

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of)	
)	
Promoting Investment in the 3550-3700 MHz)	GN Docket No. 17-258
Band)	
)	

COMMENTS OF CTIA

Thomas C. Power
Senior Vice President and General Counsel

Scott K. Bergmann
Vice President, Regulatory Affairs

Paul Anuszkiewicz
Vice President, Spectrum Planning

Kara Romagnino Graves
Director, Regulatory Affairs

Jennifer L. Oberhausen
Director, Regulatory Affairs

CTIA
1400 Sixteenth Street, NW
Suite 600
Washington, DC 20036
(202) 785-0081

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CTIA¹ submits these comments in response to the Notice of Proposed Rulemaking (“*Notice*”) issued by the Federal Communications Commission (“Commission”) in the above-captioned proceeding.² CTIA has been actively engaged in the Commission’s proceedings for developing a framework for the Citizens Broadband Radio Service (“CBRS”) in the 3550-3700 MHz (“3.5 GHz”) band and is committed to ensuring its success. We commend the Commission for issuing this *Notice* and support the prompt adoption of the common sense changes to the Priority Access Licensing (“PAL”) framework that are proposed in this rulemaking, changes which will promote investment and innovation in the 3.5 GHz band without any delay in the rollout of the CBRS ecosystem.

¹ CTIA® (www.ctia.org) represents the U.S. wireless communications industry and the companies throughout the mobile ecosystem that enable Americans to lead a 21st-century connected life. The association’s members include wireless carriers, device manufacturers, suppliers as well as apps and content companies. CTIA vigorously advocates at all levels of government for policies that foster continued wireless innovation and investment. The association also coordinates the industry’s voluntary best practices, hosts educational events that promote the wireless industry, and co-produces the industry’s leading wireless tradeshow. CTIA was founded in 1984 and is based in Washington, DC.

² *Promoting Investment in the 3550-3700 MHz Band*, Notice of Proposed Rulemaking, 32 FCC Rcd 8071 (2017) (“*Notice*”).

I. INTRODUCTION AND SUMMARY.

In issuing the *Notice*, the Commission indicated that it anticipates this proceeding will produce “targeted changes” that “will foster an investment environment for the band to flourish in the United States, as other nations target these frequencies for 5G and next-generation technologies.”³ This goal is paramount, as the 3.5 GHz band is fast becoming a crucial band for creating capacity for 4G LTE networks and fostering the development of next-generation wireless services, both in the United States and abroad.⁴ As one research report noted, this band “has received interest globally because it is seen as the range of frequencies that can meet coverage and capacity requirements for 5G.”⁵ Indeed, across the globe nations are targeting frequencies in the 3 GHz range as they vie to lead in 5G.⁶ For example, the European Union, the United Kingdom, China, South Korea, and Japan are all exploring bands that cover 3.5 GHz frequencies for possible 5G deployment.⁷ As the *Notice* finds, “given the international focus on commercial deployments in the 3.5 GHz band, global harmonization will promote innovation and investment by allowing for efficiency-promoting economies of scale.”⁸

³ *Notice* at 8072-73 ¶ 3.

⁴ Dimitris Mavrakakis & Prayerna Raina, *An Analysis of 5G Spectrum*, ABI Research Report, at 8 (Oct. 13, 2017) (“ABI Report”); *see also* Petition for Rulemaking of CTIA, GN Docket No. 12-354, RM-11788, at 3-5 (filed June 16, 2017) (“CTIA Petition”).

⁵ ABI Report.

⁶ For instance, the UK regulator Ofcom recently noted that spectrum in the 3 GHz range “has been identified as central to the rollout of 5G mobile across Europe.” *Ofcom Sets Rules for Mobile Spectrum Auction*, Ofcom (Jul. 11, 2017), <https://www.ofcom.org.uk/about-ofcom/latest/media/media-releases/2017/ofcom-sets-rules-for-mobile-spectrum-auction>.

⁷ ABI Report at 8.

⁸ *Notice* at 8072 ¶ 2.

To maintain global leadership in wireless on the path to 5G, the United States must ensure that its spectrum policies “keep up with technological advancements, create incentives for investment, encourage efficient spectrum use, support a variety of different use cases, and promote robust network deployments in both urban and rural communities.”⁹ The 3.5 GHz framework, with its three tier Spectrum Access System (“SAS”) regime, offers an opportunity to experiment with new tools to promote spectrum access. However, as CTIA has noted, the 3.5 GHz band framework as it exists today imposes an overly complicated licensing scheme and “creates a risk that a PAL licensee will invest in a license at auction, purchase and deploy equipment, incorporate 3.5 GHz into its end-user devices, and then face stranded investment in just three or six years.”¹⁰ CTIA therefore urges the Commission to:

- Extend the PAL term to 10-years with an expectation of renewal and decline to adopt specific performance requirements;
- License PALs on a Partial Economic Area (“PEA”) basis;
- Permit partitioning and disaggregation of PALs;
- Eliminate the requirement for public disclosure of certain Citizens Broadband Radio Service Device (“CBSD”) registration information;
- Revise the out-of-band emissions (“OOBE”) limits to enable wider channels; and
- Eliminate the policy that prevents PAL assignment when there is only one applicant in a given license area and the policy that makes available fewer PALs than bidders seek.

Notably, these changes will enhance the PAL framework without affecting the three tier framework that forms the foundation of the 3.5 GHz band or the spectrum use of the General Authorized Access (“GAA”) tier. GAA users will continue to benefit from the same access to

⁹*Id.*

¹⁰ CTIA Petition at 6, 9.

3.5 GHz spectrum as they do today, and the Commission’s proposals will not diminish investments that have already been made in the 3.5 GHz band.

II. EXTENDING THE PAL TERM TO 10 YEARS AND ADOPTING A RENEWAL EXPECTANCY WILL FOSTER INVESTMENT AND INNOVATION IN THE 3.5 GHz BAND.

A. A Ten-Year PAL Term Will Promote Investment in Network Deployment that a Three-Year Term Could Not Provide.

The Commission should adopt its proposal to extend the PAL term from three years to a standard 10-year license term. As the *Notice* observes, “[t]his approach is consistent with that adopted for other wireless services and will afford each licensee sufficient time to design and acquire the necessary equipment and devices and to deploy facilities across the license area.”¹¹ Indeed, as CTIA and others have noted since the early stages of the CBRS proceeding, a shortened license term fails to account for the challenges associated with standards development, equipment certification and production, network deployment, and addressing backhaul capacity needs, let alone the siting approval process.¹² A 10-year license term, on the other hand, takes into account the realities involved in a successful network buildout. Commission rules should provide PAL holders with the opportunity to earn a sufficient return on network investments, which a three-year term does not. This is especially so in rural areas where, with a more limited customer base, return on investment naturally takes longer.

A recent study found that the CBRS framework’s shorter license terms with no renewal expectancy are among the factors likely to diminish the market value for PALs by as much as 50

¹¹ *Notice* at 8077 ¶ 15; *id.* at 8076 ¶ 13.

¹² See e.g., Reply Comments of CTIA, GN Docket No. 12-354, RM-11788, RM-11789, at 5 (filed Aug. 8, 2017) (“CTIA Reply”).

to 95 percent relative to the value of similar licensed spectrum.¹³ Adjusting the PAL term from three to 10 years will significantly increase the value of PAL spectrum. As Commissioner O’Rielly noted in his separate statement to the *Notice*, “[w]e have wireless networks that are the envy of the world because of our tried and true auction procedures and rules that promote investment. . . . These are the very things, including renewability and longer license terms, that [have] made the U.S. the leader in wireless technologies.”¹⁴

Increasing the PAL term, in conjunction with adopting a renewal expectancy, as discussed below, will foster investment opportunities for PAL holders without diminishing existing efforts undertaken in the band, despite claims to the contrary.¹⁵ This change does not upset the CBRS framework for GAA users, and the investments already being made in the band—in the three-tier spectrum access framework, in standards development, and in the burgeoning ecosystem of 3.5 GHz devices¹⁶—are still valuable and useful, as new devices, applications, and SAS development work are needed regardless of length of the PAL term. However, maintaining a limited three-year non-renewable license term would have a real, negative impact on investment in the band.

¹³ Harold Furchtgott-Roth, *The Potential Market Value and Consumer Surplus Value of The Citizens Broadband Radio Service (CBRS) at 3550-3700 in the United States*, at B-1-2 (Nov. 2017), <https://www.cbbsalliance.org/whitepapers> (comparing the likely commercial value of PALs to the 2.5-2.6 GHz band and noting that a “PAL in the CBRS has less value than 10 MHz of spectrum in the 2.5-2.6 GHz band for several reasons including: Smaller geographic area; Much shorter duration of licenses; Absence of presumption of renewability of licenses; Much lower power limits and OOB limits; Incumbent users have priority particularly during certain time periods; Higher frequency of spectrum; and Administrative costs associated with large number of frequent auctions”).

¹⁴ *Notice* at 8111 (Statement of Commission Michael O’Rielly).

¹⁵ *Id.* at 8076 ¶ 12.

¹⁶ *See, e.g.*, Comments of the Dynamic Spectrum Alliance, GN Docket No. 12-354, RM-11788, RM-11789, at 6 (filed July 24, 2017); Comments of the Wireless Internet Service Providers Association, GN Docket No. 12-354, RM-11788, RM-11789, at 5-6 (filed July 24, 2017).

B. Renewal Expectancy Will Promote Investment and Avoid Uncertainty that Necessarily Limits Interest in PALs.

CTIA strongly supports the Commission's proposal to eliminate the requirement that PALs automatically terminate at the end of the license term.¹⁷ The current policy of automatic termination creates uncertainty as to future costs to retain a license and poses the risk that a licensee that invests in network buildout will not "re-win" its license at auction. In contrast, a right of renewal provides certainty to make investments in PALs and network deployment, which can be particularly important for investment in rural areas where returns take longer to achieve.

The Commission should reject suggestions by some that PALs should be re-auctioned at the end of the license term rather than licensed with a renewal expectancy.¹⁸ Auctions for subsequent license terms are not necessary to ensure that PAL spectrum is put to its highest and best use. Professor Paul Milgrom's proposed re-auction scheme, for example, is unnecessary and overly complicated, especially when compared with the proven success of the 10-year, renewable licensing scheme utilized by the Commission in other bands.¹⁹ Notably, Professor Milgrom acknowledges that "short licenses with no expectation of renewal lead to a risk that the incumbent licensee's investments may become stranded when the licensee changes, which can deter value-creating investment."²⁰ To address this concern, he proposes an auction design that

¹⁷ Notice at 8076 ¶ 13.

¹⁸ Notice at 8078 ¶ 19.

¹⁹ See 47 C.F.R. § 27.13. Frequent re-auctions of PAL spectrum would provide no benefit beyond that provided by the administratively simpler renewal expectancy. There is no reason to impose on licensees the administrative burden of preparing for and participating in frequent re-auctions.

²⁰ Letter from Paul Milgrom, Auctionomics, to Marlene H. Dortch, FCC, GN Docket No. 12-354, at 6 (filed Aug. 7, 2017).

is intended to “create something resembling an active secondary market.”²¹ Yet the CBRS framework provides for secondary market transactions already, and there is no reason to introduce a government-mandated process that regularly re-opens licensing and creates uncertainty for investors.²² Professor Milgrom’s proposal would add confusion to an already complex spectrum access model. The Commission should not adopt a novel concept intended to replicate that which already exists—a secondary market framework for CBRS licenses.

C. Traditional Performance Requirements Are Not Necessary Given Opportunistic GAA Use.

Traditional performance requirements (such as minimum buildout) are unnecessary given the CBRS “use-or-share” model that allows GAA users access to all 150 megahertz in the band in areas where there are fewer than seven PALs issued or an issued PAL is not in use. If a PAL offers service only in a portion of its licensed area, then the remaining area is open for use by GAA users on a non-interfering basis.²³ Opportunistic GAA use effectively eliminates any theoretical foreclosure risks and counters the need for the Commission to adopt and enforce any construction and performance requirements.

The Commission “tailor[s] performance and construction requirements with an eye to the unique characteristics of individual frequency bands and the types of services expected”²⁴—and the same should hold true here. Concerns about spectrum warehousing that typically inform

²¹ *Id.*

²² *Amendment of the Commission’s Rules with Regard to Commercial Operations in the 3550-3650 MHz Band*, Order on Reconsideration and Second Report and Order, 31 FCC Rcd 5011, 5069 ¶ 209 (2016) (“3.5 GHz Second Report and Order”).

²³ *Amendment of the Commission’s Rules with Regard to Commercial Operations in 3550-3650 MHz Band*, Report and Order and Second Further Notice of Proposed Rulemaking, 30 FCC Rcd 3959, 3964 ¶ 4 (2015).

²⁴ *Amendment of the Commission’s Rules with Regard to Commercial Operations in the 1695-1710 MHz, 1755-1780 MHz, and 2155-2180 MHz Bands*, Report and Order, 29 FCC Rcd 4610, 4659 ¶ 135 (2014).

performance requirements are unfounded under the new and unique “use-or-share” CBRS framework. CBRS spectrum will not lie fallow or exclude productive use as both PAL licensees and GAA users will have the opportunity to make use of spectrum and provide innovative services. The Commission should therefore refrain from imposing unnecessary performance requirements that fail to account for the unique forces at play in the 3.5 GHz band.

III. PEA-BASED GEOGRAPHIC LICENSING WILL PROMOTE INVESTMENT AND NETWORK DEPLOYMENT, AND PARTITIONING AND DISAGGREGATION WILL ENABLE FURTHER ACCESS AND IMPROVE SPECTRAL EFFICIENCY.

A. PEAs Are the Appropriate Geographic License Area for PALs.

As many stakeholders have argued, the Commission should license PALs on a PEA basis to simplify licensing, enable flexible and targeted networks, and reduce border areas and accompanying risks for interference.²⁵ As the *Notice* finds, this change would “stimulate additional investment, promote innovation, and encourage efficient use of spectrum resources.”²⁶

The census tract licensing model currently required by the Commission’s rules for the 3.5 GHz band, with more than 74,000 license areas and more than 500,000 PALs, would result in a much more complicated and burdensome licensing scheme to administer and manage. Moreover, many stakeholders have expressed concerns that census tracts will create

²⁵ See e.g., CTIA Reply at 2; Comments of Verizon, GN Docket No. 12-354, at 6-7 (filed July 24, 2017); Comments of AT&T Services, Inc., GN Docket No. 12-354, RM-11788, RM-11789, at 5-6 (filed July 24, 2017); Comments of T-Mobile USA, Inc., GN Docket No. 12-354, RM-11788, RM-11789, at 5 (filed July 24, 2017); Comments of Ericsson, GN Docket No. 12-354, RM-11788, RM-11789, at 6 (filed July 24, 2017); Comments of United States Cellular Corporation, GN Docket No. 12-354, at 6 (filed July 24, 2017); 5G Americas Comments, GN Docket No. 12-354, RM-11788, RM-11789, at 11 (filed July 24, 2017); Comments of the Telecommunications Industry Association, GN Docket No. 12-354, at 2 (filed July 24, 2017); Comments of Qualcomm Incorporated, GN Docket No. 12-354, RM-11788, RM-11789, at 6-7 (filed July 24, 2017).

²⁶ *Notice* at 8080 ¶ 23.

“unnecessary interference risks due to the large number of border areas that will need to be managed and maintained.”²⁷

PEAs, on the other hand, strike the appropriate balance of facilitating access to spectrum for both large and small providers. The Commission has already recognized that PEA-sized licenses are conducive to mobile broadband offerings and promote opportunity for smaller entities. As the *Incentive Auction R&O* concluded, “PEAs will best promote entry into the market by the broadest range of potential wireless service providers[.] . . . PEAs are small enough to allow bidders to acquire a limited coverage area—often only a few counties—which should enable small businesses and rural carriers to compete with larger carriers in these areas.”²⁸ The Commission recently echoed this conclusion in the *Spectrum Frontiers* proceedings, stating that “PEAs [are] small enough to permit access to licenses by smaller carriers while still large enough to incentivize investment in new technologies.”²⁹ Given the high costs associated with census tract licensing and the recognized benefits of PEAs, the Commission should revise the rules to license PALs on a PEA basis.

B. Partitioning and Disaggregation Will Foster Secondary Market Transactions and More Targeted Deployments.

The Commission should modify its secondary market rules to permit partitioning and disaggregation of PALs.³⁰ The previous Commission declined to adopt partitioning and

²⁷ Notice at 8079 ¶ 20.

²⁸ *Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions*, Report and Order, 29 FCC Rcd 6567, 6603-04 ¶ 80 (2014) (“*Incentive Auction R&O*”).

²⁹ *Use of Spectrum Bands Above 24 GHz For Mobile Radio Services, et. al.*, Second R&O, Second FNPRM, Order on Reconsideration and Memorandum Opinion and Order, FCC 17-175 ¶ 170 (2017).

³⁰ Notice at 8082 ¶ 31.

disaggregation because the “relatively short license terms and small license areas” provided the “necessary flexibility to service specific or targeted markets.”³¹ As the *Notice* points out, however, if the Commission adopts the other proposals in the *Notice*—which CTIA supports—PAL licensing will be “consistent with the licensing paradigm for other similarly licensed services.”³² Consistent with those other services, increasing the geographic size of PALs and permitting partitioning and disaggregation will “facilitate the ability of small entities to access the spectrum they desire for targeted, local deployments,” while still permitting larger entities to accommodate a larger network footprint.³³

Further, the CBRS use-or-share spectrum access policy will create further incentives for PAL users to make use of secondary market mechanisms, which—as Chairman Pai has noted— “[allow] spectrum to flow to its highest valued use, thereby maximizing consumer welfare.”³⁴ In particular, rather than opportunistic GAA operations on unused PAL spectrum, it is likely that PAL licensees will prefer to enter into such partitioning and disaggregation arrangements where market interest exists and to derive some benefit to their licensed spectrum. Allowing partitioning and disaggregation will thus foster access to PAL spectrum for targeted, local deployments while ensuring effective and efficient spectrum use.

³¹ 3.5 GHz, *Second Report and Order* at 5077 ¶ 229.

³² *Notice* at 8082 ¶ 31.

³³ *Id.*

³⁴ *Policies Regarding Mobile Spectrum Holdings, Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions*, Report and Order, 29 FCC Rcd 6133, 6268 (2014) (Dissenting Statement of Commissioner Ajit Pai).

IV. PUBLICLY DISCLOSED SAS REGISTRATION INFORMATION POSES SERIOUS RISKS AND SHOULD BE ELIMINATED.

CTIA strongly supports the Commission's proposal to amend its rules to prohibit public disclosure by SAS Administrators of CBSD registration information, which could result in data being used for anti-competitive purposes and could pose a national security risk.³⁵

Although SAS Administrators certainly need to obtain and share some information amongst themselves to enable the proper functioning of the CBRS regime—and SAS Administrators agreed to best practices regarding such SAS-to-SAS sharing³⁶—the current rule requiring public disclosure of CBSD registration information, even if obfuscated, is both harmful and unnecessary.³⁷

For instance, the requirement that SAS Administrators publicly release the geographic location of CBSDs could increase security risks. The requirement also is inconsistent with other Commission approaches to critical infrastructure, for example, its approach regarding the locations of Wi-Fi access points and Bluetooth beacons in the National Emergency Address

³⁵ Notice at 8085 ¶ 37.

³⁶ Letter from Brian M. Josef, CTIA, to Marlene H. Dortch, FCC, GN Docket No. 15-319 (filed Sept. 29, 2016) (describing the framework of an agreement to be executed between individual SAS administrators to govern how information exchanged between the SAS administrators may be used).

³⁷ Per Section 96.55(a)(3) of the Commission's rules, SAS Administrators must make CBSD registration information available to the general public, but must obfuscate the identity of the licensee. Section 96.39(c) in turn describes the various pieces of information a CBSD must provide to a SAS prior to initial service transmission, including: geographic location, antenna height above ground level, CBSD class, requested authorization status (*i.e.*, PAL or GAA), FCC identification number, call sign, user contact information, air interface technology, unique manufacturer's serial number, sensing capabilities (if supported), and additional information on its deployment profile. Section 96.45 requires registration of additional information for Category B CBSDs, including antenna gain, beamwidth, azimuth, downtilt angle, and antenna height above ground level.

Database.³⁸ Likewise, disclosure of certain information such as FCC identification number, unique manufacturer serial number, user contact information, and call sign raises competitive concerns, as such disclosures could enable competitors to determine the extent of a CBRS user's deployment in the band, thereby informing PAL acquisition strategies, customer acquisition strategies (*i.e.*, allowing targeting of competitors' customers who already use the CBRS), and/or competitor expansion strategies. Production of such information could provide a bad actor the ability to identify actual users or provide greater precision to commit a malicious act against a particular network deployment.³⁹

Importantly, the risks associated with public disclosure are wholly unnecessary for the functioning of the SAS. SAS Administrators are separately required to work with each other to coordinate frequency assignments and avoid interference between CBSDs.⁴⁰ Members of the public can coordinate with a SAS to determine where they can deploy CBSDs on a GAA basis. There is no countervailing benefit to publicly disclosing CBSD registration information to outweigh the potential harms. Therefore, to protect information that, as the *Notice* recognizes, “may compromise the security of critical network deployments or be considered competitively sensitive,” the Commission should eliminate Section 96.55(a)(3).⁴¹

³⁸ *Wireless E911 Location Accuracy Requirements*, Memorandum Opinion and Order, FCC 17-150 ¶¶ 8, 12 (2017).

³⁹ The examples of potential harms are illustrative and not exhaustive.

⁴⁰ 47 C.F.R. § 96.55(a)(2).

⁴¹ *Notice* at 8085 ¶ 37.

V. REVISIONS TO THE OUT-OF-BAND EMISSION LIMITS WILL FOSTER 5G AND OTHER INNOVATIVE SERVICES IN THE 3.5 GHz BAND.

CTIA agrees with the Commission that “relaxation of the current emission limits, while enabling efficient frequency and power assignments, would promote innovation and investment” in the 3.5 GHz band and “allow operators to make use of wider channels.”⁴² Most 5G solutions will benefit from wider channelization, and a more relaxed OOB limit better enables wider channels.⁴³ The Commission should thus revise the emission limits to the levels that would best promote development of 5G technologies in the 3.5 GHz band.

VI. NARROW MODIFICATIONS TO THE RULES GOVERNING PAL ASSIGNMENT WILL INCREASE PARTICIPATION IN THE PAL AUCTION.

CTIA supports the Commission’s proposals to eliminate the policy that prevents PAL assignment when there is only one applicant in a given license area and the policy that makes available fewer PALs than applicants seek.⁴⁴ If mutually exclusive PAL applications do not exist, the Commission has the authority to assign PALs on a non-auctioned basis.⁴⁵ Indeed, the Commission noted in the *3.5 GHz Order on Reconsideration* that it “could issue PALs on a non-auctioned basis,” but as a matter of policy chose the current approach instead.⁴⁶ That decision was largely premised on rationales—including shorter license terms and follow-on auctions⁴⁷—that the Commission is considering modifying or eliminating in this proceeding; thus, the

⁴² *Notice* at 8090 ¶ 54.

⁴³ See Comments of CTIA, GN Docket No. 12-354, RM-11788, RM-11789, at 3-4 (filed July 24, 2017) (“Now is the time to . . . amend the rules to ensure that new and innovative 5G equipment and technologies will not be precluded by outdated regulatory restrictions.”).

⁴⁴ *Id.* at 8086-87 ¶ 42.

⁴⁵ See 47 U.S.C. § 309(j)(6).

⁴⁶ *3.5 GHz Order on Reconsideration*, 31 FCC Rcd at 5026-27 ¶ 58.

⁴⁷ *Id.* at ¶¶ 53, 56.

modification or elimination of those rationales suggests the further elimination of the underlying (and equally atypical) decision to bar issuance of licenses to willing bidders.

The Commission should reverse course and assign PALs on a non-auctioned basis when there is only one applicant in a given geographic area or when PAL applicants seek fewer than seven licenses in a given geographic area. Doing so will afford interference protection rights to applicants who are willing to pay for PALs, while any spectrum not in use will continue to be available for GAA operations.

First, the policy restricting the Commission's ability to assign a PAL when there is only one applicant in a geographic area does not apply in other auctioned services with longer terms and renewable licenses, and there is no reason to maintain that restriction here. Even if only one applicant in a license area is willing to pay for PAL rights, that applicant should not be precluded from obtaining the interference protections afforded by a PAL.⁴⁸ The Commission made this very determination for single applicants in rural areas as part of the *3.5 GHz Order on Reconsideration*, concluding it is "appropriate to create an opportunity for operators that provide broadband services to Rural Areas to secure assured exclusive access to spectrum, regardless of competitive demand."⁴⁹ It is appropriate to extend that policy nationwide here.

Second, the current policy that makes available one fewer PAL than applicants seek in a geographic area up to a maximum of seven PALs arbitrarily limits the supply of PALs and should be eliminated. As noted above, no individual applicant seeking the interference protections afforded by PALs should be disqualified from obtaining those rights simply because

⁴⁸ Under the Commission's current policy, applicants willing to pay at auction for PAL rights will be sent home without any interference protection rights if others in that census tract are willing to operate on a GAA basis.

⁴⁹ *3.5 GHz Order on Reconsideration*, 31 FCC Rcd at 5024 ¶ 50.

fewer than seven PALs are sought in a particular geographic license area. Further, under the existing licensing rules, the current bidding procedures could result in a “musical chairs” scenario where the supply of PALs might decline, term after term, resulting in unfair treatment to PAL stakeholders.⁵⁰ While that issue will be moot if the Commission adopts a renewal expectancy as described above,⁵¹ the policy should be eliminated as a whole.

VII. CONCLUSION.

To maximize the 3.5 GHz band’s potential for investment and innovation and for new 5G wireless services, the Commission should promptly (1) extend the PAL license term to a traditional 10-year term with an expectation of renewal; (2) reexamine the use of census tract licensing and revise the rules to license PALs on a PEA basis; (3) allow partitioning and disaggregation of PALs; (4) eliminate the requirement for public disclosure of CBSD registration information; (5) revise the OOB limits; and (6) adopt the targeted proposals to modify the bidding procedures. These changes will significantly increase the value of Priority Access Licenses—spurring investment in the CBRS—without undermining the opportunity for General Authorized Access use.

⁵⁰ See Letter from Scott K. Bergmann, CTIA, to Marlene H. Dortch, FCC, GN Docket No. 12-354 (filed Apr. 27, 2016).

⁵¹ See Section II.B., *infra*.

Respectfully submitted,

/s/ Kara Romagnino Graves

Kara Romagnino Graves
Director, Regulatory Affairs

Thomas C. Power
Senior Vice President and General Counsel

Scott K. Bergmann
Vice President, Regulatory Affairs

Paul Anuszkiewicz
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Jennifer L. Oberhausen
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CTIA
1400 Sixteenth Street, NW
Suite 600
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(202) 785-0081

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