

**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)

**REPLY COMMENTS OF
PCIA – THE WIRELESS INFRASTRUCTURE ASSOCIATION**

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I. INTRODUCTION

PCIA – The Wireless Infrastructure Association (PCIA’),¹ submits these comments in response to the above-captioned Second Further Notice of Proposed Rulemaking (“FNPRM”) seeking comment on issues not resolved in the Report and Order rules for the 3550-3650 MHz band (“3.5 GHz band”).² PCIA supports the FCC’s proactive approach to securing additional spectrum through its approval of the 3.5 GHz Report and Order. However, in doing so, the FCC must continue to seek ways to spur investment as spectrum is cleared. The FCC’s focus on small wireless communications facilities such as small cells and distributed antenna systems (“DAS”) demonstrates its clear vision for our evolving heterogeneous networks and an opportunity to ease the wireless data crunch while creating new jobs and economic growth.³

PCIA has long held the position that the FCC should put into effect policies and procedures that provide for the greatest utilization and highest efficiencies possible to both optimize spectrum use and facilitate deployment of small cells and DAS networks.⁴

To that end, the FCC should define “use” of Priority Access License (“PAL”) spectrum and implement secondary markets in PALs in a way that encourages network investment. The

¹ PCIA – The Wireless Infrastructure Association is the principal organization representing the companies that build, design, own and manage telecommunications facilities throughout the world. Its over 220 members include carriers, infrastructure providers, and professional services firms.

² *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) (“3.5 GHz R&O and Second FNPRM”).

³ See HetNet Forum, “Distributed Antenna Systems (DAS) and Small Cell Technologies Distinguished,” available at <http://www.hetnetforum.com/resources/send/2-resources/24-das-and-small-cell-technologies-distinguished> (2013); *Acceleration of Broadband Deployment by Improving Wireless Facilities Siting Policies, Acceleration of Broadband Deployment: Expanding the Reach and Reducing the Cost of Broadband Deployment by Improving Policies Regarding Public Rights of Way and Wireless Facilities Siting*, 2012 Biennial Review of Telecommunications Regulations, Report and Order, WT Docket Nos. 13-238, 13-32, WC Docket No. 11-59, (rel. Oct. 21, 2014) (“Infrastructure Order”). See also ALAN PEARCE ET AL., WIRELESS BROADBAND INFRASTRUCTURE: A CATALYST FOR GDP AND JOB GROWTH 2013-2017 (Sept. 2013), available at http://www.pcia.com/images/IAE_Infrastructure_and_Economy2.PDF.

⁴ Comments of PCIA, 3.5 GHz Notice of Proposed Rulemaking and Order, at 1-2, 5, 9 (filed Feb. 20, 2013). See Reply Comments of PCIA, 3.5 GHz Notice of Proposed Rulemaking and Order, at 3 (filed Apr. 5, 2013).

Commission should allow PAL holders to designate their own operational parameters and specific spectrum needs. The Commission should also allow for a market-driven secondary market for PAL spectrum. PCIA encourages the Commission to provide increased certainty through rights-based interference protection and ensure flexibility for licensees and other users to maximize the potential utility of the 3.5 GHz band.

II. THE COMMISSION’S DEFINITION OF “USE” OF PAL SPECTRUM SHOULD PROMOTE INVESTMENT THROUGH INTERFERENCE PROTECTION AND CERTAINTY.

As the FCC recognizes, small cells and DAS networks are advantageous for wireless networks.⁵ In the licensed space, small cells and DAS networks are being deployed to provide coverage in targeted locations and to provide additional call and data-handling capacity in areas with concentrated demands for wireless services where consumer demand is highest. Making additional spectrum available for exclusive licensed use provides certainty that fosters investment in wireless networks.⁶ This certainty can only be achieved if the Commission ensures that a licensee’s investment in the band is protected through exclusive access to the spectrum it has licensed. While supportive of benefits gained from exclusively licensed spectrum, PCIA has long supported the Commission’s innovative sharing concept in the 3.5 GHz band and the opportunity it presents for innovative deployment solutions. Specifically, the role small cells and DAS networks will play a vital role in making the 3.5 GHz band viable for wireless broadband.

⁵ See generally *Infrastructure Order*. Following up on commitments made in the Infrastructure Order, the FCC’s Wireless Telecommunications Bureau released a scoping document via Public Notice inviting input on a new program alternative to streamline review of small cell and DAS deployments under Section 106 of the National Historic Preservation Act. Wireless Telecommunications Bureau Seeks Comment On Revising the Historic Preservation Review Process for Small Facility Deployments, Public Notice, WT Docket No. 15-180 (rel. Jul. 28, 2015).

⁶ See Comments of AT&T Services, Inc., Spectrum Task Force Requests Information on Frequency Bands Identified by NTIA as Potential Broadband Spectrum, ET Docket No. 10-123, at 7 (filed Apr. 22, 2011).

The Commission must prudently adopt policies that promote innovation in sharing but also encourage investment from potential licensees in order for these solutions to be implemented.

Many commenters have noted that interference-free deployment of spectrum and technology in heterogeneous networks (“HetNets”) is essential to their efforts to utilize the 3.5 GHz band to increase their spectrum capacity to meet high mobile demand.⁷ When adopting definitional rules for what constitutes “use” of a PAL, it is imperative for the FCC to carefully consider the specific investment indicators potential PAL holders have highlighted in the record. Potential 3.5 GHz band Citizens Broadband Radio Service (“CBRS”) auction participants have indicated that a definition of “use” that maximizes the “Priority Access Licensees[’]... right to use the full 10 megahertz channel bandwidth within their license areas during their license terms”⁸ and that allows the PAL holders themselves to identify their use in a given frequency would best encourage optimal investment in the 3.5 GHz band.

Some carriers propose that the geographic region of a license should be self-defined or utilize the Census Tract as a default. For example, AT&T proposes a rule that relies on “defined geographic areas to determine ‘use,’” and requires that “once a PAL begins to offer service in a Census Tract,” the Spectrum Access System (“SAS”) will block General Authorized Access (“GAA”) use in that tract for the licensed frequencies.⁹ AT&T also notes support for proposals such as Verizon’s that allow *only* “licensees to self-define service areas for purposes of the ‘in use’ requirement.”¹⁰ In this regard, Verizon argues that the “Commission should permit PAL

⁷ See Comments of CTIA – The Wireless Association, 3.5 GHz R&O and Second FNPRM, GN Docket No. 12-354, at 3-4 (filed Jul. 15, 2015) (CTIA Comments); Comments of Verizon, 3.5 GHz R&O and Second FNPRM, GN Docket No. 12-354, at 1-3 (Verizon Comments); Comments of AT&T, 3.5 GHz R&O and Second FNPRM, GN Docket No. 12-354, at 1 (filed Jul. 15, 2015) (AT&T Comments).

⁸ 3.5 GHz R&O and Second FNPRM ¶ 74 (2015).

⁹ AT&T Comments at 2-3.

¹⁰ AT&T Comments at 3, n. 9.

holders to define the contours of their service areas needing protection from harmful interference,”¹¹ emphasizing that this is the best approach to promote intensive use of the 3.5 GHz spectrum. Registering specific contours of service in the SAS database would allow GAA users to operate within a Census Tract when a portion of the tract is not in use by the PAL holder.¹² Verizon also accurately notes that an operator may have a specific need to use spectrum as a guard band or as a reserve channel for periods of high demand of service.¹³ Such targeted interference-free use is necessary because wireless providers deploy small cells to provide coverage to specific geographic regions and provide overlay to existing cell sites. As Verizon notes, a generic definition of “use” that ignores the specific operational needs of each PAL holder, “would reduce operators’ willingness to make substantial investments to deploy PAL spectrum.”¹⁴

CTIA also emphasizes the importance of PAL holder-defined “use” parameters noting that Priority Access Licensees would have specific need for interference protection to do pre-deployment testing.¹⁵ CTIA argues that the Commission should “ensure that Priority Access Licensees have the right to gain exclusive access to their licensed spectrum upon notification of their intent to ‘use’ the spectrum, including engaging in pre-deployment testing.”¹⁶ Due to the complex nature of deploying new HetNets, using small cells to meet mobile traffic demands,

¹¹Verizon Comments at 1 (specifying that “each PAL holder [would] directly input in the SAS database the coverage contours that require protection from GAA operations”). This approach rejects proposals from Google, Federated Wireless, and others who ask the FCC to impose engineering assumptions to define PAL holders’ interference protection needs. Verizon Comments at 2; CTIA Comments at 5-6. *See* AT&T Comments at 3, n. 9.

¹² Similarly, Motorola Solutions recommends that the FCC grant licensees “interference protection once they have registered operational deployments with the database, up to one week in advance of actual operations or field testing of the deployment.” Petition for Reconsideration of Motorola Solutions, 3.5 GHz R&O and Second FNPRM, GN Docket No. 12-354, at 4-5, n. 5.

¹³ Verizon Comments at 2.

¹⁴ Verizon Comments at 2.

¹⁵ CTIA Comments at 1.

¹⁶ CTIA Comments at 1, 3 (referring to “intent to use” and “intent to initiate transmissions” synonymously).

wireless providers will certainly need to test their deployments in localized areas without interference. As CTIA accurately explains, wireless carriers must be able to collect measurement data and test network configurations prior to launching commercial operations.¹⁷ CTIA argues that the best way to accommodate these testing needs, among other needs, is to require GAA users to vacate the PAL once a licensee provides notice of intent to initiate transmission on its licensed spectrum.¹⁸

Like CTIA, Qualcomm urges the FCC to honor its promise that “Priority Access Licensees will always have the right to use the full 10 megahertz channel bandwidth within their license areas during their license terms”¹⁹ by prohibiting GAA use within a licensed area once a PAL holder “provides notice that it intends to use its licensed channel within a certain period of time.”²⁰ This approach, Qualcomm argues, will protect the economic value and investment of licenses PAL holders purchased at auction without negatively impacting opportunistic GAA use, which has been afforded a set aside of the majority of the 3.5 GHz band.²¹

For the CBRS in the 3.5 GHz band to be successful, operators must see value in making high investments to deploy networks on PAL spectrum. Therefore, PCIA encourages the Commission to adopt a definition of “use” that reflects the expressed needs of providers to protect their investments as these wireless providers are considering whether or not to participate

¹⁷ See CTIA Comments at 4.

¹⁸ CTIA Comments at 3-4.

¹⁹ 3.5 GHz R&O and Second FNPRM at ¶ 74.

²⁰ Comments of Qualcomm, 3.5 GHz R&O and Second FNPRM, at 2-3 (filed Jul. 15, 2015) (Qualcomm Comments).

²¹ Qualcomm Comments at 3. The Commission has set aside “at least 80 MHz of the 150 MHz-wide 3.5 GHz band [for] GAA use coast-to-coast, where and when primary federal users are not operating.” Moreover, “GAA users can access all 150 MHz in places where no PALs are issued and up to 80 MHz where all PALs are in use.” *Id.* at n. 5, citing 3.5 GHz R&O and Second FNPRM at ¶ 64.

in the CBRS auction and will be building out the robust wireless networks as the FCC desires for the 3.5 GHz band.

III. THE COMMISSION SHOULD IMPLEMENT POLICIES THAT FACILITATE A ROBUST AND FLEXIBLE SECONDARY MARKET.

From the early stages of developing 3.5 GHz band operation rules, PCIA has advocated for the FCC to implement policies and procedures that provide for the greatest utilization and highest efficiencies possible to optimize spectrum use and facilitate deployment of DAS networks and small cell solutions.²² One way to ensure highly efficient use of the 3.5 GHz spectrum and encourage increased investment is to facilitate a competitive secondary market. PCIA supports commenters in the record that recommend that the marketplace dictate the assignment, transfer, lease, partitioning, and disaggregation of PAL spectrum.²³ The Commission should be mindful of the potential market participants in the record who place value in being able to exercise these options for PAL spectrum as not having these options may make the 3.5 GHz band less valuable or investment-friendly for potential Priority Access Licensees and those who would want to conduct future business with them.²⁴

Given the innovative nature of the spectrum sharing model the FCC has developed for the 3.5 GHz band, business and technical constructs will continue to transform as the market for this band takes shape.²⁵ It will take several years for the CBRS landscape to settle. Therefore, to further incentivize investment and create certainty, the Commission should also increase the

²² See supra note 4.

²³ See Verizon Comments at 3-5. CTIA Comments at 9. AT&T Comments 3-6. Qualcomm Comments at 3-4. Comments of Information Technology Industry Council, 3.5 GHz R&O and Second FNPRM, at 3-4 (filed Jul. 15, 2015).

²⁴ For instance, Verizon explains that “companies are less likely to acquire licenses, and to experiment with new innovative ways to put spectrum to use, if they feel uncertain about whether they can later sell or lease their spectrum if their business plans change.” Verizon Comments at 4.

²⁵ See Verizon Comments at 4.

PAL license term and include an expectancy of renewal in its rules. A three-year license term is simply not enough certainty to promote high levels of investment in the 3.5 GHz band. PCIA, and others in the record, have continuously supported longer license terms and renewal expectancy as a way to encourage the investment of infrastructure providers and manufacturers and incentivize increased deployment.²⁶ We urge the Commission to review the current Petitions for Reconsideration before it on this matter. Increasing the license term and permitting the free assignment, transfer, lease, partitioning, and disaggregation of PAL spectrum will create a robust and flexible secondary marketplace free from burdensome regulatory review processes.

²⁶ See Reply Comments of PCIA, 3.5 GHz Further Notice of Proposed Rulemaking, at 2 (filed Aug. 15, 2014); Comments of CTIA – The Wireless Association, 3.5 GHz Further Notice of Proposed Rulemaking, GN Docket No. 12-354, at 7 (filed Jul. 14, 2014) (arguing for a multi-year license term of at least five years coupled with renewal expectancy); Comments of AT&T, 3.5 GHz Further Notice of Proposed Rulemaking, GN Docket No. 12-354, at 24-27 (filed Jul. 14, 2014); Comment of T-Mobile USA, Inc., 3.5 GHz Further Notice of Proposed Rulemaking, GN Docket No. 12-354, at 11 (filed Jul. 14, 2014); Comments of Ericsson, 3.5 GHz Further Notice of Proposed Rulemaking, GN Docket No. 12-354, at 9 (filed Jul. 14, 2014). See also Qualcomm Comments at 4; CTIA Petition for Reconsideration, at 1-3 (filed Jul. 3, 2015).

IV. CONCLUSION

For the foregoing reasons, the Commission should define “use” of PAL spectrum by relying on PAL holders’ designation of their operational parameters and specific needs. The Commission should allow for a market-driven, flexible secondary market for PAL spectrum. Taking these steps will promote optimal investment by providing increased certainty and flexibility for licensees and other users to maximize the potential utility of the 3.5 GHz band.

Respectfully submitted,

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