

Before the
Federal Communications Commission
Washington, DC 20554

In the Matter of

Promoting Investment in the
3550-3700 MHz Band

GN Docket No. 17-258

JOINT REPLY COMMENTS OF
INTELSAT LICENSE LLC AND SES AMERICOM, INC.

Intelsat License LLC (“Intelsat”) and SES Americom, Inc. (“SES”) jointly file these Reply Comments in response to the above-captioned Notice of Proposed Rulemaking (“NPRM”) seeking comment on several proposed changes to licensing rules in the 3550-3700 MHz band (“3.5 GHz band”).¹ Specifically, Intelsat and SES oppose the requests by some parties for relaxation of the out-of-band emission (“OOBE”) limits into the adjacent 3700-4200 MHz band (“C-band”),² which are counter to the record evidence and premature given the pendency of a proceeding concerning these frequencies.

Numerous commenters agree on the importance of protecting critical Fixed Satellite Service (“FSS”) C-band operations, including the distribution of video and audio programming. The Content Companies aptly describe C-band spectrum as “the backbone of the infrastructure”

¹ *Promoting Investment in the 3550-3700 MHz Band*, Notice of Proposed Rulemaking and Order Terminating Petitions, GN Docket No. 17-258, FCC 17-134 (rel. Oct. 24, 2017) (“3.5 GHz NPRM”).

² *See id.* ¶¶ 54-58.

delivering programming to more than 100 million American households,³ and the National Association of Broadcasters (“NAB”) observes that nearly every U.S. television and radio household relies on C-band FSS operations for content distribution in some manner, whether the ultimate end user receives that content by broadcast, cable, or direct broadcast satellite.⁴ Interference to adjacent C-band spectrum could disrupt the delivery of important news programming, live sports, and entertainment.

Intelsat and SES agree with these parties that relaxation of the OOB limits would markedly increase interference above 3700 MHz and destroy the effectiveness of existing equipment.⁵ NAB and the Content Companies note that the FCC rightly rejected proposals in 2015 and 2016 to relax the OOB limits because doing so would have undermined the delicate balance in the rules between fostering deployment in the 3.5 GHz band and the need to protect operations in adjacent bands.⁶ Because there is no dedicated guard band or other measure in place to limit interference from the 3.5 GHz band into the C-band, the current OOB limits are necessary to protect incumbent satellite operations.

The Content Companies correctly highlight that adoption of the Qualcomm proposal discussed in the NPRM would create an additional 12 dB of interference power leaking into the

³ Comments of The Content Companies, GN Docket No. 17-258, at 2 (filed Dec. 28, 2017) (“Content Companies Comments”). Unless otherwise noted, commenters filed in GN Docket No. 17-258 on December 28, 2017 in response to the 3.5 GHz NPRM.

⁴ Comments of the National Association of Broadcasters at 3 (“NAB Comments”).

⁵ See NAB Comments at 2-3; Content Companies Comments at 6-9; Comments of NCTA—The Internet & Television Association at 18-19 (“NCTA Comments”); Comments of Comcast Corporation at 29 (“Comcast Comments”).

⁶ See NAB Comments at 2-3; Content Companies Comments at 3-6. See generally *Amendment of the Commission’s Rules with Regard to Commercial Operations in the 3550-3650 MHz Band*, Report and Order and Second Further Notice of Proposed Rulemaking, 30 FCC Rcd 3959 (2015); and Order on Reconsideration and Second Report and Order, 31 FCC Rcd 5011 (2016).

3710-3720 MHz band, and adoption of the more graduated alternative proposal would add 5 dB more interference.⁷ While many commenters focus on the potential effect of the OOB proposals on the 20 MHz of spectrum between 3700 MHz and 3720 MHz,⁸ harmful interference to the lower portion of the C-band would affect more than just that band segment. Because the vast majority of C-band satellites use 36 MHz transponders, harmful interference in the lower 20 MHz of the C-band would render the 36 MHz transponders that include those frequencies entirely unusable. As the Commission has noted, approximately 48 satellites provide service to the U.S. in the 3700-4200 MHz band.⁹ The record does not justify the cost of stranded investment in the transponders on these satellites that would be rendered useless.

Indeed, some commenters question the need to relax existing emission masks.¹⁰ The Utilities Technology Council, for example, recognizes that claims that filters cannot be used to reduce OOB from wideband operations are false.¹¹ Comments filed in support of easing OOB limits are void of any substantive discussion regarding methods that Citizens Broadband Radio Service (“CBRS”) operators can employ to maximize their operations while meeting the current OOB masks. CTIA, for example, summarily states that “[m]ost 5G solutions will benefit from wider channelization, and a more relaxed OOB limit better enables wider channels,” but offers little more.¹² Verizon and T-Mobile claim that the existing OOB limits require mobile devices

⁷ See Content Companies Comments at 6-8.

⁸ See *NCTA Comments*, at 19; *Content Companies Comments*, at 6-9.

⁹ See *Expanding Flexible Use in Mid-Band Spectrum Between 3.7 and 24 GHz*, Notice of Inquiry, 32 FCC Rcd 6373, ¶ 14 (2017) (“Mid-Band Spectrum Proceeding”).

¹⁰ See, e.g., Comments of Motorola Solutions, Inc. at 7; Comments of the Utilities Technology Council at 8 (“UTC Comments”).

¹¹ UTC Comments at 8.

¹² Comments of CTIA at 13.

to operate at reduced transmit power, but fail to explain why they are unable to use filters and other alternative methods as suggested by the Commission last year.¹³ Clearly, the parties contemplating CBRS operations are considering this issue only from the point of view of maximizing their operational flexibility; they simply do not wish to bother having to protect the operations of existing services in adjacent bands. Intelsat and SES agree with NAB that these entities' desire for wider bandwidth channels "does not change the laws of physics, or previous FCC findings, with respect to protection from harmful interference to operations in adjacent bands."¹⁴

Finally, as the Commission is aware, there is currently an open proceeding regarding, in part, the 3700-4200 MHz band.¹⁵ It would be premature to consider action that could alter the interference environment in that band while the *Mid-Band Spectrum Proceeding* is ongoing.

¹³ See Comments of Verizon at 17-18; Comments of T-Mobile USA, Inc. at 18-19. See *Amendment of the Commission's Rules with Regard to Commercial Operations in the 3550-3650 MHz Band*, Order on Reconsideration and Second Repot and Order, 31 FCC Rcd 5011, ¶ 93 (2016).

¹⁴ NAB Comments at 2.

¹⁵ See *Mid-Band Spectrum Proceeding*.

In conclusion, Intelsat and SES agree with several commenters that relaxing OOB limits could harmfully interfere with adjacent FSS operations in the lower portion of the 3700-4200 MHz band. Until there is demonstrable evidence that adjacent C-band operations will be protected and the agency has concluded its *Mid-Band Spectrum Proceeding*, the Commission should not ease its existing OOB limits.

Respectfully submitted,

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