

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

In the Matter of

Promoting Investment in the 3550-3700      GN Docket No. 17-258

MHz Band;

Petitions for Rulemaking Regarding the

Citizens Broadband Radio Service

**REPLY COMMENTS OF THE DYNAMIC SPECTRUM ALLIANCE**

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## **A. Introduction and Summary**

The Dynamic Spectrum Alliance (DSA), whose membership spans multinationals, small-and medium-sized enterprises, and academic, research, and other organizations from around the world, is committed to creating innovative solutions that will expand broadband solutions for consumers and businesses alike.<sup>1</sup> The DSA submitted our comments to the Commission's Notice of Proposed Rulemaking (NPRM) noted above.<sup>2</sup> After reviewing the significant record in this proceeding, we submit our Reply Comments below.

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<sup>1</sup> The DSA's membership spans multinationals, small-and medium-sized enterprises, and academic, research, and other organizations from around the world, all working to create innovative solutions that will increase the amount of available spectrum to the benefit of consumers and businesses alike. A full list of DSA members is available on the DSA's website at [www.dynamicspectrumalliance.org/members/](http://www.dynamicspectrumalliance.org/members/).

<sup>2</sup> In the Matter of Promoting Investment in the 3550-3700 MHz Band, Notice of Proposed Rulemaking and Order Terminating Petitions, FCC-CIRC1710-04 ("CBRS NPRM").

The weight of the evidence and the overwhelming majority of comments in this proceeding demonstrate what the DSA has maintained from the beginning: the current CBRS rules are a fair and appropriate balance between the requirements of diverse types of service providers using different categories of network infrastructure and undertaking innovative use cases--service providers that have already been attracted to the promise of CBRS--and the requirements of traditional mobile applications. Indeed, in its First Report and Order, the Commission got it right by balancing the interests of those seeking PALs that were similar in size and term to licensed mobile bands in lower frequencies, with the interests of new entrants and new entities that sought to use the band for new applications using business models different from the traditional mobile carrier model.<sup>3</sup> In reaching its conclusion, the Commission recognized that due to the unique requirements to protect incumbent users, and the propagation characteristics of the 3.5GHz frequency band, deployment in CBRS--and thus the size and length of licenses--would by necessity be different than in traditional cellular bands.<sup>4</sup>

The overwhelming majority of commenters, with the exception of large national carriers, their suppliers and interest groups, have reached the same conclusion, particularly that users of the CBRS band are better served by PAL licenses that have shorter terms and license areas that are smaller than traditional cellular licenses that are based on Partial Economic Areas ("PEAs"). A majority also support the DSA's position that no renewal expectation is necessary or helpful for the CBRS band.

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<sup>3</sup> Report and Order and Second Further Notice of Proposed Rulemaking, 30 FCC Rcd 3959 (2015) (First Report and Order) ¶100.

<sup>4</sup> *Id.* at ¶25.

In regard to secondary markets, the majority of commenters agree with DSA that the current PAL rules based on census tracts and limited term licenses will promote considerably more liquid and efficient secondary markets than though attempts to align license areas with small-cell service areas through portioning and disaggregation of PEAs. In particular, the record has shown that secondary markets have utterly failed when it comes to leasing or partitioning spectrum to small competitive or rural carriers, let alone industrial, enterprise, or institutional users.

DSA's position is that the Commission's current rules providing for public disclosure of basic anonymized CBSD registration information is in the public interest. The record continues to be devoid of any evidence of the purported harms presented by the current disclosure rules. No explanation has been provided as to why anonymous CBSD data in particular is critical as compared to other public network information, what specific harm associated with disclosure of such data, or whether such information with otherwise be available to the public. Thus, DSA hopes the Commission will not move forward on its proposal.

Finally, the majority of commenters agree with DSA that allowing PAL licensees to bid on specific channel assignments is neither feasible, desirable, or necessary. Spectrum management through dynamic assignment of PAL frequencies is required to protect incumbent Federal users and it's the cornerstone of the CBRS's three tiers of access framework. There was no interest in the Commission's proposal to adopt the Incentive Auction's two-stage forward spectrum auction mechanism to PAL frequencies in the CBRS band.

For these reasons, the DSA continues to urge the Commission not to significantly modify the existing rules for the CBRS band.

## **B. PAL Licensing Terms**

Background: In the Notice of Proposed Rulemaking (NPRM), the Commission stated that it is considering fundamental changes to PAL licenses by increasing the term from three to ten years, and allowing renewability of PAL licenses. The Commission sought comment on this change and on the appropriate performance requirements and renewal standards for PALs.<sup>5</sup> In our Comments to the NPRM, the DSA stated that the evidence in the record and practice demonstrate that the current three-year PAL term is not deterring investment and has in fact attracted significant new interest in the spectrum band.<sup>6</sup> We also stated that renewability of licenses was counterproductive to ensuring that this band continues to include the most advanced technology available. Three-year terms also eliminate the need for regulatory oversight regarding performance requirements that would be necessary with longer terms.<sup>7</sup> Nothing in the comments to the NPRM offers substantial evidence of the contrary.

DSA Position: The Commission's current CBRS NPRM has attracted almost 200 comments. With the exception of the large wireless carriers, their suppliers, and interest groups, virtually all other commenters have come out opposed to making significant

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<sup>5</sup> NPRM at ¶ 13.

<sup>6</sup> DSA Comments to the CBRS NPRM filed December 28, 2017 ("DSA Comments") (citing DSA Comments filed July 24, 2017 in response to Petition for Rulemaking to Amend the Commission's Rules Regarding the Citizens Broadband Radio Service in the 3550-3700 MHz Band, Petition for Rulemaking, GN Docket No. 12-354 (filed July 16, 2017) ("CTIA Petition")).

<https://ecfsapi.fcc.gov/file/1072450166116/DSA%20CBRS%20Comments%20July%2024%202017.pdf>

<sup>7</sup> *Id.* at 10-11.

changes to the current CBRS rules for PAL terms. These commenters agreed that increasing the PAL term to ten years and adding an expectation of renewal would drastically raise the cost of PALs for new entrants, hinder innovation and would serve the interests of only the largest wireless providers.<sup>8</sup> WISPA and a plethora of rural ISPs stressed that the increase in the PAL term to ten years would be particularly harmful in rural areas by driving up costs for smaller bidders and reducing incentives to make efficient use of spectrum.<sup>9</sup>

Rural providers were not alone in opposing the rule change to a ten-year PAL. Starry, a predominately urban focused fixed-wireless provider, for example, stated that longer PAL terms run counter to the intent of the CBRS structure to create efficient, market-oriented access to spectrum. Shorter PAL terms allow companies to choose between the need for exclusivity and the ability to operate under GAA as their needs change, which helps achieve more efficient outcomes.<sup>10</sup> Longer terms would instead force companies to either predict which model best suited their requirements up front, or defensively acquire a PAL in order to guard against unknown or unpredictable changes in the future. Longer terms would also necessitate more regulatory oversight with build-out requirements and determinations of satisfactory utilization of the PAL license.

The large wireless carrier community argues that longer terms and renewability is necessary to drive investment. DSA does not believe that the comments support this

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<sup>8</sup> Open Technology Institute at New America and Public Knowledge Comments at 29.

<sup>9</sup> WISPA Comments at 39; TechInfo Comments; Aristotle Comments at 1; Cal.net at 2.....  
<https://ecfsapi.fcc.gov/file/1072450166116/DSA%20CBRS%20Comments%20July%2024%202017.pdf>

<sup>10</sup> Starry Comments at 2 (citing the Commission's Order on Reconsideration and Second Report and Order, 31 FCC Rcd 5011, 5024).

assertion because the record demonstrates that significant investment is happening today. Companies as diverse as GE, Starry, Google, Qualcomm, cable companies, dozens of rural wireless service providers, and even Verizon and AT&T are making investments in deploying 3.5GHz networks under the current rules. Should the Commission lengthen PAL terms to ten years, such changes will conceivably benefit national carriers, but will strand current investments and deter future investment from non-traditional users of spectrum, undermining the foundation of CBRS as an innovation band.

CTIA also suggests that the licensing approach taken in the CBRS band should follow that which has been used in other bands,<sup>11</sup> ignoring the significant differences in 3.5 GHz from the lower frequency bands traditionally used by the large wireless carriers. The Commission recognized in its *First Report and Order*, and the record in this proceeding has shown, that due to the shared nature of the band, along with the smaller distance propagation and poor building penetration, the band will primarily drive small-cell deployment with very different costs and risk profiles than traditional cellular deployments.<sup>12</sup> In short, the large wireless carrier community's argument for significantly revised rules, in addition to being bad policy, is a mismatch to the physical characteristics of the band.

DSA continues to support PAL terms that provide a reasonable time for recovery of investment and that the current three-year term establishes an appropriate period to achieve such recovery. The large wireless carrier community has not, beyond making

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<sup>11</sup> CTIA Comments at 4.

<sup>12</sup> See First Report and Order, ¶98.



general assertions about how longer terms benefit them, provided any evidence that an essentially permanent right to the spectrum (through the ten-year term and the expectation of renewal) is necessary for robust investment or beneficial to innovation and consumers. In fact, the permanent right would suggest that risks for recovery of investment were enormous and impossible to predict, requiring the spectrum itself to become an asset that could later be monetized. This would imply a fundamental lack of confidence in their plans for use of the band and sits in stark contrast to the dozens of commenters advocating for the current PAL terms and investing under the current regime. The carriers' own actions and comments regarding 5G demand, as well as the growth in wireless broadband consumption, however, indicate that the deployment risks are significantly less than claimed. Planning, investment and standards setting in the CBRS band, all of which started prior to the filing of the petitions by CTIA and T-Mobile, and wide private sector participation in the CBRS Alliance and WInnForum prove that there is tremendous confidence in the opportunities for success with the current CBRS rules.

Finally, much of the large carrier community opposed the need for build-out requirements as part of any revision of the rules to larger geographical PALs or longer terms and renewal expectancies for PALs. CTIA, Verizon, Ericsson and others claim that traditional performance metrics are not even necessary due to the existence of GAA.<sup>13</sup> These entities are thus suggesting that GAA is an adequate substitute for PAL licenses, or as is more likely, that the large wireless carriers alone have a need for PAL licenses but that others should be satisfied with GAA. T-Mobile takes the position that

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<sup>13</sup> CTIA Comments at 7; Verizon Comments at 6; Ericsson Comments at 5. See also.

the Commission should adopt population based performance metrics for PALs because “some of the applications for the 3.5 GHz band will be focused on small-cell deployment and may be used to enhance capacity, population-based coverage requirements are most appropriate.” T-Mobile suggests that the Commission adopt a standard similar to the 40% of the population in a license block standard adopted for the 28 GHz, 37 GHz, and 39 GHz bands.<sup>14</sup>

We fundamentally disagree with the positions of the large wireless operator community that the significant changes to the PAL structure (both in terms of term and geography) could reasonably be accomplished without specific build-out requirements. Further, we believe that if the need for large PALs were indeed justified, these entities would not be opposed build-out requirements that would require them to provide service within the terms or geographies that they seek for PAL licenses. As is clear from the comments, the communities of interest in PALs are much larger than merely the large wireless carriers. Spectrum certainty is sought by many entities looking to deploy networks in the CBRS band. We also disagree with T-Mobile’s view that a build-out requirement based on the 40 % test for population coverage is adequate. In insisting that PAL should be expanded to being many multiples larger based on both population and geography, insisting that the large wireless carrier business case depends on it, requires build-out requirements matching those bold claims; particularly given the fact that PEA-sized PALs will crowd out so many others seeing access to the spectrum.

### **C. Geographic License Areas**

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<sup>14</sup> T-Mobile Comments at 6.

Background: In the CBRS NPRM, the Commission proposed to increase the geographic licensing area of PALs to stimulate investment, promote innovation, and encourage efficient use of spectrum.<sup>15</sup> The Commission sought comment on whether larger PALs would facilitate deployment of a variety of technologies, including 5G, whether PEAs are the right size for PALs, whether PEAs balance the objectives in section 309(j) of the Communications Act, and what impact PEAs would have on rural deployment and existing investment.

DSA Position: In our DSA Comments, we stated that census tracts are the appropriate size for PALs in the CBRS band and that large PEA-sized PALs would only be useful and valuable for national wireless carriers; and likely not even for them, given power limits in the band and the small-cell nature of networks deployed in 3.5GHz. PEA-sized PALs would be too expensive and highly inefficient to acquire for entities seeking to cover campuses, hotels, warehouses, schools, or rural communities with small-cell networks. PEA-sized PALs would also be inconsistent with Section 309(j) of the Act, as it would strongly bias the PAL opportunity in favor of large wireless carriers.

The record in this proceeding definitively bears out DSA's conclusion that PEA-sized PALs only benefit large wireless carriers and hurt, if not outright preclude, other use cases and business models seeking to use CBRS. For example, Southern Linc, a company that provides wireless connectivity to utilities, first responders, and local businesses, states that "if PEAs were to be adopted, an entity seeking to operate in a limited geographic area, such as the area around an electric generation facility, would

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<sup>15</sup> *CBRS NPRM* ¶ 23.

be compelled to submit the highest bid for the entire PEA, thus foreclosing the PAL as an economically viable option.” Likewise, rural deployment would be negatively impacted by larger PALs that cover both urban and rural areas. As ATN International, Inc. points out in its comments, with PEA-sized licenses rural service providers would have to “bid for license areas that include territory far outside of their service areas, and bid against the largest carriers that are seeking to serve primarily urban areas.”<sup>16</sup> Rural markets would again be left at a disadvantage in obtaining build-out in the band. These are merely two of hundreds of commenters, representing a broad swath of industries, who have expressed their opposition to PEA-sized PALs as an enormous economic barrier to investment and deployment.

It is important to stress that PEA-sized PALs do not merely negatively impact rural deployments but they would also significantly harm the investment opportunities for a large number of urban focused business plans. GE, for example, highlighted the unique opportunity for Industrial IOT (“IIOT”) using the CBRS band and the critical importance of being able to obtain PALs for coverage of factories and industrial parks, most of which are in or near urban centers.<sup>17</sup> Hotels, office buildings, small, medium and large businesses would also gain new opportunities to enable connectivity solutions to help the U.S. lead the globe in improved efficiency through broadband connectivity.<sup>18</sup> PEA-sized PALs, favoring one business segment (large wireless carriers) would thus harm new investment in virtually all other areas. Also, as noted previously, Verizon’s and AT&T’s involvement in the CBRS process and their investment to date suggests

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<sup>16</sup> Comments of ATN International, Inc. at 4.

<sup>17</sup> GE Comments at 27-35.

<sup>18</sup> OTI and PK Comments at 20-22.

that even for these large carriers, although PEA-sized PALs may be preferred, it is far from necessary to continue to drive their investment.

#### **D. Secondary Markets**

Background: In the CBRS NPRM, the Commission proposes to allow partitioning and disaggregation of larger geographic PALs in secondary market transactions to enable prospective PAL licensees to obtain smaller geographic areas for their business needs.<sup>19</sup>

DSA Position: The vast majority of commenters agree that the current PAL rules based on census tracts and limited term licenses will promote more liquid and efficient secondary markets. A wide variety of non-national carriers investing in the band also agree it is highly unlikely that the preclusive impact of PALs the size of PEAs or counties would be substantially mitigated by either partitioning or leasing of spectrum in a manner that meets the needs of industrial, enterprise or rural providers.

DSA concurs with General Electric that “[u]nder a PEA-based framework, the large wireless operators holding these CBRS licenses would be unlikely to make meaningful amounts of 3.5 GHz spectrum available to GE, its IIoT customers, and other non-traditional spectrum users. PAL licensees would have no legal obligation to lease or partition spectrum, and there would be no mechanism to compel them to make their frequencies available to third parties. In many cases, large carriers choose to warehouse their frequencies rather than convey spectrum to parties that might use that

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<sup>19</sup> CBRS NPRM at ¶28.

resource to develop competitive offerings.”<sup>20</sup> Additionally, secondary markets under a PEA-sized PAL framework would at best impose large and asymmetric transaction costs on smaller operators and involve extensive, complicated negotiations.<sup>21</sup>

We agree with NTCA and most other parties that the real world evidence is that spectrum secondary markets work primarily through acquisitions--or in transactions among national and regional mobile carriers. Secondary markets have utterly failed when comes to leasing or partitioning spectrum to smaller competitive or rural carriers, let alone industrial, enterprise or institutional users.<sup>22</sup> As NTCA aptly put it: “In reality, the secondary market has proven to be an effective tool for large operators to *consolidate* spectrum.”<sup>23</sup>

WISPA recently conducted a survey among its ISP members that confirmed that large carriers typically do not lease spectrum to smaller competitors. The survey found that while roughly 25 % of survey respondents reported that they had attempted to obtain licensed spectrum from AT&T, Verizon, Sprint or T-Mobile, fewer than ten % of those who had made those attempts were successful.<sup>24</sup>

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<sup>20</sup> General Electric Comments at 23-24. G.E.’s Comments state: “Historical evidence from other wireless bands indicates that these carriers would largely hold onto their CBRS spectrum, even frequencies lying fallow or underused in rural and remote areas. A 2013 report revealed that only 11.01% of the MHz/POPs transferred or assigned from 2003 to 2013 were conveyed from nationwide operators to non-nationwide operators, while only 8.58% of the MHz/POPs leased between 2003 and 2013 were leased by nationwide operators to non-nationwide operators. In comparison, nationwide carriers received 67.58% of all MHz/POPs transferred or assigned during that period (from nationwide and non-nationwide operators), while nationwide operators leased 75.71% of all MHz/POPs leased during that timeframe (again, from both nationwide and non-nationwide operators).”

<sup>21</sup> *Id.*

<sup>22</sup> NTCA Comments at 6 (“Secondary markets are neither a reliable source of spectrum nor a solution to the lack of coverage in rural areas. Relying on small and rural carrier access to spectrum via the secondary market assumes without justification or evidence that such a market will develop and a leap of faith that license holders are willing to part with spectrum at reasonable prices.”).

<sup>23</sup> NTCA Comments at 6 (emphasis in original).

<sup>24</sup> WISPA Comments at 43-44.

WISPA's survey is consistent with the Commission's licensing records, which show that the large mobile carriers that typically acquire large-area licenses at auction (such as Economic Areas or PEAs with 10-year licenses and non-competitive renewal) rarely engage in secondary market transactions with smaller entities, and are much less likely to engage with entities other than established telecommunications companies.<sup>25</sup> According to a Mobile Future study of the Commission's Universal Licensing System database, 89% of secondary market transactions have concerned the transfer of spectrum resources to major wireless providers or between non-nationwide providers.<sup>26</sup> Mobile Future found that secondary market transactions that transfer spectrum away from smaller operators far outnumber those to those licensees.<sup>27</sup>

While the large carriers argue that partitioning and disaggregation will solve the problem of the secondary market, these methods are a woefully inefficient way of aligning license areas with small-cell service areas in the CBRS band. Microsoft correctly observes that this approach has failed to promote competition or provide right-sized spectrum access to smaller providers in the past, and so there is even less reason to believe national carriers will partition or lease areas that fit the needs of industrial, enterprise, institutional or rural providers. "The bottom line is that partitioning and

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<sup>25</sup> Google Comments at 19.

<sup>26</sup> Mobile Future, *FCC Spectrum Auctions and Secondary Market Policies: An Assessment of the Distribution of Spectrum Resources Under the Spectrum Screen* (Nov. 2013), at 19, available at <http://mobilefuture.org/wp-content/uploads/2013/11/Paper-Distribution-ofSpectrum-Resources.pdf>. See also Google Comments at 20.

<sup>27</sup> *Ibid.*

disaggregation will not actually make spectrum available in less densely populated areas, and these areas will remain unserved by interference-protected PAL licenses.”<sup>28</sup>

Although the efficiency of spectrum secondary markets in relation to partitioning or leasing a *portion* of a large license area is questionable, Dr. William Lehr argues that it’s likely that secondary markets would be more liquid and efficient if the license areas are smaller and better aligned with the small cell character of deployments.<sup>29</sup> As Lehr states:

“Favoring large territories by auctioning only PEA-sized PALs would impose asymmetric transaction costs on the small users . . . Those with excess spectrum may prefer not to partition their spectrum either to foreclose the competition or to avoid incurring the transaction costs. Moreover, if those with excess spectrum are small users, then they have to incur spectrum leasing costs that are likely to be higher for them than for a large national operator who is likely already to have an in-house team to manage spectrum transactions.”<sup>30</sup>

Shorter and non-permanent license terms will also empower more robust secondary markets for the CBRS spectrum.<sup>31</sup> Three-year license terms and competitive renewals serves the public interest in multiple ways by increasing access to and efficient utilization of spectrum, as well as through innovation and investments in the 3.5 GHz band by a wide variety of companies and use cases.<sup>32</sup> As Cantor argues, “Many entities who would otherwise participate in the PAL auction--and who have likely invested resources already in anticipation of obtaining 3.5 GHz spectrum--would be

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<sup>28</sup> Microsoft Comments at 7 (“It is no surprise then that partitioning and disaggregation have largely failed in the real world, because the transaction costs to acquire access to spectrum in small geographic areas in less densely populated areas are higher than the value of the spectrum to be leased or sold.”).

<sup>29</sup> Lehr Comments at 12.

<sup>30</sup> *Id.*

<sup>31</sup> Cantor Telecom Services Comments at 5 (“Longer license terms would make the market less fluid and dynamic and potentially result in large swaths of spectrum lying fallow for extended periods of time during which another user could make productive use of the license.”).

<sup>32</sup> Cantor Comments at 6.



foreclosed from participation as a result of the higher cost of licensing fees associated with longer terms.”<sup>33</sup>

At the same time, national and regional mobile carriers would face nothing but *disincentives* concerning a voluntary partitioning or leasing of large and perpetual licenses. These disincentives include the administrative burden to the license holder, the loss of potential future use of the affected portion of the license (optionality), and the inherent motivations of the incumbent to stifle competition or, relatedly, to deprive industrial and enterprise owners the option to self-provision, customize and control IIoT, neutral host and other networks that do not generate business for the mobile carriers.<sup>34</sup>

DSA agrees with Ruckus Wireless that “[w]ithout additional provisions and modifications to the Commission’s existing secondary market framework to specifically address these issues... there is little basis to believe that PAL license holders will make spectrum available for lease or transfer.”<sup>35</sup> Ruckus Networks argues further that modifications and enhancements will be needed to the existing light-touch leasing framework if the secondary market is to promote spectrum access to enterprises and smaller vertical industry entities through the secondary market.<sup>36</sup> Ruckus Networks elaborates:

“Specifically, the Commission will need to encourage the formation of spectrum exchanges in order to overcome the administrative burden that leasing would entail absent such exchanges. Further, strong and appropriate incentives should be defined to

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<sup>33</sup> *Id.*

<sup>34</sup> Ruckus Networks Comments at 16.

<sup>35</sup> *Id.*

<sup>36</sup> Ruckus Networks Comments at 5.

promote the availability of PAL usage rights to the secondary markets. Such incentives can be tied to the performance requirements for license renewal based upon dynamic SAS-derived metrics. PAL license holders could also be encouraged to make PAL usage rights available to the secondary market and to avoid spectrum warehousing via license renewal discounts based upon the percentage of the license that was made available via spectrum exchanges over the life of the license.”<sup>37</sup>

DSA agrees that light touch leasing should be retained and strengthened--and will operate most efficiently if coupled with small PAL areas. The combination will provide the most flexible and efficient framework for secondary market transactions. As Cantor Telecom Services argues, “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.”<sup>38</sup>

#### **E. SAS Public Disclosure of CBSD Registration Information**

Background: In the NPRM, the Commission proposed to amend the Part 96 rules to “prohibit SASs from disclosing publicly CBSD registration information that may compromise the security of critical network deployments or be considered competitively sensitive.”<sup>39</sup>

DSA Position: In the DSA Comments, we defended the current rules that provide for public disclosure of basic anonymized CBSD registration information.<sup>40</sup> Such

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<sup>37</sup> *Id.* at 6.

<sup>38</sup> Cantor Telecom Services Comments at 11.

<sup>39</sup> CBRS NPRM ¶37.

<sup>40</sup> The DSA is open to rules that allow for disclosure of such information by SAS administrators on a confidential basis. DSA Comments at 24-25.

anonymized information is used by SAS operators to calculate protection areas between PALs and facilitate access to vacant PAL spectrum for GAA users, allowing potential network operators to assess the spectral environment. The DSA further stated that it was unaware of any legitimate reason why large carriers would oppose such disclosure in this band when public databases of site-based spectral information exists in other bands, carriers themselves disclose and third parties can obtain such information.

The record continues to be devoid of any evidence of the purported harms presented by the current disclosure rules. AT&T, for example, pushes the vague notion of protecting “critical network data” as a reason for a rule change,<sup>41</sup> though it fails to explain why anonymous CBSD data in particular is critical as compared to its other public network information, fails to provide any specific harm associated with disclosure of such data, or even dispute that such information will otherwise be available to the public, as DSA has previously pointed out. By contrast, smaller companies *can* identify specific harm associated with a rules change. As Starry explains:

“Existing competitive providers or new entrants will lack sufficient information about the availability of spectrum – only after going through a network planning and coordination process to register CBSDs will they discover whether sufficient spectrum at a specific location exists. This adds to the cost, uncertainty, and time to plan and deploy a network. Instead of removing a barrier, the Commission will be erecting another road block to competitive entry to the benefit of only large incumbents.”<sup>42</sup>

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<sup>41</sup> AT&T Comments at 12.

<sup>42</sup> Starry Comments at 8.

The Commission must not take amorphous claims of harm by the large carrier community at face value to justify revisiting its previous conclusions about the proper balance of enabling new entrants into the band and network security.

#### **F. Competitive Bidding Procedures for PALs**

Background: The NPRM seeks comment on the feasibility and desirability of allowing PAL holders to bid on specific channel assignments, given the “other constraints of the band, including the protection of incumbents.” Among other things, the Commission asks whether the two-phase auction employed for the 600 MHz forward auction can be applied to the CBRS. It also asks about alternative auction methodologies that “might be appropriate to balance the SAS Administrator’s need to dynamically avoid interference with Priority Access licensee’s desire for certainty and the ability to aggregate contiguous spectrum.”<sup>43</sup>

DSA Position: DSA believes that allowing PAL licensees to bid on specific channel assignments is neither feasible, desirable, or necessary. Spectrum management through dynamic assignment of PAL frequencies is required to protect incumbent Federal users and is the cornerstone of the CBRS’s three tiers of access framework. A two-stage spectrum auction, with the second stage being the “assignment phase” of PAL frequencies is a static approach and inconsistent with the unique characteristics and nature of the CBRS framework.

The majority of commenters on this topic agree with DSA and voice serious doubt that allowing PAL licensees to bid on specific channel assignments is feasible,<sup>44</sup>

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<sup>43</sup> CBRS NPRM ¶49.

<sup>44</sup> Comcast Comments at 25; Cantor Telecom Comments at 11.

desirable,<sup>45</sup> necessary<sup>46</sup> or consistent with the unique characteristics and nature of the CBRS framework.<sup>47</sup> DSA concurs with NTCA's assessment that that the "Commission's existing rules strikes the right balance by enabling dynamic assignment, while providing that, where feasible, a PAL operator with multiple PALs adjacent either in frequency or in a geographic area, will be granted contiguous slots."<sup>48</sup> The Utilities Telecommunication Council also expresses this sentiment.<sup>49</sup> Finally, like DSA, OTI / PK is also concerned about the possible political ramifications if the Commission were to take such action to permit specific and static PAL channel assignments--it may cause the Department of Defense "to reconsider any agreement to share the band."<sup>50</sup>

The arguments put forward by AT&T,<sup>51</sup> Ericsson,<sup>52</sup> and T-Mobile<sup>53</sup> for the Commission to change a core characteristic of CBRS band operations are unconvincing. First, it is important to note that neither T-Mobile, AT&T, nor Ericsson advocate that the Commission should apply the Incentive Auction's two-stage forward auction methodology to CBRS. More specifically, DSA disagrees with AT&T that without PAL applicants being able to bid on specific channel assignments, investment in the CBRS band will be depressed. As DSA points out in its comments, deep-pocketed entities that intend to pursue PALs in urbanized census tracts because they see a good business opportunity will do so regardless.<sup>54</sup> DSA strongly disagrees with Ericsson's

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<sup>45</sup> OTI/PK Comments at 34.

<sup>46</sup> WISPA Comments at 51; Southern Linc Comments at 20.

<sup>47</sup> Alaska Communications Comments at 10.

<sup>48</sup> NCTA Comments at 15.

<sup>49</sup> Utilities Telecommunications Council Comments at 2.

<sup>50</sup> PK/OTI Comments at 34

<sup>51</sup> AT&T Comments at 17.

<sup>52</sup> Ericsson Comments at 7.

<sup>53</sup> T-Mobile Comments at 15-17.

<sup>54</sup> DSA Comments at 27.

underlying rationale for wanting static channel assignments that will make the CBRS “more akin to conventional Commercial Mobile Radio Service (CMRS) deployment.”<sup>55</sup> DSA has a high degree of confidence that FCC-certified SASs will protect incumbents and PAL holders from receiving harmful interference.

DSA further disagrees with T-Mobile’s assessment that without static PAL assignments mobile operations in the CBRS band will be less spectrally efficient than it would be otherwise. T-Mobile argues that co-channel licensees operating in adjacent geographic areas would be able to agree on mechanisms for maximizing each entities’ spectrum use through negotiated agreements outside of the Commission’s rules as they do now. The alternative would be that PALs “...will be required to comply with the Commission, SAS, and industry guidelines, which will certainly be more restrictive than can be negotiated among adjacent channel block licensees, leading to less intensive spectral use.”<sup>56</sup> DSA believes that the combination of small-cell technologies, a limited number of PAL holders in each census tract,<sup>57</sup> and requiring the SAS to assign geographically continuous PALs held by the same licensee to the same channels in each geographic area to the extent feasible,<sup>58</sup> will enable highly spectrally efficient use of the CBRS band--especially in urbanized areas

## **G. Conclusion**

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<sup>55</sup> Ericsson Comments at 7.

<sup>56</sup> T-Mobile comments at 16.

<sup>57</sup> As little as 2 and as many as 7 PAL holders in a census tract

<sup>58</sup> 47 C.F.R.96.25(b)(1)(i)

DSA believes that the fundamental structure of the CBRS band that the Commission created in the First Report and Order remains the best path forward for achieving the goals of innovation, the broadest delivery of service, including to those that currently do not have adequate broadband services, and the most efficient use of spectrum. We urge the Commission not to change the PAL rules to suit the interests of one particular interest group at the expense of all of the others that have already invested in the band. The broad engagement in the CBRS Alliance and the WinnForum indicated that the current rules are attracting support for this new and innovative approach to spectrum management. DSA believes that given this fact, the Commission should first look to “do no harm” as it seeks to improve the rules.