratel Star One C2 and Embratel Star One C3 are

⁷³ The entities identifying themselves as “small satellite operators” are ABS Global Ltd., Hispasat S.A., and Claro S.A. (f/k/a Embratel Star One S.A). The C-Band Alliance has previously collected for the Commission statements from each of these operators conceding that they lack service transmissions in the United States. *See* Reply Comments of the C-Band Alliance, GN Docket No. 18-122, at 45–48 (filed Dec. 7, 2018) (“C-Band Alliance Reply Comments”). And these operators confirmed in an ex parte filing that they have neither customers nor revenue in the United States. *See* Letter from Scott Blake Harris, Counsel to the Small Satellite Operators, to Marlene H. Dortch, Secretary, FCC, GN Docket No. 18-122, at 2 (filed Feb. 21, 2019) (“SSO Ex Parte Letter II”).

⁷⁴ *See* C-Band Alliance Reply Comments, at 45–48; Letter from Michele C. Farquhar, Counsel to the C-Band Alliance, to Marlene H. Dortch, Secretary, FCC, GN Docket No. 18-122, at Attachment C. p.10 (filed Nov. 19, 2018).

⁷⁵ *See* Public Notice, at 3.

⁷⁶ Ex Parte Letter from Scott Blake Harris, Counsel to Hispasat, to Marlene H. Dortch, Secretary, FCC, Docket No. 18-122, Attachment, at 6 (filed Oct. 15, 2018) (“SSO Ex Parte Letter I”); *see also* SSO Ex Parte Letter II, at 2.

incapable of reaching the United States.⁷⁷ And, although the beam from twelve-year-old Embratel Star One C1 appears to reach part of the southeastern United States,⁷⁸ the company concedes that the satellite has never provided service there.⁷⁹ Similarly, while the beam from Hispasat's Amazonas-3 reaches CONUS,⁸⁰ it serves no U.S. customers,⁸¹ and Hispasat acknowledges that it has “fully booked” the satellite's C-band transponders with non-U.S. service “for years.”⁸² ABS-3A, which is owned by a Hong Kong company and operates under Papua New Guinea and Intersputnik ITU filings, appears designed primarily to serve Africa and South America, given that the orbital position of the satellite makes it hardly visible from the United States. The company sought approval to construct an earth station in Hudson, New York, six-months *after* the FCC issued a Notice of Inquiry in this proceeding.⁸³ But the C-band beam of ABS-3A would only reach the Hudson earth station at a 5.4° elevation angle (which would render viable service highly

⁷⁷ Embratel, *About Star One C2 Satellite* (last visited July 3, 2019), http://www.starone.com.br/en/internas/satelite_c2/ (click “Coverage Map” button); Embratel, *About Star One C3 Satellite* (last visited July 3, 2019) http://www.starone.com.br/en/internas/satelite_c3/ (same).

⁷⁸ See Embratel, *About Star One C1 Satellite* (last visited July 3, 2019) http://www.starone.com.br/en/internas/satelite_c1/ (click “Coverage Map” button); Star One S.A., Petition for Declaratory Ruling, Call Sign S2677, IBFS File No. SAT-PPL-20050706-00143 (Int'l Bur. granted Mar. 29, 2006).

⁷⁹ See SSO Ex Parte Letter I, Attachment, at 6.

⁸⁰ Hispasat, *Amazonas-3 Satellite Characteristics* (last visited Jul 3, 2019), https://www.hispasat.com/contenidos/web/0/47-amz_3-8.pdf.

⁸¹ See Comments of ABS, Hispasat, and Embratel Star One, GN Docket No. 18-122, at 5 (filed Oct. 29, 2018).

⁸² *Id.*

⁸³ *Compare In re Expanding Flexible Use in Mid-Band Spectrum Between 3.7 and 24 GHz*, Notice of Inquiry, 32 FCC Rcd. 6373 (2017) (FCC 17-104) with Application in File No. SES-LIC-20180213-00118 (filed Feb. 13, 2018).

impracticable as a technical matter), and ABS failed to build the earth station before its authorization lapsed in March 2019.⁸⁴

Analysis of the coverage maps of the SSOs' satellites reveals that they were designed primarily to serve South America and/or Africa, not CONUS. While some of their satellites do provide marginal coverage of CONUS, such limited coverage does not provide for any viable service to Americans. This is clearly demonstrated by the fact that none of the SSOs derive any C-band revenue from the United States, even though they have held U.S. market access in some cases for over a decade.

The SSOs' lack of service transmissions to CONUS means that the authorization of new terrestrial mobile operations in CONUS will not harm the SSOs and therefore cannot effect a "basic and fundamental" change to the market access authorizations they possess. The Commission's rules provide that to enforce a non-interference right the holder of a license or other FCC authorization must show that any interference it alleges is real.⁸⁵ The Commission has also recognized when dealing with incumbent licensees that it may lawfully "distinguish between 'real' networks that have received substantial investment and provide socially productive service" and "'paper networks' whose only effect is to restrict spectrum" that would otherwise be available for

⁸⁴ See Request for Extension of Time in File No. SES-LIC-20180213-00118 (filed Mar. 7, 2019). Ironically, ABS claimed in its extension request that it was unable to construct the Hudson earth station due to "regulatory uncertainty," and cited the instant proceeding. However, ABS applied for the Hudson earth station *after* the C-band proceeding was well underway.

⁸⁵ See 47 C.F.R. §§ 1.106(e) ("Where a petition for reconsideration is based upon a claim of electrical interference, ... such petition ... must be accompanied by an affidavit of a qualified radio engineer. ... show[ing] ... that electrical interference will be caused to the station"), 2.1(c)(3) (defining "[i]nterference" as "[t]he effect of unwanted energy ... manifested by any performance degradation, misinterpretation, or loss of information"); *In re Interstate Consol., Inc.*, 15 FCC Rcd. 3330, 3337 (2000) (FCC 00-51) ("claims of interference ... require some manner of tangible evidence to support them").

more productive uses.⁸⁶ Federal courts similarly require a showing that any alleged interference is “actual or imminent, not conjectural or hypothetical.”⁸⁷ Unlike the members of the C-Band Alliance, the SSOs do not offer any service in CONUS that could be harmed by the authorization of terrestrial mobile operations in CONUS. Thus, because the SSOs’ alleged injury is merely theoretical, the Commission would not exceed its modification authority with respect to the SSOs if it were to authorize new terrestrial mobile operations in the C-band.

The SSOs’ argument that the FCC must not modify their authorizations because they “intend to” provide service to CONUS is belied by the record in this proceeding.⁸⁸ The SSOs acknowledge that they obtained market access years—and in some cases, more than a decade—ago.⁸⁹ Thus, all three companies have had ample opportunity to serve the United States. But the SSOs admit that they have never secured a single U.S. customer, nor one penny of U.S. revenue.⁹⁰ Actions speak louder than words. The SSOs have chosen to invest their resources in serving other countries. They cannot now be heard to claim that they intended to serve America all along.

Moreover, the public interest disfavors compensating the SSOs because the market-access authorizations held by these operators have not been used to benefit Americans.⁹¹ The purpose of

⁸⁶ *In re Amendment of the Commission’s Rules with Regard to Commercial Operations in the 3550-3650 MHz Band*, Report & Order & Second Further NPRM, 30 FCC Rcd. 3959 ¶ 402 (2015) (FCC 15-47).

⁸⁷ *See Spokeo, Inc. v. Robins*, 136 S. Ct. 1540, 1548 (2016); *AMSC*, 216 F.3d at 1160 (holding FCC not required to hear “speculative” interference claim under § 316); *Mobile Relay Assocs. v. FCC*, 457 F.3d 1, 13–14 (D.C. Cir. 2006) (“[I]n the licensing context, the party seeking to establish standing on that basis must demonstrate that it is a direct and current competitor whose bottom line may be adversely affected by the challenged government action.” (quoting *KERM, Inc. v. FCC*, 353 F.3d 57, 60 (D.C. Cir. 2004) (emphasis and internal quotation marks removed))).

⁸⁸ *See* SSO Ex Parte Letter I, Attachment, at 6.

⁸⁹ *See id.*, Attachment, at 5.

⁹⁰ *See id.*, Attachment, at 6.

⁹¹ *See* 47 U.S.C. § 316(a); Public Notice, at 7.

authorizing non-U.S.-licensed satellites to deliver services in the United States is to “bring U.S. consumers the benefits of enhanced competition.”⁹² “Enhanced competition in the U.S. market,” the Commission has explained, “provide[s] users more alternatives in choosing communications providers and services,” and “reduce[s] prices and facilitate[s] technological innovation.”⁹³ The market access authorizations obtained by members of the C-Band Alliance enable robust delivery of video and data services to the U.S. marketplace, directly contributing to the benefits of enhanced competition. Because the SSOs, by their own admission, do not provide such services⁹⁴ and lack full coverage capability,⁹⁵ they are not currently contributing to market competition that benefits Americans. The public interest simply does not favor compensating these station operators in the C-band transition process.

Equitable principles confirm the public interest analysis.⁹⁶ Unlike the members of the C-Band Alliance, which must use proceeds from any secondary market transaction to groom their U.S. customers from the cleared portion of the C-band into the remaining spectrum and to procure new satellites to expand the capacity available in that spectrum, the SSOs have no U.S. customers to groom. They therefore will incur no costs nor expend any effort associated with the transition. Nor have the SSOs made any investment of time and money to serve CONUS that might entitle them to compensation under a common law theory of desert.⁹⁷ Under any conceivable public

⁹² *DISCO II First Reconsideration Order* ¶ 4.

⁹³ *DISCO II Order* ¶ 4.

⁹⁴ SSO Ex Parte Letter I, Attachment, at 6; *see also* SSO Ex Parte Letter II, at 2.

⁹⁵ *See* nn. 76–84, *supra*.

⁹⁶ Public Notice, at 7.

⁹⁷ *See* Thomas W. Hazlett, *The Rationality of U.S. Regulation of the Broadcast Spectrum*, 33 J.L. & Econ. 133, 149–52 (1990) (discussing *Chicago Tribune Co. v. Oak Leaves Broadcasting Station*, Ill. Circuit Ct., Cook County, Nov. 17, 1926, *reprinted in* 68 Cong. Rec. 215–19 (1926), and explaining common law theories that pre-date the Communications Act); John Locke, Second

interest standard, therefore, the SSOs need not—and should not—be incentivized to take no action or incur no costs.

D. The Voluntary Model Proposed By The C-Band Alliance Would Facilitate New Terrestrial Mobile Operations In The C-Band.

As described above, the FCC lacks authority to unilaterally authorize new terrestrial mobile operations in the C-band. All is not lost, however, because what the Commission could not do via regulatory fiat, the C-Band Alliance could achieve via voluntary agreements. The C-Band Alliance has put forth a proposal whereby it would enter into such agreements with terrestrial mobile operators to make the lower 200 MHz of the C-band available for terrestrial 5G service, inclusive of a 20 MHz guard band.⁹⁸ The process proposed by the C-Band Alliance would rely on a market-based mechanism designed to allow all interested participants a transparent, fair opportunity to acquire C-band spectrum interference protection rights so as to enable terrestrial mobile use on an expedited basis.⁹⁹

The compensation the C-Band Alliance would receive from terrestrial mobile operators would be used in part “to cover repacking costs and ensure uninterrupted service for both C-band Downlink satellite operators and their customers.”¹⁰⁰ Such costs are substantial. For example, new satellites must be acquired and launched, and filters must be designed and installed on every antenna at every earth station in CONUS. The proceeds from the proposed market-based approach

Treatise of Government § 27 (1690) (“Whatsoever then he removes out of the state that nature hath provided, and left it in, he hath mixed his labour with, and joined to it something that is his own, and thereby makes it his property.... [A]t least where there is enough, and as good, left in common for others.”).

⁹⁸ This proposal has been described at length in the record. *See, e.g.*, C-Band Alliance Comments; C-Band Alliance Reply Comments.

⁹⁹ *See* Letter from Bill Tolpegin, Chief Executive Officer, C-Band Alliance, to Marlene H. Dortch, Secretary, FCC, GN Docket No. 18-122, at Attachment (filed June 12, 2019).

¹⁰⁰ C-Band Alliance Comments, at 4.

would also recognize the C-Band Alliance members' efforts to develop and come forward proactively with a public-spirited solution to a pressing need identified by the Commission. And not just the idea for a solution, but a fully-fledged, "whole package" solution that addresses *every aspect* of a very complex transition process. To the extent the C-Band Alliance realizes compensation commensurate with its time, effort, costs, and foregone revenue, licensees in other bands could be incentivized to similarly look for ways to use their licensed spectrum more efficiently and make spectrum available for other services in the public interest.¹⁰¹

Indeed, the C-Band Alliance is essential—if not wholly indispensable—to opening the C-band to terrestrial mobile operations. The C-Band Alliance is committed to helping existing customers transition out of the portion of the band that will be cleared for terrestrial 5G operators. In binding commitment letters sent to their respective customers, the members of the C-Band Alliance agreed to undertake, manage, and complete all necessary actions for customers to transition to 300 MHz of spectrum if the proposed market-based approach is adopted by the Commission.¹⁰² No other party to this proceeding has the requisite expertise to provide this level of assistance, and no other reallocation plan before the Commission ensures that the members of

¹⁰¹ This is also consistent with the Commission's practice since the *Emerging Technologies* proceeding of the early 1990s to incentivize negotiation between incumbents and new entrants through compensation. *See, e.g., In re Amendment of Section 2.106 of the Commission's Rules to Allocate Spectrum at 2 GHz for Use by the Mobile-Satellite Service*, Memorandum Opinion & Order & Third NPRM & Order, 13 FCC Rcd. 23949 (1998) (FCC 98-309).

¹⁰² *See* Letter from Henry Gola, Counsel for the C-Band Alliance, to Marlene H. Dortch, Secretary, FCC, GN Docket No. 18-122 (filed Apr. 3, 2019). The commitment letters also set forth an earmark of 120% of the estimated spectrum clearing costs for customer expenses; provide a schedule of transition-related expenses; detail technical specifications for antenna filters; and contain customer-specific transition timelines, loading and restoration plans, and terrestrial uplink and operations plans.

the C-Band Alliance will invest the time and resources necessary to guarantee a successful transition.¹⁰³

IV. THE FCC LACKS POWER TO COMPENSATE RECEIVE ONLY EARTH STATION REGISTRANTS THROUGH AN INCENTIVE AUCTION OR OTHER MEANS.

The Public Notice also seeks comment as to whether the Commission has statutory authority to share the proceeds of an incentive auction with registered receive-only earth stations in the C-band.¹⁰⁴ The definitive answer is “no.” In the “reverse” portion of an incentive auction, existing licensees voluntarily relinquish service transmission rights in exchange for a share of the proceeds from an auction of new licenses to use the repurposed spectrum.¹⁰⁵ Receive-only earth stations, of course, have no licensed rights to relinquish and in any event are not “competing licensees,” so the plain language of the statute forecloses their participation. Moreover, allowing such an auction in the C-band would fundamentally alter the rights of space stations serving

¹⁰³ As is readily apparent from the record, the C-Band Alliance is also committed to protecting satellite service quality, reliability, and certainty for incumbent users in the 300 MHz of spectrum that will remain for FSS use. *See, e.g.*, Letter from Jennifer D. Hindin, Counsel for the C-Band Alliance, to Marlene H. Dortch, Secretary, FCC, GN Docket No. 18-122 (filed Feb. 7, 2019) (attaching satellite transponder migration plans describing how members of the C-Band Alliance plan to accommodate all existing C-band customers in 300 MHz of spectrum); Letter from Jennifer D. Hindin, Counsel for the C-Band Alliance, to Marlene H. Dortch, Secretary, FCC, GN Docket No. 18-122 (filed Apr. 9, 2019) (describing technical and logistical solutions designed to protect against interference between terrestrial 5G operations and continuing C-band satellite service, detailing proposed spacecraft launch plans and timing, discussing how and when cleared spectrum could be made available to 5G operators, and outlining the ground impacts of spectrum clearing, including the anticipated sequencing of installing filters in every eligible receive antenna in CONUS); Letter from Jennifer D. Hindin, Counsel for the C-Band Alliance, to Marlene H. Dortch, Secretary, FCC, GN Docket No. 18-122 (filed Mar. 4, 2019) (attaching the C-Band Alliance’s “Further Technical Statement” describing proposed rules and technical considerations designed to protect earth stations operations from harmful interference caused by flexible use operations).

¹⁰⁴ Public Notice, at 5–6.

¹⁰⁵ *See In re Expanding the Econ. & Innovation Opportunities of Spectrum Through Incentive Auctions*, NPRM, 27 FCC Rcd. 12357, 12359 (2012) (FCC 12-118).

CONUS, in violation of Section 316. But even if the FCC had authority to allow earth station participation in an incentive auction, exercising that authority would contravene the public interest.

A. Section 309(j)(8)(G) Prohibits The Commission From Sharing Incentive Auction Proceeds With Entities That Do Not Transmit.

“The incentive auction is a new tool authorized by Congress to help the Commission meet the Nation’s accelerating spectrum needs.”¹⁰⁶ Section 6402 of the Middle Class Tax Relief and Job Creation Act of 2012 (the “Spectrum Act”), codified at 47 U.S.C. § 309(j)(8)(G), “authorizes the Commission to conduct incentive auctions in which licensees may voluntarily relinquish their spectrum usage rights in order to permit the assignment by auction of new initial licenses subject to flexible use service rules, in exchange for a portion of the resulting auction proceeds.”¹⁰⁷

The Commission’s incentive auction authority operates “within specified limits.”¹⁰⁸ Those limits include the restriction of participation in an incentive auction to *licensees*. Section 309(j)(8)(G) provides that “the Commission may encourage *a licensee* to relinquish voluntarily some or all of its licensed spectrum usage rights in order to permit the assignment of new initial licenses.”¹⁰⁹ The term “licensee” is defined in the Communications Act as “the holder of a radio

¹⁰⁶ *In re Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions*, Report & Order, 29 FCC Rcd. 6567, 6569 (2014) (FCC 14-50), *aff’d*, *Nat’l Ass’n of Broads. v. FCC*, 789 F.3d 165 (D.C. Cir. 2015) (“*Incentive Auction R&O*”).

¹⁰⁷ *See In re Expanding the Econ. & Innovation Opportunities of Spectrum Through Incentive Auctions*, NPRM, 27 FCC Rcd. 12357, 12368 (2012) (FCC 12-118); *see also* Middle Class Tax Relief and Job Creation Act of 2012, Pub. L. No. 112-96, § 6402, 125 Stat. 156 (2012) (“Spectrum Act”).

¹⁰⁸ H.R. Conf. Rep. No. 112-399, at 131 (2012), *reprinted in* 2012 U.S.C.C.A.N. 186, 214.

¹⁰⁹ 47 U.S.C. § 309(j)(8)(G)(i) (emphasis added); *see also id.* § 309(j)(8)(G)(ii) (“The Commission may not enter into an agreement for a *licensee* to relinquish spectrum usage rights ... unless ... the Commission conducts a reverse auction to determine the amount of compensation that *licensees* would accept”).

station license.”¹¹⁰ A “radio station license” is “that instrument of authorization required ... for the use or operation of apparatus for *transmission* of energy, or communications, or signals by radio, by whatever name the instrument may be designated by the Commission.”¹¹¹ For all the reasons discussed in part II.B., *supra*, receive-only earth station operators cannot be considered licensees within the meaning of the statute because they do not transmit.

There are three additional reasons receive-only earth stations cannot be considered licensees within the meaning of Section 309(j)(8)(G). *First*, the statute expressly states that the rights a licensee may relinquish are the licensee’s “licensed spectrum usage rights.”¹¹² In the Communications Act, “use” of spectrum refers to “transmission.”¹¹³ Thus, when Congress amended the Communications Act through the Spectrum Act, Congress’s employment of the term “usage” clearly was meant to invoke the act of transmission.¹¹⁴ Receive-only earth stations do not engage in transmission and thus do not hold “spectrum usage rights.”

Second, Section 6403 of the Spectrum Act illustrates Congress’s purpose in authorizing the Commission to conduct incentive auctions. Section 6403 required the Commission to conduct an incentive auction of the broadcast television spectrum, whereby television broadcasters could voluntarily relinquish their spectrum rights in exchange for a portion of the proceeds generated by

¹¹⁰ *Id.* § 153(30).

¹¹¹ *Id.* § 153(49).

¹¹² *Id.* § 309(j)(8)(G).

¹¹³ *See id.* § 301 (“It is the purpose of this chapter, among other things, to maintain the control of the United States over all the channels of radio transmission; and to provide for the *use* of such channels[.]” (emphasis added)).

¹¹⁴ *See, e.g., Hanif v. Attorney Gen. of U.S.*, 694 F.3d 479, 484 (3d Cir. 2012) (“we must presume that Congress intended to give those terms the meaning ascribed to them elsewhere in the statute”).

the auction.¹¹⁵ For purposes of that incentive auction, Congress described an “eligible relinquishment” as a “television broadcast licensee” giving up “all usage rights” with respect to individual “television channel[s].”¹¹⁶ There is no hint anywhere in the statute, nor in the FCC’s implementing orders, that a consumer who *received* television broadcasts, or an intermediate distributor to consumers, could somehow participate in a reverse auction and receive a portion of the proceeds. Indeed, it would make no sense to pay individuals to stop receiving signals because that would do nothing to make additional spectrum available for transmission.¹¹⁷

Third, section 309(j)(8)(G)(II)(ii) requires that “at least two competing licensees” must participate in the reverse auction. Receive-only earth stations cannot be considered “competing licensees” against satellite operators for the purposes of an FCC incentive auction because they do not compete with satellite operators.¹¹⁸ Indeed, as the Commission explained regarding the broadcast incentive auction, only television broadcast license holders were potential “competing licensees”—television receivers did not meet this definition.¹¹⁹

¹¹⁵ See 47 U.S.C. § 1452; see also *In re Expanding the Econ. & Innovation Opportunities of Spectrum Through Incentive Auctions*, NPRM, 27 FCC Rcd. 12357, 12368 (2012) (FCC 12-118) (explaining § 1452).

¹¹⁶ 47 U.S.C. § 1452(a)(1), (2); see also *id.* § 1401(30) (in “an incentive auction of broadcast television spectrum under section 1452(a),... a broadcast television licensee may submit bids stating the amount it would accept for voluntarily relinquishing some or all of its broadcast television spectrum usage rights”).

¹¹⁷ Cf. *1979 Satellite Order* ¶ 31 (finding it “unreasonable” to regard receive-only earth stations as “facilities ... incidental to radio transmission” because that interpretation “would require that all television and radio receivers be licensed as well as receive-only earth stations”).

¹¹⁸ See Letter from Paul Milgrom, Chairman, Auctionomics, Inc., to Marlene H. Dortch, Secretary, FCC, GN Docket No. 18-122, at 1 (Mar. 6, 2019) (“Milgrom Analysis”) (explaining competition only results among bidders who supply economic substitutes), filed as attachment to Letter from Henry Gola, Counsel for the C-Band Alliance, to Marlene H. Dortch, Secretary, FCC, GN Docket No. 18-122 (filed Mar. 7, 2019).

¹¹⁹ *Incentive Auction R&O* ¶¶ 412–15.

In sum, because receive-only earth stations do not possess FCC licenses, do not have licensed, protected transmission rights that they may relinquish voluntarily, and do not compete with FSS operators, they are not eligible to participate in an incentive auction pursuant to Section 309(j)(8)(G).

B. Section 316 Prohibits The Commission From Utilizing An Incentive Auction Or Other Mechanism To Incentivize Receive-Only Earth Stations To Clear The C-Band.

The Public Notice seeks comment as to whether the Commission has any “other statutory authorities that would enable it to authorize or require payments to licensed or registered receive-only earth stations to induce them to modify or relocate their facilities.”¹²⁰ The answer is “no.”

As established above, receive-only earth stations do not transmit. Rather, they passively receive service transmissions from FSS space stations. Transmitters providing service into the United States—*i.e.*, FSS space stations—are the only entities that possess non-interference rights under the Communications Act.¹²¹ Section 316 prohibits the Commission from making a fundamental change to the non-interference rights of such transmitters.¹²² Because the record in this proceeding unequivocally shows that authorizing new terrestrial mobile operations in the C-band would obliterate FSS service transmissions in CONUS, that authorization would violate Section 316.¹²³ And that would be true even if the FCC first held an auction or used some other mechanism to pay receive-only earth stations to leave the C-band. In either case, the subsequent authorization of terrestrial mobile service would work a fundamental change to the authorizations

¹²⁰ Public Notice, at 6.

¹²¹ See Section II., *supra*.

¹²² See Section III., *supra*.

¹²³ See Section III.A., *supra*.

held by FSS space station operators serving CONUS. Thus, the search for some other statutory basis for incentivizing receive-only earth stations is a fool's errand.

C. The Public Interest Does Not Favor An Incentive Auction That Would Share Proceeds With Receive-Only Earth Stations In The C-Band.

Even if the Commission had authority to share proceeds with non-licensees—and it does not—the public interest would not favor structuring a competitive incentive auction to share proceeds with receive-only earth stations operating in the C-band.¹²⁴

To begin, allowing earth stations to participate in an incentive auction would exacerbate the holdout problem the FCC identified in the Notice of Proposed Rulemaking.¹²⁵ As currently allocated, every satellite operator is authorized to use the entire 500 MHz of the C-band. In order to clear the C-band, therefore, every licensed satellite operator must cease transmitting to the United States. This creates an incentive for individual satellite operators to “hold out” in the hope of greater economic gain—the very problem the C-Band Alliance was created to solve. Allowing earth stations to participate in the incentive auction would make this holdout problem worse, not better, because it would greatly increase the number of participants with an economic incentive to hold out and make it more difficult to clear the spectrum. Selecting an alternative that would make a significant problem worse is contrary to principles of reasoned decision making.¹²⁶

Next, compensating registered receive-only earth stations to avoid receiving satellite transmissions in some spectrum to allow for terrestrial 5G operations would be both economically and technically unsound. “[T]he first principle of reverse auctions,” Professor Milgrom explains,

¹²⁴ Public Notice, at 7.

¹²⁵ See NPRM ¶ 59.

¹²⁶ See, e.g., *Achernar Broad. Co. v. FCC*, 62 F.3d 1441, 1447 (D.C. Cir. 1995); *Office of Comm’n of United Church of Christ v. FCC*, 779 F.2d 702, 704 (D.C. Cir. 1985).

is “that any economically sound auction creates competition among bidders who supply substitutes.”¹²⁷ Transmitting and receiving capabilities are not substitutes. They are, at best, economic complements.¹²⁸ “There is no merit to any plan that calls for suppliers of complements to bid against one another” because, “[f]or complements, economic benefits flow only from coordination among suppliers, not from competition.”¹²⁹ Allowing receive-only earth stations to participate would create, in effect, a “disincentive auction.”¹³⁰

Even if transmitting and receiving capabilities were counterfactually declared to be economic substitutes,¹³¹ an incentive auction that incorporated receive-only earth stations would still be, as a practical matter, nearly impossible to implement given the sheer number of earth stations and Partial Economic Areas (“PEAs”) involved. The Commission has correctly identified “speed to the market” as a crucial public interest differentiator in this proceeding.¹³² But if an incentive auction were held that incorporated receive-only earth stations, that auction would necessarily be delayed as different earth station consortia formed in hundreds of PEAs. And each of these hundreds of consortia would need to agree on a whole host of legal and economic issues, such as governance rules, personnel, the timeline and plan for clearing each PEA of earth station

¹²⁷ Milgrom Analysis, at 1.

¹²⁸ *Id.*

¹²⁹ *Id.*

¹³⁰ Preston Padden, *5G For All Americans, NOW*, at 2 (Feb. 4, 2019) filed as attachment to Letter from Jennifer D. Hindin, Counsel for the C-Band Alliance, to Marlene H. Dortch, Secretary, FCC, GN Docket No. 18-122 (filed Feb. 4, 2019).

¹³¹ *Cf.* George Orwell, *Nineteen Eighty-Four* 312–13 (1949) (“Newspeak was the official language of Oceania Its vocabulary was so constructed as to give exact and often very subtle expression to every meaning that a Party member could properly wish to express.”).

¹³² NPRM ¶¶ 2, 6; *see also* Public Notice, at 1.

use, the amount of spectrum to be cleared, and the division of proceeds.¹³³ Importantly, agreement on these issues would need to occur *before* earth station consortia could bid in a reverse auction. As Professor Milgrom has explained, “[i]t is surpassingly unlikely that hundreds of consortia will form at all, let alone quickly enough to have the fast process needed to make a sizable amount of mid-band spectrum available for 5G.”¹³⁴

Finally, these hundreds of consortia could decide to forego receiving satellite transmissions in differing amounts of spectrum. As the record indicates, such a result would create a patchwork of adjacent PEA co-frequency operations that would require each terrestrial mobile operator in a PEA to engineer its network to protect adjacent PEA earth station operations from harmful interference.¹³⁵ Such a technical constraint would severely limit the terrestrial mobile operators’ flexibility, resulting in sub-optimal terrestrial use of the spectrum. The better approach is to permit the members of the C-Band Alliance to coordinate their non-interference rights and protect their customers.

¹³³ Milgrom Analysis, at 1.

¹³⁴ *Id.*

¹³⁵ See Letter from Mark Racek, Sr. Director, Spectrum Policy, Public Affairs and Regulations, Ericsson, to Marlene H. Dortch, Secretary, FCC, GN Docket No. 18-122 (filed Apr. 26, 2019); Letter from Jennifer Hindin, Counsel for the C-Band Alliance, to Marlene H. Dortch, Secretary, FCC, GN Docket No. 18-122 (filed May 9, 2019).

V. CONCLUSION

For the all these reasons, the Commission should adopt the proposal of the C-Band Alliance and reject the counterproposals from other parties in this proceeding.

Respectfully submitted,

By: /s/ Bill Tolpegin
Bill Tolpegin
C-BAND ALLIANCE
900 17th Street, NW
Suite 300
Washington, DC 20006

Jennifer D. Hindin
Kathryne C. Dickerson
Henry Gola
Jeremy J. Broggi
Wiley Rein LLP
1776 K St NW
Washington, DC 20006

July 3, 2019