

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

In the Matter of	)	
	)	
AURA NETWORK SYSTEMS OPCo, LLC AND	)	
A2G COMMUNICATIONS, LLC	)	
	)	
Petition for Rulemaking to Permit the	)	RM-_____
Transmission of Data in Air-Ground Radio	)	
Telephone Automated Service Channels Between	)	
454.675-454.975 MHz and 459.675-459.975 MHz	)	
	)	
Request for Waiver of 450 MHz General Aviation	)	WT Docket No. 20-185
Air-Ground Radiotelephone Service Rules	)	

**PETITION FOR RULEMAKING**

Michael Carper  
A2G COMMUNICATIONS, LLC  
515 Congress Ave, Suite 1850  
Austin, TX 78701

Tamara Casey, President  
AURA NETWORK SYSTEMS OPCo, LLC  
11710 Plaza America Drive  
Suite 2000  
Reston, VA 20190

Elizabeth Sachs  
LUKAS, LAFURIA, GUTIERREZ &  
SACHS, LLP  
8300 Greensboro Drive, Suite 1200  
Tysons, VA 22102

Michele C. Farquhar  
John W. Castle  
HOGAN LOVELLS US LLP  
555 Thirteenth Street, NW  
Washington, DC 20008

*Counsel for A2G Communications, LLC*

Bryan N. Tramont  
J. Wade Lindsay  
WILKINSON BARKER KNAUER, LLP  
1800 M Street, NW, Suite 800N  
Washington, DC 20036

*Counsel for AURA Network Systems OpCo, LLC*

February 16, 2021

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\* These rules were included in Petitioners’ Waiver Request, and the record in WT Docket No. 20-185 reflects no opposition to waiver of these rules.

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**PETITION FOR RULEMAKING**

AURA Network Systems OpCo, LLC (“AURA”) and A2G Communications, LLC (“A2G”) (collectively “Petitioners”), pursuant to section 1.401 of the Commission’s rules<sup>1</sup> and the Waiver Order in the above-referenced proceeding,<sup>2</sup> petition the Commission to commence a rulemaking proceeding to amend portions of its rules as necessary to allow the Air-Ground Radiotelephone Service (“AGRAS”) channels between 454.675-454.975 MHz and 459.675-459.975 MHz (the “450 MHz AGRAS band”) to be used to provide voice and data capabilities to the broadest base of aviation subscribers possible, including Unmanned Aircraft Systems (“UAS”). Specifically, AURA and A2G request the Commission to amend or remove portions

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<sup>1</sup> 47 C.F.R. § 1.401.

<sup>2</sup> See *AURA Network Systems OpCo, LLC and A2G Communications, LLC Request for Waiver*, Order, WT Docket No. 20-185, DA 21-58, ¶ 31 (rel. Jan. 14, 2021) (“Waiver Order”); see also *Request of AURA Network Systems OpCo, LLC and A2G Communications, LLC for Waiver*, WT Docket No. 20-185 (filed June 12, 2020) (“Waiver Request”). Petitioners request the Commission incorporate by reference the record in WT Docket No. 20-185.

of sections 2.106, 22.805, 22.809, 22.813, 22.817, and 22.99 of the Commission’s rules, and any other part 22 rules deemed necessary by the Commission.<sup>3</sup>

## I. INTRODUCTION AND SUMMARY.

This petition seeks rule changes to modernize and enable more flexible and efficient use of the 450 MHz AGRAS band allocated by the Commission for general aviation air-ground use. A2G and AURA together hold all of the active licenses in the 450 MHz AGRAS band, and AURA is the only operator pursuant to its *de facto* transfer lease arrangements with A2G. Petitioners thus have “licenses that effectively constitute exclusive nationwide use of the 450 MHz [AGRAS] band.”<sup>4</sup> In 2010, Petitioners’ predecessors-in-interest obtained a waiver of various part 22 rules to enable them to upgrade their AGRAS-based facilities and to fill in their existing networks.<sup>5</sup>

While the bandwidth limitations in the 450 MHz AGRAS band make the spectrum unsuited for commercial broadband data services, the band is ideal for serving aviation subscribers with voice and data service. Indeed, the band is particularly well suited for UAS Control and Non-Payload Communications (“CNPC”) links for multiple reasons: (1) the band already features an aviation allocation to accommodate air-to-ground communications; (2) as the only operator in the band, AURA can ensure that its service offerings are free from interference and thereby provide a more reliable, deterministic aviation-grade service; (3) the band’s

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<sup>3</sup> The Waiver Order directed Petitioners to submit this petition for rulemaking “seeking rule changes that would permit more flexible use of the band, including for UAS.” See Waiver Order ¶ 31. Also as directed by the Waiver Order, Petitioners formally acknowledge the items set forth in paragraph 32 of the Waiver Order. *Id.* ¶ 32.

<sup>4</sup> *Id.* ¶ 22.

<sup>5</sup> See *Joint Request by Stratophone, LLC and SkyTel Spectrum, LLC for Waiver of Certain Air-to-Ground Radiotelephone Service Licensing Rules for General Aviation*, Order, 25 FCC Rcd 8581 (WTB MD 2010).

propagation characteristics make it highly cost-effective for providing nationwide coverage (including in rural areas) at all altitudes for beyond visual line of sight (“BVLOS”), and other expanded operations; and (4) the band can be used to securely offer UAS CNPC services on a specialized, private carrier, and nationwide basis, reducing the likelihood of network security issues and harmful interference.

The Commission’s part 22 regulations governing the 450 MHz AGRAS band, last revised in 1994, did not anticipate use of the band for the provision of sound *and* data services to aviation subscribers, including service to UAS. In the Waiver Request, Petitioners therefore requested waiver of section 22.805 to allow the transmission of data as well as sound to the broadest base of aviation subscribers possible, consistent with market demand.<sup>6</sup> Petitioners requested waiver of two other rules—the U.S. spacing and channel limitations in section 22.813 and the minimum power requirement for transmitters in section 22.809—that impede efficient operation of the new nationwide network using modern technologies. Petitioners’ Waiver Request demonstrated conclusively that waiver of these legacy restrictions would serve the public interest by providing AURA with the flexibility to efficiently manage its network and put the long-underutilized 450 MHz AGRAS band to its highest and best use.

The record associated with the Waiver Request in WT Docket No. 20-185 was comprehensive and overwhelmingly supported waiver of sections 22.805, 22.809, and 22.813.<sup>7</sup> On January 14, 2021, the Mobility Division of the Wireless Telecommunications Bureau (“Bureau”) granted the Waiver Request and waived relevant portions of sections 2.106, 22.107,

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<sup>6</sup> See *generally* Waiver Request.

<sup>7</sup> The Commission received 21 comments and reply comments, 19 of which fully supported the Waiver Request. See *infra* text at 5-6.

22.805, 22.809, 22.813, 22.817(f), and 22.99 to permit AURA to better manage its existing network and authorize the provision of additional services, such as service to public safety, commercial, and large UAS for BVLOS and other expanded operations.<sup>8</sup> The Bureau conditioned the waiver grant on Petitioners filing a petition for rulemaking “seeking rule changes that would permit more flexible use of the band, including for UAS.”<sup>9</sup> Accordingly, the Petitioners file this request that the Commission initiate a rulemaking proceeding to amend or remove sections 2.106, 22.805, 22.809, 22.813, 22.817, and 22.99 of the Commission’s rules to enable the 450 MHz AGRAS band to be used to provide sound and data service to the broadest base of aviation subscribers possible, including UAS.

Amending the Commission’s rules as proposed herein will serve the public interest, convenience, and necessity. It will enable AURA to serve aviation and UAS operators on its nationwide network, to engage in more sophisticated operations for all network users, and to encourage industry growth on a permanent basis, while facilitating broader use of the 450 MHz AGRAS band. The proposed rule amendments will harm no other party and will accelerate innovation and investment such that more advanced technology can be brought to market and the spectrum can be deployed for its highest and best use. The Commission should therefore initiate a rulemaking to amend its rules to implement the changes proposed below.

**II. AMENDING OR REMOVING CERTAIN RULES AS REQUESTED WOULD SERVE THE PUBLIC INTEREST, CONVENIENCE, AND NECESSITY CONSISTENT WITH THE REASONS CITED IN THE WAIVER ORDER.**

The Waiver Request, accompanying public record, and Waiver Order demonstrate compellingly that permitting the 450 MHz AGRAS band to be used to provide sound and data

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<sup>8</sup> See generally Waiver Order.

<sup>9</sup> *Id.* ¶ 31.

service to the broadest base of aviation subscribers possible, including UAS, serves the public interest, convenience, and necessity.<sup>10</sup> The U.S. government has long recognized that regulatory flexibility will enable successful integration of UAS into the national airspace.<sup>11</sup> And, as Petitioners have shown, this band presents the Commission with an important opportunity to unlock quickly the UAS industry’s universally acknowledged potential.<sup>12</sup>

The comprehensive record developed in connection with the Waiver Request confirms that granting Petitioners flexibility to satisfy market demand and to offer aviation subscribers services that keep pace with technological innovation will allow the 450 MHz AGRAS band to be optimized to the greatest extent possible. Commenters confirmed that revisions to these rules would further modernize communications in aviation operations and provide multiple benefits, including: (1) support for public safety organizations, critical infrastructure, and rural and Tribal communities; (2) the promotion of innovation and increased administrative efficiency; and (3) the creation of a safe and reliable network for UAS communications.<sup>13</sup> Multiple commenters

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<sup>10</sup> See generally Waiver Request at 4-7; WT Docket No. 20-185.

<sup>11</sup> See, e.g., *Wireless Telecommunications Bureau and Office of Engineering and Technology Seek Comment on Unmanned Aerial System Operations in the 960-1164 MHz and 5030-5091 MHz Bands, Pursuant to Section 374 of the FAA Reauthorization Act of 2018*, Public Notice, 34 FCC Rcd 11038 (2019); Unmanned Aircraft Systems Integration Pilot Program, 82 Fed. Reg. 50301, 50301 (Oct. 30, 2017) (stating in Presidential memorandum that, “[t]o promote continued technological innovation and to ensure the global leadership of the United States in this emerging industry, the regulatory framework for UAS operations must be sufficiently flexible to keep pace with the advancement of UAS technology”).

<sup>12</sup> Waiver Request at 6-7.

<sup>13</sup> Two commenters sought assurance that the resulting system would comply with FAA requirements (and one of those commenters urged broader FCC action on UAS operations). No commenter suggested that the relief requested in the Waiver Request does not serve the public interest. See Aerospace Industries Association (“AIA”) Comments, WT Docket No. 20-185, at 4 (filed July 24, 2020); The Boeing Company (“Boeing”) Comments, WT Docket No. 20-185, at 4-5 (filed July 24, 2020) (“Boeing Comments”). Boeing and AIA also raised questions about safety related issues in connection with Petitioners’ proposed UAS operations. But, as Petitioners confirmed in their reply comments, their UAS operations will be evaluated for safety consistent with FAA requirements, before such operations begin.

stated the Petitioners’ services would greatly benefit rural and Tribal areas, where communications infrastructure often lags behind that of more populous communities.<sup>14</sup> Others noted that relief from the part 22 rules would increase competition and drive innovation in aviation services and UAS in particular.<sup>15</sup> Indeed, Boeing, the only party that did not support grant of the Waiver Request, agreed that the Petitioners’ proposal “offers a promising solution to meet UAS spectrum needs . . . .”<sup>16</sup>

The Waiver Order thus correctly concluded that it would “serve the public interest, convenience, and necessity” to enable AURA to better manage its existing network and to provide additional services.<sup>17</sup> The Bureau found that “the underlying purpose of the part 22 rules that are subject to the waiver request would not be served by their strict application in the instant case.”<sup>18</sup> The Bureau also recognized Petitioners’ effectively exclusive nationwide use of the band and that, “in the last ten years, other parties have not shown interest in operating in the band and have overwhelmingly supported Petitioners’ steps to grow and modernize their existing network.”<sup>19</sup>

In particular, the Waiver Order recognized the significant market demand for the services that can be supported on AURA’s network and that flexibility is needed to meet such demand.

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Reply Comments of AURA Network Systems OpCo LLC and A2G Communications, LLC, WT Docket No. 20-185, at 8-11 (filed Aug. 10, 2020).

<sup>14</sup> Choctaw Nation of Oklahoma Comments, WT Docket No. 20-185, at 2 (filed July 1, 2020); Northern Plains UAS Test Site Comments, WT Docket No. 20-185, at 1 (filed July 20, 2020); Phoenix Air Unmanned, LLC Comments, WT Docket No. 20-185, at 1 (filed July 9, 2020).

<sup>15</sup> See, e.g., Commercial Drone Alliance Comments, WT Docket No. 20-185, at 3 (filed July 24, 2020).

<sup>16</sup> Waiver Order ¶ 8 (citing Boeing Comments at 1-3).

<sup>17</sup> See Waiver Order ¶ 10.

<sup>18</sup> *Id.* ¶ 11 (citation omitted).

<sup>19</sup> *Id.* ¶ 12 (citation omitted).

Specifically, the market has shown significant interest in use of the 450 MHz AGRAS band for CNPC links, and AURA has received inquiries from utilities and multiple businesses—including large multinationals—regarding the status of its network build and operational timeline.<sup>20</sup> The Bureau acknowledged that the Petitioners need flexibility to “respond efficiently and expeditiously to [these] network demands.”<sup>21</sup> The Bureau also agreed that “waiver of the part 22 channel assignment policies on a prospective, rather than *ad hoc*, basis would enable them to respond to such demands with the necessary speed and efficiency.”<sup>22</sup>

Further, the Bureau concluded that the Petitioners’ additional products and services would further the Commission’s “goals of encouraging the provision of new technologies and services,” and that “the underlying purpose of the part 22 rules . . . would not be served by their strict application in the instant case.”<sup>23</sup> It also concluded that absent the relief granted by the Waiver Order, the “aviation industry will be deprived of the opportunity to ‘offer services that keep pace with technological innovation,’ and use of the general aviation air-ground spectrum will not be optimized to the greatest extent possible.”<sup>24</sup>

In short, the Waiver Order will allow the Petitioners to provide sound and data service to the broadest base of aviation subscribers possible, including UAS. Amending or removing sections 2.106, 22.805, 22.809, 22.813, 22.817, and 22.99 as proposed herein, however, will allow AURA to permanently and more efficiently serve the aviation and UAS communities on its nationwide network, enabling industry growth and more robust use of the band. Such use is

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<sup>20</sup> *Id.* (citing Waiver Request at 3-7).

<sup>21</sup> *Id.* ¶ 22.

<sup>22</sup> *Id.* (emphasis added).

<sup>23</sup> *Id.* ¶¶ 10-11 (citation omitted).

<sup>24</sup> *Id.* ¶ 12.

consistent with the Commission’s “long-standing precedent permitting innovative and efficient use of spectrum for supplemental service . . . .”<sup>25</sup>

### **III. THE COMMISSION SHOULD AMEND OR REMOVE CERTAIN RULES TO ALLOW DATA-BASED SERVICES TO ALL AVIATION OPERATORS AND AIRCRAFT.**

The Commission should amend or remove sections 2.106, 22.805, 22.809, 22.813, 22.817, and 22.99 as proposed below, as well any other part 22 rules deemed necessary. Doing so will provide a permanent regulatory basis upon which Petitioners may serve all aviation operators, including non-airborne subscribers, on its nationwide network and provide sophisticated operations for all network users, thereby accelerating innovation and investment such that more advanced technology can be brought to market and the spectrum can be deployed for its highest and best use.

#### **A. Section 2.106 Should Be Amended to Allow the 450 MHz AGRAS Band To Be Used for the Provision of Data-Based Services.**

Section 2.106, non-Federal Government footnote 32 states that frequencies in the 450 MHz AGRAS band may be assigned to domestic public land and mobile stations to provide two-way air-ground public *radiotelephone service*.<sup>26</sup> Section 22.99 defines “radiotelephone service” as the “transmission of sound” by radio.<sup>27</sup> Thus, the 450 MHz AGRAS band is currently allocated only for the provision of sound service and not for data-based information services.

Section 2.106 footnote 32 should be amended to remove the limitation that the spectrum must be used for sound and make clear that the spectrum may also be assigned for the provision

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<sup>25</sup> *Id.* ¶ 13.

<sup>26</sup> 47 C.F.R. § 2.106.

<sup>27</sup> *Id.* § 22.99.

of data-based information services. Specifically, section 2.106 non-Federal Government footnote 32 should be amended to read as follows:

Frequencies in the bands 454.6625-454.9875 MHz and 459.6625-459.9875 MHz may be assigned to domestic public land and mobile stations to provide ~~a two-way Air-g-Ground public Radiotelephone Service.~~

**B. Sections 22.99 and 22.805 Should Be Amended To Allow for the Provision of Data-Based Services in the 450 MHz AGRAS Band to UAS.**

Section 22.99 defines AGRAS as a “radio service in which licensees are authorized to offer and provide radio telecommunications service for hire to subscribers in aircraft.”<sup>28</sup> Section 22.805 likewise dictates that the channels in the 450 MHz AGRAS band are allocated “for the provision of *radiotelephone service to airborne mobile subscribers in general aviation aircraft.*”<sup>29</sup> As such, these rules create two concerns: (1) they limit this spectrum to the provision of radiotelephone service only, thereby precluding data-based services; and (2) they preclude service to unmanned aircraft, which do not have airborne mobile subscribers.<sup>30</sup>

Sections 22.99 and 22.805 should be amended to permit service to UAS.<sup>31</sup> Specifically, section 22.99 can be revised to define “Air-Ground Radiotelephone Service” to include the provision of both sound and data services as follows:

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<sup>28</sup> *Id.*

<sup>29</sup> *Id.* § 22.805 (emphasis added).

<sup>30</sup> As AURA previously stated in the record, this limitation is clearly not characteristic of the AGRAS rules more generally, but is rather a byproduct of section 22.805’s adoption more than twenty-five years ago, well before the rules could have anticipated the commercial feasibility of UAS. *See* Waiver Request at 14-15.

<sup>31</sup> The Waiver Order notes that sections 22.107(d) and 22.805, when read together, limit Petitioners’ ability to deploy additional ground stations within their existing 450 MHz nationwide footprint and to provide data services to non-airborne aviation subscribers, including unmanned aircraft operators. This issue stems from 22.107(d)’s directive that applications must propose operations in conformance with the public mobile radio rules, in this case the 450 MHz AGRAS band rules. The proposed amendments to the rules proposed herein should remedy this concern without the need to revise section 22.107.

*Air-Ground Radiotelephone Service.* A radio service in which licensees are authorized to offer and provide radio telecommunications service and information services for hire to subscribers in aircraft aviation subscribers as authorized pursuant to these rules.<sup>32</sup>

Likewise, the first paragraph of section 22.805 should be revised to read as follows:

The following channels are allocated for the provision of ~~radiotelephone service to airborne mobile subscribers in general aviation aircraft~~ Air-Ground Radiotelephone Service.

**C. Section 22.805 Should be Amended to Not Require Internal Guard Bands Between Contiguous Paired Channels Licensed to a Single Entity.**

Section 22.805 also currently limits operators to 20 kHz emissions within 13 paired channels spaced at 25 kHz.<sup>33</sup> This channel plan provides a guard band between each of the 13 paired channels. The guard bands between the channels are not necessary in this instance because Petitioners are the sole licensees and operators in the band and thus have the ability and incentive to manage the internal boundaries between these channels in AURA’s network to prevent interference. When a single entity holds licenses for multiple contiguous channels in an area, it can be relied upon to maximize the use of that contiguous bandwidth without causing intra-network interference. Of course, the Commission should maintain guard bands at band edges as necessary to protect against interference to unrelated licensees where the channel boundaries are not internal (*e.g.*, out-of-band-emissions (“OOBE”)). Such action would be consistent with the Bureau’s prior action in the 800 MHz AGRAS band, where the Bureau

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<sup>32</sup> Revising section 22.99’s definition of “air-ground radiotelephone service” as described herein will not require any amendments to the Commission’s definition of “radiotelephone service,” which can remain the “[t]ransmission of sound from one place to another by means of radio.” 47 C.F.R. § 22.99.

<sup>33</sup> *Id.* § 22.805.

waived certain technical requirements to give AC BidCo technical flexibility with regard to the internal boundaries between channels of the newly merged entity.<sup>34</sup>

Amending section 22.805 in this way would permit modern, more efficient spectrum management by allowing a licensee to utilize all of its contiguous bandwidth to harness developments in digital technology for the benefit of the aviation community and increase the number of aviation customers that can be served within the 450 MHz AGRAS band. To this end, section 22.805 should be revised as follows:

These channels have a bandwidth of 250 kHz and are designated by their center frequencies in MegaHertz, provided that 2.5 kHz immediately above (uplink) and below (downlink) any channel or group of contiguous channels authorized for use by a single licensee must be reserved as guard bands.

**D. Section 22.809 Should be Amended to Allow AURA to Operate at Power Levels Consistent with the Demands of its Service.**

Section 22.809 establishes a 50-watt minimum effective radiated power requirement for ground station transmitters and a 4-watt minimum transmitter power output requirement for airborne mobile transmitters.<sup>35</sup> As AURA explained previously, advancements in technology have rendered these minimum effective radiated power level requirements unnecessarily high and inconsistent with current technology.<sup>36</sup> Modern digital technologies feature some form of dynamic power control, which improves overall system capacity and efficiency by limiting the power of any end-user terminal to the minimum power level necessary to deliver the required quality of service.<sup>37</sup> By forcing ground station and airborne mobile transmitters to operate at

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<sup>34</sup> See FCC, ULS File No. 0005185165 (granting assignment of Call Sign WQFX729 from Live TV, LLC to AC BidCo, LLC).

<sup>35</sup> 47 C.F.R. § 22.809.

<sup>36</sup> Waiver Request at 21-22.

<sup>37</sup> 47 C.F.R. § 22.809.

higher power than is necessary, section 22.809 limits the number of subscribers that can be served by the system. Section 22.809 should either be removed in its entirety or be amended to allow operation at lower power levels consistent with modern digital technologies' capabilities.

**E. Section 22.813(a) Should be Amended and Section 22.813(b) Should be Eliminated as Unnecessary to Protect Against Interference.**

As the Bureau noted in the Waiver Order, “[s]trict application of section 22.813 here would not serve the public interest, as it would directly undermine Petitioners’ ability to engage in the dynamic network management” upon which the Bureau conditioned its relief.<sup>38</sup> To resolve these issues on a permanent, prospective basis, the Commission should: (1) amend section 22.813(a) so that a licensed party can short space its own facilities where it effectively occupies the band; and (2) eliminate section 22.813(b) because it is no longer necessary.

Specifically, section 22.813(a) prohibits ground transmitters from being located less than 800 kilometers (497 miles) from the antenna location of the nearest co-channel ground transmitter.<sup>39</sup> This limitation was designed to protect unrelated co-channel licensees from harmful interference and should be limited to those circumstances. Because Petitioners currently and effectively occupy the entire 450 MHz AGRAS band, there are no co-channel licensees that require protection from harmful interference in connection with AURA’s operations, and AURA has every incentive to maximize coverage. Section 22.813(a) thus unnecessarily limits the quality of the services provided to aviation subscribers.<sup>40</sup> There is no reason that AURA should be barred from “short spacing” itself as to its internal boundaries to better serve aviation

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<sup>38</sup> Waiver Order ¶ 21.

<sup>39</sup> 47 C.F.R. § 22.813(a).

<sup>40</sup> See Waiver Order ¶ 22.

subscribers, i.e., constructing a new ground station closer to an existing ground station than would be permitted under section 22.813(a).<sup>41</sup>

Petitioners acknowledge, however, that section 22.813(a) could become relevant in the future if they no longer effectively occupied the 450 MHz AGRAS band. To accommodate these different circumstances, Section 22.813(a) should thus be amended as follows:

*Distance separation for co-channel ground stations.* The FCC may grant an application requesting assignment of a communication channel pair to a proposed ground transmitter only if the proposed antenna location is at least 800 kilometers (497 miles) from the antenna location of the nearest co-channel ground transmitter in the United States, its territories and possessions that is licensed to a party other than the applicant; and 1000 kilometers (621 miles) from the antenna location of the nearest co-channel ground transmitter in Canada that is licensed to a party other than the applicant.

Section 22.813(b), on the other hand, is no longer necessary and should be removed.<sup>42</sup>

This rule allows no more than five different communication channel pairs already assigned to ground transmitters within a 320 kilometer (199 mile) radius of the proposed antenna location.<sup>43</sup>

This limitation was designed to ensure that channels were available to bridge any regional gaps in service. But, as the Bureau noted, the “regional gaps in service that [the] dispersion requirement is designed to prevent have already been addressed by Petitioners’ established operation of a nationwide general aviation air-ground service on their existing network.”<sup>44</sup>

Further, modern digital technologies no longer require Commission management of the spectrum

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<sup>41</sup> See *AC BidCo supra* note 34.

<sup>42</sup> The Commission has recognized that it should eliminate rules that are no longer necessary. See generally *FCC Seeks Public Comment on Report on Process Reform*, Public Notice, 29 FCC Rcd 1338 (2014); Tom Wheeler, Chairman, FCC Blog, *Updating Old Policies; Pioneering New Ones* (Sept. 9, 2014), <https://www.fcc.gov/news-events/blog/2014/09/09/updating-old-policies-pioneering-new-ones>.

<sup>43</sup> 47 C.F.R. § 22.813(b).

<sup>44</sup> Waiver Order ¶ 22.

on a channel-by-channel basis. As such, Petitioners and any potential future licensees should be permitted to locate channels in their network as needed to provide efficient, safe operation that satisfies market demand, and section 22.813(b) should be removed from the Commission's rules.

**F. Section 22.817's Channel-by-Channel Licensing Is Unnecessary and Should be Eliminated.**

Section 22.817 governs the processing of applications for authority to operate a ground station transmitter on any ground station communication channel listed in section 22.805 when the applicant has applied or been granted an authorization for other ground station communication channels in the same area.<sup>45</sup> The channel policies in section 22.817: (1) limit channel assignments to one channel at a time in the same area; (2) require licensees to construct authorized channels prior to seeking an additional channel in the same area; and (3) limit channel assignments to six per carrier in a given 350-kilometer area. These policies were developed in 1994, when the Commission was considering very different technologies and services than those available today.<sup>46</sup> Technology has changed dramatically since 1994 and there is no longer any reason to require Commission authorization on a channel-by-channel basis.

Further, because every radio AURA deploys on the ground has the ability to use all the available spectrum once active, there is no need to license channels individually and request additional channels once constructed. In other words, all available channels should be authorized for each ground station, *viz.*, 7 total channels in the Canadian sharing zone and the full 13 channels elsewhere.

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<sup>45</sup> 47 C.F.R. § 22.817.

<sup>46</sup> Waiver Order ¶ 21; 47 C.F.R. § 22.817.

The Petitioners' ability to "relocate certain existing general aviation air-ground stations and to seek additional channel authorizations at new locations" is "precisely the type of dynamic, efficient spectrum management [the Commission] envisioned" for the 450 MHz AGRAS band when it granted a waiver to the Petitioners' predecessors in 2010.<sup>47</sup> Petitioners have the ability and market incentives to manage their network for maximum efficiency and to avoid interference in its operations.<sup>48</sup> Furthermore, elimination of the rule would benefit the Commission by reducing the number of applications it must review and process. Section 22.817 should therefore be removed in its entirety.

#### **IV. CONCLUSION.**

Petitioners respectfully request the Commission to initiate a rulemaking proceeding to amend or remove sections 2.106, 22.805, 22.809, 22.813, 22.817, and 22.99 of the Commission's rules, and any other part 22 rules deemed necessary, to allow the 450 MHz AGRAS band to be used to provide sound and data service to the broadest base of aviation subscribers possible, including UAS. Doing so will serve the public interest, convenience, and necessity, and is supported by a broad base of commenters in the above-referenced proceeding.

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<sup>47</sup> Waiver Order ¶ 21.

<sup>48</sup> See generally *supra* notes 39-41 and accompanying text.

Respectfully submitted,

**AURA NETWORK SYSTEMS OPco, LLC AND  
A2G COMMUNICATIONS, LLC**

By: /s/ Tamara Casey  
Tamara Casey, President

Michael Carper  
A2G COMMUNICATIONS, LLC  
515 Congress Ave, Suite 1850  
Austin, TX 78701

AURA NETWORK SYSTEMS OPco, LLC  
11710 Plaza America Drive, Suite 200  
Reston, VA 20190

Elizabeth Sachs  
LUKAS, LAFURIA, GUTIERREZ &  
SACHS, LLP  
8300 Greensboro Drive, Suite 1200  
Tysons, VA 22102

Michele C. Farquhar  
John W. Castle  
HOGAN LOVELLS US LLP  
555 Thirteenth Street, NW  
Washington, DC 20008

*Counsel for A2G Communications, LLC*

Bryan N. Tramont  
J. Wade Lindsay  
WILKINSON BARKER KNAUER, LLP  
1800 M Street, NW, Suite 800N  
Washington, DC 20036

*Counsel for AURA Network Systems OpCo, LLC*

February 16, 2021