

**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 AT&T

William L. Roughton, Jr.
Michael Goggin
Gary L. Phillips
David L. Lawson
1120 20th Street, N.W.
Suite 1000
Washington, DC 20036
(202) 457-2040
Counsel for AT&T Services, Inc.

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I. INTRODUCTION AND SUMMARY

AT&T Services Inc., on behalf of the subsidiaries and affiliates of AT&T Inc. (collectively “AT&T”) respectfully submits these reply comments in response to the Commission’s Second Further Notice of Proposed Rulemaking (“*Second FNPRM*”) in the above-captioned proceeding.¹ In their opening comments, numerous parties argued that for the new licensing regime envisioned for the 3.5 GHz band to be successful there needed to be certainty, simplicity, and flexibility for all users of the spectrum. Key to the success of the 3.5 GHz spectrum ecosystem will be the willingness of Priority Access License (“PAL”) and General Authorized Access (“GAA”) users to invest in equipment and spectrum usage rights, and the Commission should adopt a framework that encourages such investment. However, the record demonstrates that both prospective PAL and GAA users have significant concerns about the 3.5 GHz policy framework and believe that significant uncertainties may limit their ability to invest in the band.

There are several steps the Commission can and should take in this proceeding to increase stakeholder confidence in the 3.5 GHz band. First, commenters generally agree that

¹ *Amendment of the 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 (Apr. 21, 2015) (“*Second FNPRM*”).

flexible secondary market policies will promote efficient spectrum use in the 3.5 GHz band. Second, IEEE’s reticence to support the 3.5 GHz band illustrates the pragmatic impact of technical uncertainties associated with this band. The Commission must avoid exacerbating that problem with regulatory uncertainty – it must adopt policies that foster investment in the band. Third, the Commission must take steps to protect fixed satellite service incumbents, and commenters support a stakeholder-focused process for ensuring such protection.

II. COMMENTERS AGREE THAT FLEXIBLE SECONDARY MARKET POLICIES WILL PROMOTE EFFICIENT SPECTRUM USE.

AT&T believes that a robust secondary market for PAL rights will promote the public interest, improve spectral efficiency, and encourage investment in PAL rights. Commenters in this proceeding agree, highlighting the importance of removing procedural hurdles to spectrum access, providing opportunities for partitioning and disaggregation of licenses where desired, and permitting a well-designed spectrum exchange. By supporting the development of an efficient secondary market, the Commission will allow for innovative spectrum uses and permit parties to adjust PAL holdings between auctions to fit theirs and consumers’ needs.

Numerous commenters support a secondary market framework that permits transactions to proceed with minimal cost, delay, and burden to parties. As Cantor Telecom observes, “a vibrant secondary market requires maximum flexibility and should permit PAL users to gain access to additional spectrum as future needs arise between auction windows.”² Given the relatively short license terms of PALs and the ever-changing needs of PAL users, it is essential that any secondary market framework permit transactions to proceed quickly and enable rapid

² Comments of Cantor Telecom Services, L.P. in Response to Second Further Notice of Proposed Rulemaking, GN Docket No. 12-354, at 11 (July 15, 2015) (“Cantor Telecom Comments”).

access to spectrum.³ Further, PAL license transfers are unlikely to spur public interest concerns and, therefore, simplification and streamlining of the Commission’s processes would serve the public interest and reduce administrative burdens for both PAL holders and the Commission.⁴ In sum, AT&T agrees that a “dynamic and efficient secondary market for PALs will spur innovation and investment by ensuring that operators can obtain PALs when and where they need quality of service assurances, and also divest PALs quickly and easily if they determine they do not require them.”⁵

In particular, the record contains substantial support for secondary market rules that permit partitioning and disaggregation of PALs, with several parties noting the public interest benefits of such flexibility. These benefits are numerous. By permitting partitioning and disaggregation of licenses, the Commission will enable spectrum to flow to those who most demand it, promoting efficiency of use.⁶ The Commission would also enable PAL holders in larger, more rural census tracts to achieve small license areas comparable to more urban census

³ See, e.g., Comments of Qualcomm Incorporated, GN Docket No. 12-354, at 3-4 (July 15, 2015 (“Qualcomm Comments”)) (“Given that the Commission has adopted census tract area licenses with limited license terms and no right of renewal, it is critically important that the agency adopt policies and rules that allow 3.5 GHz PAL licensees to be readily leased, assigned, and transferred.”).

⁴ Verizon Comments on Further Notice of Proposed Rulemaking, GN Docket No. 12-354, at 3 (July 15, 2015) (“Verizon Comments”) (“The Commission should take advantage of the databases already inherent in the sharing framework to efficiently monitor PAL transfers and leases, stepping in and reviewing them only if it identifies public interest concerns. Given the potentially vast number of transactions involving census tract-sized PALs, a streamlined approach to PAL transfers would also reduce the Commission’s administrative burdens.”).

⁵ Verizon Comments at 4.

⁶ Cantor Telecom Comments at 9; John Peha, “A Real-Time Secondary Market for Spectrum With Guaranteed Interference Protection,” GN Docket No. 12-354, at 4 (July 15, 2015) (“John Peha Comments”).

tracts, should they so desire.⁷ Further, the provision of service to facilities that straddle census tract lines may require the use of partitioning and disaggregation to create a customized “license area.”⁸ And, as AT&T and others noted in their initial comments, highly beneficial outcomes can result from assignments or leases of spectrum covering very small geographic areas.⁹ The Commission has long enabled partitioning and disaggregation in other spectrum bands, and should do the same here.

The record also supports AT&T’s position that a well-designed spectrum exchange could play an important role in facilitating secondary market transactions. A spectrum exchange operator “would be able to utilize its expertise to provide an electronic marketplace through which operators can come together to share this limited and valuable resource.”¹⁰ Commenters agree that spectrum exchanges “may prove to be a very efficient way for the secondary market to

⁷ Comments of the Wireless Internet Service Providers Association, GN Docket No. 12-354, at 7-8 (July 15, 2015) (“WISPA Comments”) (“While the size of census tracts in non-rural areas may be small, that is not always the case for rural census tracts, which may cover thousands of square miles. For these larger tracts, there may be multiple broadband providers that desire the exclusivity of PALs in a particular area that conforms to an existing area of operation where more spectrum may be needed. In other cases, the desired areas of operations may straddle two or more census tracts, forcing a party desiring a PAL to acquire multiple PALs even though it only wants to serve a small area of multiple PALs.”).

⁸ Qualcomm Comments at 4 (“Despite defining census tract area licenses (of which there may be more than 500,000) and much shorter license terms with no right of renewal, the FCC should still permit partitioning and disaggregation of PAL licenses because licensees may want to engage in a spectrum transaction involving a collection of spectrum assets along lines that do not directly correspond to census tracts.”); Rajant Comments at 3 (“The census block area will encourage service to particular industrial or commercial facilities or community centers. But to serve such facilities, which may straddle a census block, a provider may require some partition or disaggregation of an adjacent PAL to fully serve the intended site.”).

⁹ Qualcomm Comments at 4; Comments of Rajant Corporation to Second Further Notice of Proposed Rulemaking, GN Docket No. 12-354, at 3 (July 15, 2015) (“Rajant Comments”).

¹⁰ Cantor Telecom Comments at 5.

blossom.”¹¹ However, the Commission should not require that the same party serve as both the SAS and the spectrum exchange. Cantor Telecom agrees, observing that a 3.5 GHz spectrum exchange “would be best managed by an independent and disinterested third party” and would be complementary to and interoperable with the SAS.¹²

Finally, AT&T reiterates that the imposition of spectrum aggregation limits and spectrum attribution standards on the 3.5 GHz band is unnecessary. There is no basis to judge what, if any, aggregation limits should apply to PAL licenses, as the 3.5 GHz spectrum environment has not yet been established and the competitive conditions in the band are not yet known. Further, as commenters note, application of these rules to the 3.5 GHz band would raise new regulatory complications due to the licensing rules for PALs. For example, Federated Wireless observes that the Commission would need to establish a threshold of how much “use” of a PAL license is enough to count it toward the aggregation limit.¹³ AT&T agrees that the imposition of spectrum aggregation limits to the 3.5 GHz band would bring numerous administrative burdens with little to no cognizable benefit.

III. TO ENSURE SUCCESS IN THE 3.5 GHZ BAND, THE COMMISSION MUST ENCOURAGE INVESTMENT BY PAL AND GAA STAKEHOLDERS ALIKE.

The 3.5 GHz band is an ambitious experiment in spectrum sharing unlike anything attempted previously by the Commission. For this experiment to be successful, both the licensed

¹¹ WISPA Comments at 9. *See also* Verizon Comments at 4 (“The Commission should permit, and encourage, database administrators to establish spectrum exchanges facilitating the efficient buying, selling, and leasing, in real time, of PAL licenses. The Commission correctly notes that one or more spectrum exchanges could ‘facilitate a vibrant and deep market for PAL rights.’”).

¹² Cantor Telecom Comments at 5.

¹³ Comments of Federated Wireless, Inc., GN Docket No. 12-354, at 23 (July 15, 2015) (“Federated Wireless Comments”).

and unlicensed communities will need to make substantial investments in spectrum access, technologies, and services in the 3.5 GHz band. Based on the record developed by the Commission in this proceeding, AT&T is concerned that neither the licensed nor unlicensed community will be willing to make the investments needed for the 3.5 GHz ecosystem to be a success without additional regulatory certainty.

In the near term, unlicensed 3.5 GHz technologies cannot be expected to proliferate in the 3.5 GHz band, as relevant standards groups have expressed a reluctance to expend resources on a band mired in regulatory uncertainty. In its comments, IEEE 802.11 explains that it has little interest in standardizing the 3.5 GHz band for unlicensed use. This is because “the policy of creating exclusion zones covering all coastal densely populated areas in the U.S. does not justify costly and time consuming standard and silicon development for inclusion in mobile devices, as they would be unusable in many areas where these devices are most valuable.”¹⁴ Unless and until unlicensed standards bodies such as IEEE 802.11 have the incentive to develop standards for the 3.5 GHz band, there will be serious concerns regarding the viability of 3.5 GHz spectrum for unlicensed operation. It is clear that, at a minimum, these technologies will require additional time before they can be deployed in the 3.5 GHz band.

As the Commission continues to study ways to narrow exclusion zones and promote unlicensed standards development in the 3.5 GHz band, PAL licensing will play a pivotal role in launching the 3.5 GHz band. As with the unlicensed community, potential PAL holders will require the regulatory certainty needed to invest with confidence. In its opening comments, AT&T highlighted that the Commission’s chosen definition of “use” in connection with its “use-it-or-share-it” regime will directly impact licensees’ incentives to build out and exploit the

¹⁴ Comments of IEEE 802.11, GN Docket No. 12-354, at 4 (July 15, 2015) (“IEEE Comments”).

licenses they have purchased.¹⁵ Other commenters agree, noting that for PAL holders to invest both in spectrum licenses and in infrastructure, they must have certainty that they will be able to fully access their licensed spectrum and be free from interference caused by lower priority uses.¹⁶ This is just one example of an area where the Commission’s policy decisions will have a direct impact on potential PALs’ willingness to invest in the 3.5 GHz band. As the Commission’s rules currently stand, PALs face unusually short license terms, may not enjoy a renewal expectancy, and will be impacted by the SAS – an as yet untested technology. As a result, prospective PAL holders face considerable uncertainty under the Commission’s existing framework, which may lead to results that are similar to the IEEE outcome—a lack of interest in the band. It is for this reason that AT&T supports the Petition for Reconsideration filed by CTIA – The Wireless Association® (“CTIA”), which enumerates several policy modifications that “will put the 3.5 GHz Band, and Priority Access Licensees, in a stronger position to succeed.”¹⁷ Unless the Commission can provide regulatory certainty to PALs, they will not make the investments necessary to ensure a robust deployment at 3.5 GHz. AT&T urges the Commission

¹⁵ Comments of AT&T, GN Docket No. 12-354, at 3 (July 15, 2015) (“AT&T Comments”).

¹⁶ *See, e.g.*, Comments of CTIA – The Wireless Association, GN Docket No. 12-354, at 6 (July 15, 2015) (“CTIA Comments”) (“Instead, by adopting a framework where notice of commencement of operations in any part of a licensed census tract triggers the cessation of GAA operations throughout a census tract – already a small area to begin with – the Commission will ensure an interference-free environment and relieve licensees of burdens and uncertainty that are fundamentally inconsistent with the “exclusive usage” licensed spectrum rights that they will be paying for at auction.”); Verizon Comments at 2 (“Imposing a generic definition of “use” would permit GAA operations to cause harmful interference to some PAL operations, which would reduce operators’ willingness to make substantial investments to deploy PAL spectrum.”).

¹⁷ Petition for Reconsideration of CTIA – The Wireless Association®, GN Docket No. 12-354, at 2 (July 23, 2015) (“CTIA Petition”). In its Petition for Reconsideration, CTIA asks the Commission to adopt longer license terms and a renewal expectancy for PALs, to reconsider its decision to “systematically phas[e] out PALs with each subsequent auction,” and to alter its technical rules in a manner that enables PALs to improve indoor and outdoor coverage and operate more robust, higher-power services.

not to take any additional steps that would increase uncertainty for prospective PALs, and to consider changes to its rules that would promote investment.

If the Commission's rules for the 3.5 GHz band cannot spur sufficient investment by licensed or unlicensed stakeholders, the result will be a significant blow to the Commission's spectrum allocation goals. The Commission has cited the 3.5 GHz band as "a major contribution toward our collective goal of making 500 megahertz newly available for broadband use."¹⁸

AT&T looks forward to playing a role in the development of the 3.5 GHz ecosystem, but under the Commission's existing regime there remain significant questions for licensed and unlicensed interests alike. AT&T urges the Commission to adopt rules and policies that will promote certainty for the licensed and unlicensed communities and, in turn, spur investment in the 3.5 GHz band.

IV. COMMENTERS SHARE AT&T'S CALL FOR A STAKEHOLDER-FOCUSED PROCESS FOR PROTECTING FIXED SATELLITE SERVICE INCUMBENTS.

AT&T and others in this proceeding support efforts to protect incumbent fixed satellite service ("FSS") earth stations from harmful interference. In its initial comments, AT&T noted the efforts of industry groups that are working to develop standards and best practices for coexistence in the 3.5 GHz band.¹⁹ The Commission should permit the industry to continue these efforts, and should encourage a stakeholder-driven process for interference protection in this band. Notably, several commenters agree with AT&T and the Commission that SAS administrators should use a uniform set of propagation models developed by the industry to

¹⁸ *Second FNPRM* at ¶ 1.

¹⁹ AT&T Comments at 7.

prevent interference.²⁰ The use of uniform propagation models will simplify SAS administration and promote fairness and consistency. Conversely, using differing propagation models “would lead to disparate protection requirements among or within CBSD operational localities and cause operational inconsistencies in an already difficult sharing environment.”²¹ Further, commenters agree that, regardless of the protection mechanisms and propagation models adopted, there must be a mechanism in place to promptly resolve incidents of actual interference as they arise.²²

²⁰ Comments of RadioSoft, Inc. and LS telecom, AG, GN Docket No. 12-354, at 1 (July 15, 2015) (“RadioSoft Comments”); Comments of the Satellite Industry Association, GN Docket No. 12-354, at 4 (July 15, 2015) (“SIA Comments”).

²¹ SIA Comments at 4.

²² *Id.* at 6 (stating that the Commission “should ensure that under any such methods, the SAS always prioritizes incumbent protection and is required to swiftly resolve any interference that arises.”).

V. CONCLUSION

The latest round of comments in this proceeding has made clear that both the licensed and unlicensed communities require additional assurances from the Commission before they can confidently invest in the 3.5 GHz band. AT&T believes that the path to success at 3.5 GHz involves an initial launch of PAL technologies while the Commission takes steps to support broader unlicensed use of the band. To achieve this vision, the Commission should heed the submissions of AT&T in others in this proceeding who call for flexibility, simplicity, and certainty in the 3.5 GHz band.

Respectfully submitted,

By: /s/ William L. Roughton, Jr.

William L. Roughton, Jr.
Michael Goggin
Gary L. Phillips
David L. Lawson
1120 20th Street, N.W.
Suite 1000
Washington, DC 20036
(202) 457-2040
Counsel for AT&T Services, Inc.

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