

**Before the
Federal Communications Commission
Washington, DC 20554**

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

COMMENTS OF CALIFORNIA INTERNET, L.P. DBA GEOLINKS

California Internet, L.P. DBA GeoLinks (“GeoLinks” or the “Company”) submits these reply comments in response to comments filed on the Notice of Proposed Rulemaking and Order Terminating Petitions (“Notice and Order”) issued October 24, 2017.

I. INTRODUCTION AND SUMMARY

As noted in its opening comments, GeoLinks understands that the 3.5 GHz Band is gaining traction as “one of the core mid-range bands for 5G network deployments throughout the world” and acknowledges that any rules the Commission develops for this band will be primarily for 5G mobile wireless use.¹ However, this band has propagation characteristics that make it optimal for other wireless technologies that can be deployed quickly to start closing the digital divide.

Sparsely populated rural areas are not well suited for traditional, wired broadband service given the cost to build and deliver a cable/ fiber-based network. However, fixed wireless broadband technology can provide high-speed broadband to consumers in these areas for a fraction of the cost. For this reason, it is imperative that spectrum resources be allocated in ways that allow fixed wireless ISPs to deploy services to these regions.

Chairman Pai has stated that the Commission “ha[s] no business picking winners and losers in the marketplace.”² Therefore, the Commission must be careful to avoid creating

¹ Notice and Order at para. 2.

² See Ajit Pai, Chairman, FCC Remarks on Restoring Internet Freedom (Nov. 28, 2017) (“We have no business picking winners and losers in the marketplace”).

spectrum policies that favor some technologies over others. Currently, mobile wireless carriers have ample spectrum resources available to them. However, smaller providers struggle to acquire even a fraction of what these large carriers already have. For these reasons, GeoLinks urges the Commission to develop rules for the 3.5 GHz Band that support 5G deployment *without* closing off the band to other uses, such as fixed wireless service.

II. DISCUSSION

A. PAL Allocation Should be Done in a Way that Promotes Efficient Spectrum Use in Both Urban and Rural Areas

GeoLinks has consistently urged the Commission to consider the unique characteristics of rural vs. more populated urban areas when determining how those areas should be licensed to ensure the most efficient use of the spectrum. To achieve this goal, GeoLinks makes the following suggestions with respect to PAL license areas and license terms.

As an initial matter, in reviewing comments filed in this docket and assessing the unique characteristics of the license areas that GeoLinks would seek to apply for, the Company believes that PALs at the county-level may strike a balance between PEAs and census tracts. As Open Technology Institute at New America and Public Knowledge (“OTI & PK”) explains, many PEAs include both major metropolitan markets and rural areas, that may include hundreds of small towns.³ For example, PEA 2 in California has a population of nearly 20,000 while PEA 192 has a population of just over 300,000.⁴ In these situations, it makes little sense to treat all PEAs the same for the purposes of allocating spectrum licenses.

Meanwhile, GeoLinks agrees with commenters that census tracts are too small for general PAL assignments.⁵ In part, this is because wireless network areas are difficult to limit to census tract boundaries in urban areas (where census tracts are smaller than in rural areas).

³ See Comments of Open Technology Institute at New America and Public Knowledge, GN Docket No. 17-258 (filed Dec. 28, 2017), at 23 (“OTI & PK Comments”).

⁴ Data based on 2010 Census data, available at <https://www.fcc.gov/oet/maps/areas> (last visited January 29, 2018).

⁵ See generally Comments of AT&T Services, Inc., GN Docket No. 17-258 (filed Dec. 28, 2017) (“AT&T Comments”), Comments of United States Cellular Corporation, GN Docket No. 17-258 (filed Dec. 28, 2017), Comments of Mobile Future, GN Docket No. 17-258 (filed Dec. 28, 2017), Comments of T-Mobile USA, Inc., GN Docket No. 17-258 (filed Dec. 28, 2017) (“T-Mobile Comments”), etc.

Many times, depending on specific engineering, a fixed wireless transmitter will have the capability to extend a wireless broadband signal several miles, often covering numerous census tracts, especially in urban areas. Assignment of PALs at the census tract level in urban areas could lead to carrier interference between PAL license areas and the need for expensive management processes to avoid such interference. As NCTA points out, by reducing the total license areas from 74,000 census tracts to approximately 3,150 counties, the Commission would significantly simplify license management burdens and border coordination issues.⁶ GeoLinks is inclined to agree that county-sized licenses would also support rural deployment better than PEAs.⁷

Many commenters assert that counties are still too large and that awarding PAL licenses on a county-basis will stifle the ability for smaller carriers to obtain PALs in the 3.5 GHz band and will not promote deployment to rural areas. GeoLinks believes that if PALs are awarded at the county level, subject to strict buildout requirements (as discussed in further detail below), and if the FCC establishes robust relinquishment, partition and/ or disaggregation rules, large carriers only looking to serve a small portion of a county will either seek out other spectrum resources or engage in secondary market agreements quickly within PAL areas.

While GeoLinks supports the idea of PALs being issued at the county-level, generally, the Company still recognizes that counties may not present a perfect option for all parts of the country and urges the Commission to consider the unique characteristics of rural vs. more populated areas when determining final license areas. Just as PEAs differ in size and population, so do some counties. Especially in California, counties can consist of large metropolitan areas and vast stretches of rural areas. In these counties, GeoLinks supports the adoption of a hybrid approach but agrees with NCTA that “the Commission should carefully evaluate prospective solutions to ensure that they would meet the Commission’s substantive goals.”⁸

In addition to allocation by county (or hybrid approach in rural areas), GeoLinks supports a longer PAL license term. As explained in its opening comments, the Company believes that longer terms will allow license holders time to better utilize the spectrum. Specifically, the

⁶ Comments of NCTA – the Internet & Television Association, GN Docket No. 17-258 (filed Dec. 28, 2017), at 4 (“NCTA Comments”).

⁷ *Id.* at 5

⁸ *Id.* at 9.

expectation of extended use of a specific band of spectrum creates certainty that will allow PAL holders to work with equipment manufacturers to develop and produce new equipment at lower costs. These lower costs will, in turn, allow license holders to invest more resources into their networks to promote higher speeds, additional roll out, etc. Shorter license periods, however, will have the opposite effect. As AT&T points out, the current three-year license term (paired with no right of renewal), creates the risk that PAL licensees will face stranded investments.⁹ As T-Mobile notes, a ten-year term “would afford each licensee sufficient time to design and acquire the necessary equipment and devices and to deploy facilities across the license area.”¹⁰

Rural Wireless Association (“RWA”) asserts that “lengthening the PAL license term to ten years will result in spectrum lying fallow in rural areas and further deprive small and rural providers of access to protected 3.5 GHz.”¹¹ GeoLinks agrees that without the appropriate checks and balances, this could be a risk. Specifically, GeoLinks agrees with NCTA that longer, renewable terms also require appropriate performance obligations.¹² GeoLinks asserts that PAL licensees must be subject to strict build out and reporting requirements (as discussed in further detail below). If a license holder fails to meet these robust buildout requirements, the remaining portion of the PAL area should be subject to relinquishment, partition and/ or disaggregation to allow another service operator the opportunity to utilize the PAL for the remainder of the PAL license term. When the PAL license term expires, the secondary PAL license holder(s) should get the first right of renewal for the PAL areas held.

B. The Commission Should Ensure Adequate PAL Allocation Among Technology Types to Promote Competition

Section 309(j) of the Communications Act of 1934 directs the Commission to promote “the development and rapid deployment of new technologies, products, and services for the benefit of the public,” while “disseminating licenses among a wide variety of applicants” and

⁹ AT&T Comments at 3, citing Comments of Ericsson, GN Docket No. 12-354 (filed July 24, 2017), at 6.

¹⁰ T-Mobile Comments at 4, citing the Notice and Order at para 13.

¹¹ Comments of the Rural Wireless Association, GN Docket No. 17-258 (filed Dec. 28, 2017) at 7 (“RWA Comments”).

¹² See NCTA Comments at 13.

“avoiding excessive concentration of licenses.”¹³ As Google explains, with the right rules, PAL spectrum can support both established wireless and new investors with novel business models.¹⁴ GeoLinks agrees that “opening PAL spectrum to a wider set of potential licensees advances greater overall intensity of use, supports additional economic activity, and avoids the hazards that follow when government auction rules artificially limit access to spectrum that otherwise would support many business models.”¹⁵

GeoLinks asserts that PALs should be assigned in a way that ensures a mixture of technologies are able to utilize the 3.5 GHz Band. One way in which the Commission can ensure competition within the 3.5 GHz Band is by keeping its existing spectrum aggregation limit in place. While AT&T urges the elimination of the 40 MHz spectrum aggregation limit,¹⁶ GeoLinks maintains that allocating more than 40 MHz of spectrum to one PAL holder will essentially close off the band to any other provider that could use that spectrum to provide high-speed broadband service.¹⁷ Moreover, allocating more than 40 MHz to one PAL holder that is not positioned to utilize the band immediately (e.g. a mobile wireless carrier planning to utilize the band for future 5G services) could mean that the 3.5 GHz Band would not be utilized fully for an indefinite amount of time. GeoLinks agrees with OTI & PK that package bids be limited to three or at most four of the PALs (30-40 MHz).¹⁸

C. The Commission Cannot Solely Rely on Secondary Markets to Avoid Spectrum Warehousing or Underutilization of Spectrum in the 3.5 GHz Band

AT&T asserts that “allowing for partitioning and disaggregation will alleviate concerns that licensing on a PEA basis will result in underutilized spectrum.”¹⁹ However, as Google

¹³ 47 U.S.C. §309(j)(3).

¹⁴ Comments of Google LLC, GN Docket No. 17-258 (filed Dec. 28, 2017), at 2 (“Google Comments”).

¹⁵ *Id.* at 3; *see also* NCTA Comments at 4, “NCTA continues to believe that the Commission should design its licensing rules in this innovation band to enable investment by a wide variety of market participants.”

¹⁶ AT&T Comments at 7.

¹⁷ *See* Comments of GeoLinks, GN Docket 17-258 (filed Dec. 28, 2017) at 3 (“GeoLinks Comments”).

¹⁸ *See* OTI & PK Comments at 6.

¹⁹ AT&T Comments at 8

explains, “history confirms that the Commission’s partitioning and disaggregation rules, while sound, cannot be relied upon to promote access to spectrum for non-traditional or rural licensees. According to Commission records, the large wireless carriers who typically win mobile-ready spectrum in auctions only rarely engage in secondary market transactions with smaller entities, much less entities other than established telecommunications companies.”²⁰

GeoLinks agrees with numerous commenters that the FCC cannot rely on the secondary marketplace alone if PALs are granted for larger geographic areas.²¹ However, GeoLinks believes that the secondary marketplace is a viable solution *IF* PALs are subject to strict build out and reporting requirements and the threat of forced relinquishment, partition and/ or disaggregation for failure to meet those requirements.

In developing policies surrounding allocation of PAL licenses in the 3.5 GHz band, GeoLinks urges the Commission to develop strict buildout and reporting requirements for PAL licensees. As stated in its opening comments, the Company suggests that the Commission require license holders to provide status updates regarding their deployment/ network improvements within the 3.5 GHz Band by census block and reporting on a quarterly basis for the first year of the initial license period or renewal and annually thereafter.²²

With respect to buildout metrics, GeoLinks strongly opposes T-Mobile’s proposal that the Commission adopt a performance requirement of coverage to only 40% of the population for licenses in the 3.5 GHz band.²³ As OTI & PK notes, if build-out requirements are based on population, mobile carriers would satisfy them simply by building out almost solely in the high-density and/ or high-ARPU areas where the economic returns justify putting spectrum to work.²⁴ GeoLinks asserts that the Commission must create buildout requirements that ensure the 3.5 GHz band is utilized in all areas of the PAL license areas, regardless of population density. Failure to implement such requirements will only serve to ensure that large swaths of spectrum go unused; a concept that runs contrary to the Commission’s efforts to close the digital divide.

²⁰ Google Comments at 19.

²¹ *See e.g.* Comments of the General Elective Company, GN Docket No. 17-258 (filed Dec. 28, 2017), at 23 and OTI & PK Comments at 22.

²² GeoLinks Comments at 4.

²³ T-Mobile Comments at 7.

²⁴ OTI & PK Comments at 20.

As stated in GeoLinks' opening comments, minimum buildout requirements should be set high enough to ensure that unserved areas (if applicable) within the license area are not left behind.²⁵ As such, GeoLinks suggests that the Commission implement buildout requirements based on locations within the PAL license area.

Moreover, the Commission should establish robust relinquishment, partition, and disaggregation processes for situations where buildout requirements are not met. Similar to the RWA's suggestion that unused PAL areas should be subject to a "keep-what-you-serve" standard at the time of renewal, GeoLinks suggests that this be taken a step further to ensure anything unserved within a reasonable time (i.e. one year from PAL assignment) can become available for reassignment by the Commission.²⁶

GeoLinks believes that these buildout and reporting requirements, pair with a relinquishment, partition, and disaggregation process will ensure that large carriers either refrain from bidding on PAL areas in which they know they cannot or will not meet the build out requirements or ensure that these carriers seek out options for partitioning a portion of the PAL to another carrier expeditiously (before buildout requirements kick in). However, in advocating for these safeguards, GeoLinks asserts that PAL holders should not be able to set the price or terms for transferring unused spectrum to an interested party. GeoLinks firmly believes that if a PAL holder is not willing to utilize the 3.5 GHz Band throughout the entire license area or does not meet certain mandatory buildout requirements (such as those suggested above), the holder should not reap a benefit.

D. If the Commission Utilizes an Incentive Auction to Assign PAL Licenses in the 3.5 GHz Band, it Should Create a Process to Ensure All Types of Service Providers Can Participate

GeoLinks has previously advocated that incentive auctions should not be the preferred mechanism for determining how spectrum is licensed in all bands.²⁷ This is because incentive auctions tend to only benefit large companies with large amounts of capital to spend and

²⁵ GeoLinks Comments at 5.

²⁶ See RWA Comments at 10.

²⁷ Reply Comments of GeoLinks, GN Docket N. 17-183 (filed Nov. 15, 2017), at 3.

incentivize bidders to purchase spectrum resources as an asset for future use rather than for immediate use. This process, while not necessarily designed to, picks “winners and losers” by creating a playing field that only a limited number of parties can participate in. GeoLinks understands that the Commission will likely utilize the auction process to license PALs in the 3.5 GHz band. In light of this, and to ensure that PAL licenses can be obtained by “both established wireless and new investors with novel business models,”²⁸ GeoLinks recommends that the Commission establish a set of bidding credits designed to put potential bidders on equal footing. Some suggestions for bidding credits include the following.

i. Small Service Provider Bidding Credit

Many small and mid-sized service providers lack the large amounts of capital generally necessary to compete in spectrum incentive auctions leaving them behind and unable to compete with larger carriers in the same spectrum bands. This disadvantages rural areas where many of these small and mid-sized carriers operate (and wish to invest in additional broadband deployment). In order to put these smaller operators on equal footing with larger operators, GeoLinks suggests a generous bidding credit for carriers with fewer than 10,000 customers.²⁹

ii. Rural Broadband Bidding Credit

GeoLinks believes that the 3.5 GHz band is well suited for a multitude of rural broadband services that will help in the Commission’s goal of closing the digital divide. However, this will only occur if the policies surrounding allocation of the 3.5 GHz band PALs are crafted in a way that encourages such deployment. This includes giving smaller service providers, that may focus their service offerings on rural areas, opportunities to obtain spectrum sufficient to offer high speed broadband to these areas – smaller providers that likely do not have the capital that the large mobile carriers do in order to afford such spectrum. GeoLinks suggests that the Commission create a generous bidding credit for service providers that commit to serve rural

²⁸ Google Comments at 2.

²⁹ This suggestion goes beyond the bidding credits implemented in 600 MHz Band (Incentive Auction), *See* Updating Part 1 Competitive Bidding Rules et al., WT Docket No. 14-170 et al., Report and Order, 30 FCC Rcd 7493 (2017). GeoLinks is open to other metrics for determining what is considered a “small service provider” but believes that the metric should be smaller than what was proposed for the 600 MHz Band or that the bidding credit should increase incrementally the fewer customers a service provider has.

areas within the PAL license area. Specifically, GeoLinks suggests that those service providers that bid on rural areas, including areas containing CAF II Auction eligible areas, and commit to serving a certain number of locations within such area be given such a bidding credit. The Company also suggests that such bidding credits be subject to ongoing reporting regarding rural service deployment over the 3.5 GHz band.

iii. Connect America Fund Phase II Awardee Bidding Credit

In its opening comments, GeoLinks proposed that Connect America Fund Phase II (“CAF II”) awardees (or, depending on timing, CAF II applicants that pass the short form phase of the application process) that rely on spectrum resources be allowed “first crack” at a PAL covering applicable eligible areas.³⁰ GeoLinks believes that this “first crack” could be in the form of a bidding credit applicable towards PALs in the 3.5 GHz Band. As awardees will already be committing to serve 95% of rural locations within eligible CAF II areas, this credit could be paired with the rural bidding credit.

iv. Wholesale Bidding Credit

Another bidding credit GeoLinks suggests is a credit for those PAL holders that are willing to offer access to PAL spectrum on a wholesale basis to other service providers, either in the same areas as the PAL holder offers its services or in areas throughout the PAL license areas where the PAL holder cannot or does not wish to deploy services.

v. PAL Awardee Payment Options

In addition to the bidding credits set forth above, and any others the Commission may determine are in the public interest, GeoLinks suggests that the Commission implement a process by which smaller PAL recipients can pay for their spectrum licenses in installments over the length of the PAL period. This will allow bidders with less upfront capital to expend on spectrum (generally small and mid-sized carriers) to acquire and pay as the spectrum is utilized and services are deployed. GeoLinks suggests that failure of a PAL recipient to make timely payments under such a payment option should result in relinquishment or forced relinquishment,

³⁰ GeoLinks Comments at 7.

partition and/ or disaggregation. GeoLinks suggests that applicants who qualify for the “small Service Provider” bidding credit, for example, should qualify for extended payment.

III. CONCLUSION

In conclusion, GeoLinks urges the Commission to adopt rules with respect to spectrum licensing in the 3.5 GHz band that do not close off the band to fixed wireless service providers, ensure efficient use of the band, and promote broadband deployment and competition in both urban and rural areas.

Respectfully submitted,

GEOLINKS, LLC

/s/ Skyler Ditchfield, Chief Executive Officer

/s/ Melissa Slawson, General Counsel/ V.P of Government
Affairs and Education

January 29, 2018