

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

In the Matter of)
)
Amendment of the Commission’s Rules with) GN Docket No. 12-354
Regard to Commercial Operations in the)
3550-3650 MHz Band)

**VERIZON’S OPPOSITION TO THE SATELLITE INDUSTRY ASSOCIATION’S
PETITION FOR RECONSIDERATION**

The Commission should deny the Satellite Industry Association’s (“SIA’s”) requests for stricter out-of-band emissions (“OOBE”) limits for 3.5 GHz stations and reductions to their permitted power levels.¹ These changes would unnecessarily constrain 3.5 GHz operations, including by reducing the coverage areas of 3.5 GHz small cells. Indeed, as Verizon explained in its reconsideration petition, and as other parties confirm, the Commission should increase (not decrease) the power limits in order to enable reasonably-sized small cells. Contrary to SIA’s assertion, technical rules enabling economically viable 3.5 GHz operations—including increased power limits—are fully consistent with protecting earth stations from harmful interference.

DISCUSSION

A. SIA’s Interference Arguments Are Premature and Unpersuasive.

SIA’s only rationale for its proposal is a purported need to reduce the interference risk to incumbent earth stations.² But it is premature to say an interference problem exists since the coexistence regime for protecting earth stations has not yet been developed. The Commission is

¹ See Petition for Reconsideration of the Satellite Industry Association, GN Docket No. 12-354 (July 23, 2015), at 3-7 (“SIA Petition”).

² SIA Petition at 7-9.

seeking comment on the precise topic of achieving coexistence between 3.5 GHz operators and earth station operators.³ That process should result in a coexistence regime that protects earth stations from 3.5 GHz operations under the technical rules the Commission establishes for the band, including the higher (not lower) power limits that are necessary to support robust investment in 3.5 GHz infrastructure. There is no basis to conclude otherwise, and no merit to SIA's proposal to constrain all 3.5 GHz operations across the board, including ones nowhere near any earth station.

Verizon operates multiple earth stations, including ones using 3.5 GHz spectrum as well as ones using the adjacent C-Band, and thus has a strong interest in successful coexistence between earth stations and 3.5 GHz operations. The Commission rightly proposes to achieve coexistence by requiring the Spectrum Access System ("SAS") to authorize or deny 3.5 GHz device activation requests based on protection areas calculated for the actual operating characteristics of each earth station.⁴ SIA, however, appears to oppose any requirement that earth station operators cooperate in a new coexistence regime. For example, SIA asks the Commission to repeal Rule 96.17(d), which requires earth station operators to file information about their operations with the SAS.⁵ The Commission should deny that request. SIA asserts that "most" (but not all) of the information could be downloaded by the SAS from the existing IBFS database, but it offers no evidence that the information currently in IBFS is accurate and up to date, and no reason to find that maintaining information with the SAS would be "unduly

³ *Amendment of the Commission's Rule with Regard to Commercial Operations in the 3550-3650 MHz Band*, GN Docket No. 12-354, Report and Order and Second Further Notice of Proposed Rulemaking, 30 FCC Rcd 3959, (2015) ("April 2015 Order & FNPRM"), ¶¶ 436-445.

⁴ *Id.*

⁵ SIA Petition at 16-18.

burdensome.”⁶ The SAS should, of course, implement the rule in ways that minimize burdens on earth station operators, such as by permitting them to simply certify annually that information previously submitted remains accurate.

B. Higher—Not Lower—Power Limits Are Crucial for the Success of the 3.5 GHz Band Because They Enable Economically Viable Small Cell Coverage.

Neither SIA nor any other party disputes that lower power limits reduce the economic viability of small cell deployment by increasing the number of cells required to cover a given geographic area. In fact, higher power limits permit more economical small cell deployment. The Commission’s April 21, 2015 Order acknowledges that fact,⁷ and Verizon’s petition for reconsideration explains why the existing very low power limit in Section 96.41(b) risks making small cell deployment uneconomic.⁸

Verizon’s experience in real-world small cell build-out underscores the importance of enabling 3.5 GHz licensees to operate at higher power limits. Typical small cells in urban areas operate at power levels that are much lower power than macrocells (which typically involve up to 40 watts) but substantially higher than the very low power levels currently authorized in Section 96.41(b).⁹ Verizon, and others, propose power limit increases that would *partially* close the size gap so that 3.5 GHz cells would be closer in size to (but still much smaller than) typical existing small cells.¹⁰

⁶ *Id.* at 16.

⁷ See April 2015 Order & FNPRM, ¶ 214.

⁸ See Verizon Petition for Reconsideration, GN Docket No. 12-354 (July 23, 2015), 3-5; see also Wireless Innovation Forum Petition for Reconsideration (July 22, 2015) at 5-9; CTIA Petition for Reconsideration (July 23, 2015) at 7-8; Motorola Solutions Inc. Petition for Reconsideration (July 23, 2015) at 4; Nokia Networks Petition for Reconsideration (July 23, 2015) at 7-9.

⁹ Verizon Reconsideration Petition at 3.

¹⁰ *Id.*

Without a reasonable increase in the power limits, there is a serious risk that the adopted power limit will impose costs that will slow investment in the new band by substantially driving up the costs of deploying small cell networks.¹¹ Given the importance of increasing power limits to enable deployment of reasonably-sized small cells, the Commission should deny SIA’s request to go in the wrong direction.

C. The Out-of-Band Emissions Rule Is Sound.

The Commission should deny SIA’s request for stricter out-of-band emissions limits because that would constrain 3.5 GHz operations. To comply with SIA’s proposed rule, many operators would need to either reduce power (and thereby reduce their cells’ sizes) or use a narrower portion of the channels assigned to them. If anything, the evidence shows that the current OOBE rule is too strict, not too lax.¹²

SIA does not support its assertion that the existing rule “poses a threat to signals relied on for safe satellite operations.”¹³ SIA asserts that the rule could disrupt operations at the lower end of the 3700-4200 band because the strictest OOBE constraints begin to apply at 3720 MHz, so 3.5 GHz base stations’ out-of-bound emissions could leak into the low end of the 3700-4200 band.¹⁴ But the asserted interference risk would exist only to the extent the coexistence regime, including the separation distances yet to be established, fails to protect earth stations from interference from these devices. As the Commission develops that coexistence regime it can, of course, take into account that interference risks—and therefore protection distances—may be different for 3.5 GHz operations in the portion of the band (3650-3700) that is spectrally closest

¹¹ *Id.* at 3-4.

¹² *See, e.g.*, CTIA Petition for Reconsideration at 5-7.

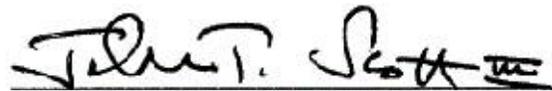
¹³ SIA Petition at 4.

¹⁴ *Id.*

to the earth stations' spectrum. That is a far better outcome than imposing a stricter OOB rule that constrains all 3.5 GHz operations across the board, including ones that could not possibly pose any interference risk given their geographic locations and channel assignments.

Respectfully submitted,

Of Counsel:
Kathleen Grillo

A handwritten signature in black ink that reads "John T. Scott III". The signature is written in a cursive style with a horizontal line underneath the name.

John T. Scott, III
Christopher D. Oatway
1300 I Street N.W., Suite 400 West
Washington, D.C. 20005
(202) 515-2470

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Attorneys for Verizon

Certificate of Service

I hereby certify that on this 19th day of October a copy of Verizon's Opposition to the Satellite Industry Association's Petition for Reconsideration in GN Docket 12-354 was sent by US mail to the following party:

Tom Stroup
President
Satellite Industry Association
1200 18th Street, N.W., Suite 1001
Washington, D.C. 20036

/s/

Sarah E. Trosch