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

In the Matter of	**)**	
	)	
MIMOSA NETWORKS, INC.	**)**	**RM- 11715**
Amendment of Parts 2 and 90 of the	**)**	
Commission's Rules to Create a New	**)**	
Frequency Allocation for Wireless	**)**	
Broadband Services	**)**	

To: The Commission
Via: ECFS

COMMENTS OF ARRL, THE NATIONAL ASSOCIATION FOR AMATEUR RADIO

ARRL, the national association for Amateur Radio, formally known as the American Radio Relay League, Incorporated (ARRL), by counsel, hereby respectfully submits its comments on the above-captioned *Petition for Rule Making* (the "Petition") filed on or about May 1, 2013 by Mimosa Networks, Inc. (Mimosa). The Mimosa Petition was placed on Public Notice by the Commission on March 11, 2014.[1] It requests the amendment of Parts 2 and 90 of the Commission's Rules so as to create a new domestic frequency allocation for "mobile except aeronautical mobile" services in the band 10.0-10.5 GHz; and to modify the Part 90, Subpart Z service rules accordingly in order to permit the use of that band for "wireless broadband services." In the interests of the more than 710,000 licensed Amateur Radio operators in the United States, many of whom regularly (and increasingly) utilize this band, ARRL states as follows:

[1] See, the *Public Notice*, Report No. 3002, released March 11, 2014. Pursuant to Sections 1.4 and 1.405 of the Commission's Rules, these comments are timely filed. However, in any case, the Chief, Broadband Division, Wireless Telecommunications Bureau issued on March 27, 2014 an *Order* in this proceeding, DA 14-413, clarifying unnecessarily (in response to a motion filed by Mimosa) that all comments on this Petition are due on or before April 10, 2014 and reply comments are due on or before April 25, 2014.

I. Introduction

1. Mimosa proposes to create a mobile allocation (except aeronautical mobile) in the band 10.0-10.5 GHz and to make that band available for licensed wireless broadband service. Though Appendix A to the Petition references the addition only of a mobile allocation in that band, the Petition speaks of the use of the band for wireless backhaul, which is a fixed service. Mimosa argues that the Part 90 licensing structure in this band for wireless broadband service would be similar to that now specified in Part 90, Subpart Z of the Commission's Rules for the 3650-3700 MHz band. Mimosa notes that the "3.65 GHz band" was initially allocated for government radiolocation use on a primary basis, with non-government secondary allocation added later, but that recently, the Commission has deployed the band more fully by making it available for wireless broadband,[2] but requiring the use of contention-based protocols. Mimosa suggests the same model for the 10.0-10.5 GHz band, and contends that the amount of lower-frequency microwave spectrum otherwise available is inadequate for wireless backhaul for various reasons, notwithstanding a series of recent Commission actions which provided access to several microwave allocations for wireless backhaul.[3]

2. There is an Amateur Service secondary allocation at 10.0-10.5 GHz, and the Amateur-Satellite Service has a secondary allocation at 10.45-10.5 GHz. Both the Amateur Service and Amateur-Satellite Service allocations are secondary only to Federal government radiolocation. By domestic footnote, non-government radiolocation stations may use this band on a non-

[2] Part 90, Subpart Z provides, with respect to the 3.65 GHz band, for non-exclusive, Part 90 licensing for Wi-Max systems involving non-exclusive, nationwide licenses, with registered, fixed sites.

[3] As but one example, in WT Docket 10-53, the Commission allowed Fixed Service (FS) operations access to the bands 6875-7125 MHz and 12700-13200 MHz for wireless backhaul. *See, Report and Order and Further Notice of Proposed Rule Making,* FCC 11-120, 26 FCC Rcd. 11614, released August 9, 2011; *reconsideration granted in part,* 27 FCC Rcd. 9735 (2012).

interference basis to the Amateur Service. There are other constraints on the non-government radiolocation service use of this band discussed below.

3. Mimosa argues at page 18 of its Petition that "licensed use of the 10.0-10.5 GHz band has been very limited in the United States, with only 220 active licenses for Radiolocation services in the band." This statement is misleading in that Mimosa's reference is only to non-government radiolocation service assignments in this band. There is no indication in the Petition of the extent of the use of the band by government (i.e. military) radiolocation on a primary basis. On the other hand, Mimosa does concede that "Amateur Radio use of the 10.0-10.5 GHz band has become popular in recent years."[4] It claims, however that the Amateur Service has "demonstrated the ability to share spectrum" at 5 GHz and 24 GHz with unlicensed services, apparently inferring from this that sharing with a Part 90 licensed service would be compatible as well.[5] Mimosa proposes a non-mandatory channelization scheme for broadband and Amateur operation in the 10.0-10.5 GHz band, and argues that the combination of: (1) that plan; (2) a non-interference requirement obliging broadband wireless systems to protect Amateur communications from interference in this band; and (3) mandatory use of contention-based protocols by wireless broadband licensees will assure compatible sharing of the band with the

[4] This is correct. The band 10.0-10.5 GHz is a popular band for amateur experimentation, investigation of propagation phenomena, and point-to-point communication between networked repeater stations. The band 10.45-10.5 GHz is allocated to the amateur-satellite service on a secondary basis. Owing to the popularity of the 10.0-10.5 GHz band for terrestrial amateur communication, increased use of this allocation for amateur satellite communication is anticipated. In 2013, given extensive growth in Amateur Radio Service use of this band domestically, ARRL developed and adopted a revised band plan for this band. ***Exhibit A*** hereto is a chart depicting that plan. It illustrates the variety of uses of the band now. It is important to note that national Amateur Radio band plans are subject to substantial regional variation, however, and local band plans adopted by groups of radio amateurs cooperatively are given deference over the national band plan.

[5] The comparison fails, however for several reasons. First, there is no "sharing" between allocated radio services and Part 15 devices. Part 15 unlicensed devices have no allocation status and operate on an at-sufferance basis. They are prohibited from causing interference to any authorized radio service. That is not the regulatory paradigm proposed by Mimosa for the 10.0-10.5 GHz band. Furthermore, as is discussed more fully below, unlike the Part 15 devices, Mimosa proposes an extremely high maximum EIRP for licensed wireless broadband services and no limit on antenna configuration or gain. There is simply no comparison between the extent of Amateur Radio compatibility with Part 15 unlicensed devices in some other microwave bands on one hand, and compatibility between Amateur Radio stations and licensed wireless broadband facilities at 10.0 GHz as proposed by Mimosa on the other.

Amateur Service. As is discussed below, the channelization proposal is flawed conceptually; the non-interference requirement is unenforceable as a practical matter and impossible of compliance as a technical matter; and contention-based protocols for interference avoidance are in this instance ineffective given the nature of Amateur operation in this band.

4. Mimosa states at page 16 of its Petition that the international allocation status of the 10.0-10.5 GHz band in all three ITU Regions is "limited to Radiolocation and Amateur Radio, though ITU Regions 1 and 3 also permit fixed and mobile operation."[6] Mimosa claims that "(i)ncluding the 10.0-10.5 GHz band under the Part 90, Subpart Z rules would bring ITU Region 2 into alignment with Regions 1 and 3." That statement reflects a most surprising naiveté on the part of Mimosa. The process for modifying the international table of allocations in ITU Region 2 obviously has nothing to do with creation of a domestic allocation action by the Commission, and Mimosa is thus asking the Commission to place the cart a huge distance in front of the horse. The proper route to modify a Region 2 allocation is at a competent ITU World Radiocommunication Conference, not by means of a domestic allocation at variance with both the current international *and* domestic tables of allocations. Directly to the dispositive point, however: *The domestic Table of Allocations in this instance contains a United States footnote which necessitates the denial or dismissal of Mimosa's Petition*.

II. The Commission is Without the Authority to Make the Allocation Proposed in the Petition and the Petition Must be Dismissed.

5. In ITU Region 2, as noted above, the band 10.0-10.50 GHz is allocated on a primary basis to the radiolocation service and on a secondary basis to the Amateur Service. The segment

[6] That is not exactly correct. The international Table of Allocations in ITU Regions 1 and 3 includes radiolocation, amateur, fixed and mobile allocations in the band 10.0-10.45 GHz, but the band 10.45-10.50 MHz specifies only radiolocation, amateur and amateur satellite allocations. *There is no mobile or fixed operation permitted by the Table in any ITU region at 10.45-10.50 GHz other than by footnote.*

10.45-10.5 GHz is also allocated to the Amateur-Satellite service. International footnote 5.479 specifies that "the band 9975-10025 MHz is also allocated to the meteorological-satellite service on a secondary basis for use by weather radars." There is no mobile or fixed allocation in ITU Region 2.[7] Domestically, the band 10.0-10.50 GHz is allocated on a primary basis to the government radiolocation service and on a secondary basis to the amateur service and the non-government radiolocation service.[8] Pursuant to domestic footnote G32, except for weather radars on meteorological satellites in the band 9975-10025 MHz and for Federal survey operations (permitted by domestic footnote US108), Federal radiolocation in the band 10-10.5 GHz is limited to the military services.

6. Directly relevant to Mimosa's proposal, Footnote US128 very clearly and without equivocation *prohibits all non-Federal services in the band 10-10.5 GHz except for the amateur service, the amateur-satellite service, and the non-Federal radiolocation service*. This United States footnote makes it impossible to grant the relief sought by Mimosa. The footnote reads, in its entirety, as follows:

> US128 In the band 10-10.5 GHz, pulsed emissions are prohibited, except for weather radars on board meteorological satellites in the sub-band 10-10.025 GHz. The amateur service, the amateur-satellite service, and the non-Federal radiolocation service, which shall not cause harmful interference to the Federal radiolocation

[7] However, pursuant to international Footnote 5.480, in Argentina, Brazil, Chile, Costa Rica, Cuba, El Salvador, Ecuador, Guatemala, Honduras, Mexico, Paraguay, the Netherlands Antilles, Peru and Uruguay, the band 10-10.45 GHz is also allocated to the fixed and mobile services on a primary basis. In Venezuela, the band 10-10.45 GHz is also allocated to the fixed service on a primary basis. Furthermore, pursuant to international Footnote 5.481, in Germany, Angola, Brazil, China, Costa Rica, Côte d'Ivoire, El Salvador, Ecuador, Spain, Guatemala, Hungary, Japan, Kenya, Morocco, Nigeria, Oman, Uzbekistan, Paraguay, Peru, the Dem. People's Rep. of Korea, Romania, Tanzania, Thailand and Uruguay, the band 10.45-10.5 GHz is also allocated to the fixed and mobile services on a primary basis.

[8] Pursuant to United States footnote US108, in the band 10-10.5 GHz, survey operations, using transmitters with a peak power not to exceed five watts into the antenna, may be authorized for Federal and non-Federal use on a secondary basis to other Federal radiolocation operations. Non-government domestic footnote NG50 specifies that in the band 10-10.5 GHz, non-Federal stations in the radiolocation service shall not cause harmful interference to the amateur service; and in the sub-band 10.45-10.5 GHz, these stations shall not cause harmful interference to the amateur-satellite service.

> service, are the only non-Federal services permitted in this band. The non-Federal radiolocation service is limited to survey operations as specified in footnote US108.

ARRL suggests that the Commission is not at liberty to ignore this footnote; it is obligated to apply it;[9] and it is obligated therefore to dismiss the Mimosa Petition on this basis alone, pursuant to Section 1.401(e) of the Commission's Rules.

III. The Mimosa Petition Is Premature Relative to International Spectrum Allocation Planning by the United States, and Should Be Dismissed.

7. Although US Footnote 128 is dispositive of this Petition, it is notable that the Petition is fatally flawed in other respects. Specifically, what Mimosa proposes domestically is premature. There is a 2015 World Radiocommunication Conference (WRC-15) agenda item (AI 1.12) that will consider the allocation status of the band 10-10.5 GHz (among other bands). Under consideration is a possible expansion of up to 600 MHz for the earth exploration satellite service (EESS), which has a current allocation at 9300-9900 MHz. The text of the agenda item is as follows:

> Agenda Item 1.12 – "to consider an extension of the current worldwide allocation to the Earth exploration-satellite (active) service in the frequency band 9 300 - 9 900 MHz by up to 600 MHz with the frequency bands 8 700 - 9 300 MHz and/or 9 900 - 10 500 MHz, in accordance with Resolution 652 (WRC-12)."

Domestic action by the Commission on the Mimosa Petition would prejudge and potentially foreclose an opportunity to implement this international allocation proposal, if adopted in some configuration. Furthermore, action now would limit the development of a United States position for WRC-15 with respect to the 10 GHz band and with respect to Agenda Item 1.12.

[9] *See*, 47 C.F.R. §1.102(a).

[10]Accordingly, the Petition is premature and subject to dismissal pursuant to 47 C.F.R. § 1.401(e).

IV. There is No Compatibility Between Wireless Broadband Operation and Amateur Radio Operation at 10.0-10.5 GHz.

8. The Petition, at Appendix B, proposes an informal (i.e. non-mandatory) channelization scheme (which it refers to as a "band plan") for wireless broadband operation that would effectively relegate the Amateur Service to two small segments of the entire 10.0-10.5 GHz band. Mimosa suggests that this non-mandatory "band plan" would channelize the mobile broadband systems and backhaul fixed links to avoid "popular Amateur Radio segments" including the subband that Mimosa claims is most often used for Amateur weak-signal operation.[11] The channelization plan is as follows:

Proposed 10.0-10.5 GHz Band Plan

From	To	Use
10.000	10.010	Guard Band
10.010	10.030	Channel 1
10.030	10.050	Channel 2
10.050	10.070	Channel 3
10.070	10.090	Channel 4
10.090	10.110	Channel 5
10.110	10.130	Channel 6
10.130	10.150	Channel 7

[10] While there is not yet a reconciled United States position, both the FCC's WRC-15 Advisory Committee (WAC) and the Interdepartment Radio Advisory Committee (IRAC) have proposed an allocation to the EESS at 9.9-10.5 GHz. While the WAC recommends a secondary allocation and the IRAC recommends a primary allocation, there appears to be widespread agreement among participating interests that some allocation is warranted and feasible in this frequency range. While ARRL has expressed a preference for a secondary allocation (*see* Comments of ARRL, the national association for Amateur Radio, filed February 19, 2014, in IB Docket 04-286), we do not disagree that an allocation is warranted and feasible.

[11] In microwave bands, and especially at 10 GHz, a great deal of Amateur Radio experimentation involves narrowband, point-to-point communications over very long transmission paths using high-power transmitted signals which are very weak at the receive point. These communications necessitate low noise levels at the receive points. These communications may be conducted throughout the 10 GHz band, though (as in other microwave bands) there is a "calling frequency" or range of frequencies, which are traditionally used to set up experimental communications.

10.150 10.170 Channel 8
10.170 10.190 Channel 9
10.190 10.210 Channel 10
10.210 10.230 Channel 11
10.230 10.250 Channel 12
10.250 10.270 Channel 13
10.270 10.290 Channel 14
10.290 10.310 Channel 15
10.310 10.330 Channel 16
10.330 10.350 Channel 17
10.350 10.370 Amateur Calling Band
10.370 10.390 Channel 18
10.390 10.410 Channel 19
10.410 10.430 Channel 20
10.430 10.450 Channel 21
10.450 10.500 Amateur Satellite

The channel numbers refer to proposed wireless broadband channels. It is apparent that by this plan, Mimosa is intending to urge (but not obligate) wireless broadband licensees to avoid use of (1) what it refers to as the "calling channels" in the weak signal segment near 10.360 GHz,[12] and (2) the Amateur Satellite allocation in this band. Those exclusions, however, are not in Mimosa's proposal, mandatory. This non-mandatory "band plan;" a proposed footnote in the table of allocations that would require that mobile Part 90 wireless systems protect Amateur Radio operation; and the proposed mandatory use of contention-based protocols by wireless broadband providers, constitute the entirety of Mimosa's plan for ongoing Amateur Radio and Amateur-Satellite operation in this band without interference from wireless broadband operation.[13]

[12] This is actually a self-serving construct by Mimosa; it bears no relevance to actual Amateur Radio use of the band. The current national band plan for Amateur Radio calls for a weak signal subband of 10.367-10.370 GHz. Activity centers, in fact, just above 10.368 GHz. Mimosa's "Band Plan," which is not referred to anywhere in the Petition's proposed rules and therefore is a nullity, shows 10.350-10.370 GHz as "Amateur Calling Band." However, the channel limits were chosen by Mimosa for its own purposes, not as any reflection of actual Amateur radio use. As is discussed herein, the Mimosa channel plan would result in severe interference to the weak signal stations operating near 10.368 MHz.

[13] At page 18 of its Petition, Mimosa states that in its view, the "coordination procedures (sic) and requirements provided in (the proposed amended) Subpart Z will ensure that amateur radio operators will be able to continue using the 10.0-10.5 GHz band as they do currently, without any disruption of their activities resulting from the Commission's making the band available for wireless broadband services."

9. The "band plan" proposed by Mimosa indicates a presupposition that the bulk of the terrestrial use of the 10.0-10.5 GHz band by radio Amateurs occurs in what it misleadingly identifies as the "weak-signal subband 10.350-10.370 GHz." It also urges wireless broadband users to avoid the Amateur Satellite Service segment above 10.45 GHz. The assumption, however, that those two segments are the only ones used actively by radio amateurs or that they are the only segments that require protection from interference is mistaken. As a review of ***Exhibit A*** hereto reveals, there are amateur operations throughout the 10.0-10.5 GHz band now, and varied types of Amateur operation in this band are being added regularly. For example, in southern California, there are active Amateur television repeaters with inputs near 10.40 GHz using 27 MHz-wide NTSC FM emissions. Mimosa's proposed channels 18 and 19 for wireless broadband could create significant interference to those repeater input frequencies. Because they are input frequencies, which only listen and do not transmit, no contention-based protocol would limit Part 90 transmissions on those frequencies.

10. The "band plan" proposed by Mimosa does not propose any out-of-channel emission limits. Therefore, even if the wireless broadband providers were to adhere to the non-mandatory channel plan suggested by Mimosa, and even if it were true that the bulk of Amateur operation occurs in the two channels (between Mimosa's proposed channels 17 and 18 and above 21) that Mimosa urges be avoided by wireless broadband providers, there would in any event be a substantial increase in the noise floor[14] in those two channels. The channel plan is therefore an ineffective and illusory method of attempting to demonstrate compatibility.

[14] Any out-of-channel emission limit would have to be on the order of 80 dB or more in order to avoid an increase in the noise floor for the segments used by Amateurs for weak-signal communications. Such a requirement would be ineffective in any case because of the non-mandatory status of the Mimosa "band plan."

11. Mimosa's proposed footnote in the domestic table of allocations that would require that mobile Part 90 wireless systems protect Amateur Radio operation is likewise of no practical value in creating compatibility where none exists otherwise. Amateur operation in the 10 GHz band is in part transient and includes mobile and temporary fixed applications. Amateur activity is ubiquitous, periodic and not predictable in many cases. Post-hoc interference resolution, even if the Commission's enforcement resources were sufficient to do that, would be effectively meaningless. Increases in the noise floor in this band that would result from wireless broadband operations as proposed would simply foreclose most or all Amateur use of the band on an ongoing basis.[15] The Commission does not in fact have the resources available to enforce a non-interference requirement, and it certainly has demonstrated in other contexts[16] that it would not be willing to enforce a non-interference requirement that would restrict wireless broadband providers once that infrastructure is in place. Such a requirement would be meaningless in terms of preserving, protecting or restoring Amateur Radio access to the 10.0-10.5 GHz band.

12. Mimosa proposes to enact a new Section 90.1322 in the Part 90, Subpart Z rules which would provide that base and fixed stations are permitted up to 55 dBW EIRP. Other than that EIRP limit, antenna design, gain and beamwidth would be unspecified in the rules. This very high EIRP in the context of point-to-multipoint services in this band is inconsistent with any continued access to any portion of the band by the Amateur Service. There is no narrow-

[15] For example, the Mimosa band plan sets aside the 10.350-10.370 GHz segment as the calling band and provides for the use of 10.370-10.390 GHz as channel 18 for wireless broadband use. The noise from channel 18 broadband use would severely adversely affect 10.368 GHz which is actively used for Amateur weak-signal operation, even if the channel band plan was mandatory. Neither Mimosa's proposed channelization plan, nor its interference avoidance plan is properly formulated.

[16] The Commission was unwilling to utilize any resources to resolve any of the numerous Broadband over Power Line (BPL) interference cases that occurred over long periods of time despite well-documented cases of preclusive wideband noise in Amateur allocations.

beamwidth requirement proposed,[17] so it would be entirely consistent with Mimosa's proposed rules for a wireless broadband provider to utilize a 360-degree azimuth, fixed antenna at 55 dBW EIRP and to operate that facility *anywhere* in the band. Without any antenna limitations, a 55 dBW EIRP is far too high.[18]

13. The proposed use of contention-based protocols by wireless broadband systems in this band would likewise be of no value in avoiding interference to Amateur Radio stations. As discussed above, contention-based protocols are not useful in protecting repeater input frequencies from interference. Nor would they prevent interference to the receivers used in weak-signal Amateur operation. The broadband system would have no way to determine when a nearby Amateur station was monitoring a frequency or trying to receive a far distant, narrow bandwidth signal at or near the noise floor. It is understood that the concept of listen-before-transmit protocols is favored in certain contexts as a means of permitting frequency re-use and increased sharing, but in this context it is inapplicable.

V. The Petition Fails to Demonstrate a Justification for the Proposed Allocation.

14. It is axiomatic that before seeking additional allocations for essentially the same purpose, the proponent of the allocation must first demonstrate that the service for which the additional allocation is sought is making the most effective use of its existing allocations. This Mimosa has clearly failed to do. On pages 10 and 11 of its Petition, Mimosa concedes that there

[17] Contrast the Mimosa Petition in this respect with Section 15.249 of the Commission's rules, which limits Part 15 fixed, point-to-point systems operating in the 24.05-24.25 GHz band to antenna gain of at least 33 dBi, or alternatively, a main lobe beamwidth not exceeding 3.5 degrees in any plane. At antenna gains over 33 dBi or beamwidths narrower than 3.5 degrees, power must be reduced to ensure that the field strength does not exceed 2500 millivolts/meter.

[18] If it is necessary to operate wireless backhaul facilities with such high EIRP levels in order to overcome fading (which is substantial in this band in many areas, especially in the summer months), that is additional evidence that there is no compatibility between incumbent Amateur Radio operation in the band and the proposed wireless broadband operation.

is not a lack of allocated spectrum for wireless backhaul. Rather, the problem is a prevalence of "legacy radios" in the existing bands available for wireless backhaul that use spectrum inefficiently and do not make use of adaptive technologies. While the Petition recites the well-known arguments that demand for wireless broadband will continue to escalate indefinitely, it fails to (1) quantify that demand relative to low-microwave bands available for wireless backhaul now; or (2) demonstrate how the generalized assumption of demand for broadband spectrum this leads logically to a need for the relief sought in the Petition. In short, the Petition fails to justify the need for an additional allocation in this frequency range.

VI. Conclusions.

15. The Commission should dismiss this Petition forthwith, as it is inconsistent with the specific provisions of domestic footnote US128, which, on its face precludes the Part 90 allocation proposed by Mimosa. The United States has carefully limited the use of the band 10.0-10.50 MHz to use by military radiolocation stations on a primary basis and, on a secondary basis thereto, the Amateur and Amateur Satellite services. On a non-interference basis, non-government radiolocation can operate in this band domestically, but *no other services are permitted*. Given this, the Commission has no choice but to dismiss this Petition for Rule Making because it hasn't the authority to grant it.

16. Even if the Commission could proceed with the allocation proposed, it would be premature to do so. The United States is in now in the process of developing positions in advance of WRC-15, which includes an agenda item (1.12) that may very well have a profound effect on the 10.0-10.5 GHz band in ITU Region 2. Action domestically on the Mimosa Petition now

would foreclose certain options that the United States may wish to advocate at WRC-15, and the WRC-15 final acts may have an effect on this band as well.

17. Moreover, the Mimosa Petition is not well-conceived in numerous respects. First of all, it proposes a non-mandatory "band plan" that would effectively relegate the entire panoply of Amateur Radio operations now existing throughout the 10.0-10.5 GHz band to two small segments. The remainder of the band would be channelized for wireless broadband operation, but none of those channels (even if the "band plan" was mandatory) would, under Mimosa's proposal be subject to out-of-channel emission limits, thus effectively rendering the two proposed Amateur channels subject to high noise levels, precluding operation in those segments for the uses now conducted in them.

18. The proposed maximum EIRP is exceptionally high and there are no proposed limitations on antenna configurations. Given this, and the impracticalities of the proposed non-interference requirement and the use of contention-based protocols as interference-limiting tools, it is quite obvious that Mimosa has propounded a seriously flawed proposal which fails to justify the allocation of any additional spectrum for wireless backhaul in this frequency range. The Petition should be dismissed without action by the Commission without delay.

Therefore, the foregoing considered, ARRL, the national association for Amateur Radio, respectfully requests that the Commission deny or dismiss this Petition without further action, as

it proposes relief that the Commission is without jurisdiction to grant; it is premature; and its proposal fails to adequately support the relief requested.

Respectfully submitted,

ARRL, the national association for Amateur Radio

225 Main Street
Newington, CT 06111

By: Christopher D. Imlay
Christopher D. Imlay
Its General Counsel

BOOTH, FRERET & IMLAY, LLC
14356 Cape May Road
Silver Spring, MD 20904-6011
(301) 384-5525

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EXHIBIT A

3 Centimeters (10000.000-10500.000 MHz)

Frequency Range	Emission Bandwidth	Functional Use
10000.00 - 10050.000		Experimental
10050.000-10100.000	<=100 kHz	Analog & Digital; paired with 10300-10350
10100.000-10115.000	>=25 kHz and <1 MHz	Analog & Digital; paired with 10350-10365
10115.000-10117.000	<=50 kHz	Analog & Digital; paired with 10365-10367
10117.000-10120.000		Experimental
10120.000-10125.000	<=50 kHz	Analog & Digital; paired with 10370-10375
10125.000-10200.000	>=1 MHz	Analog & Digital; paired with 10375-10450 (Note 2)
10200.000-10300.000		Wideband Gunnplexers
10300.000-10350.000	<=100 kHz	Analog & Digital; paired with 10050-10100
10350.000-10365.000	>=25 kHz and <1 MHz	Analog & Digital; paired with 10100-10115
10365.000-10367.000	<=50 kHz	Analog & Digital; paired with 10115-10117
10367.000-10368.300	6 kHz or less	SSB, CW, Digital Weak-Signal & NBFM (Note 1
10368.300-10368.400	6 kHz or less	Beacons
10368.400-10370.000	6 kHz or less	SSB, CW, Digital Weak-Signal & NBFM
10370.000-10375.000	<=50 kHz	Analog & Digital; paired with 10120-10125
10375.000-10450.000	>=1 MHz	Analog & Digital; paired with 10125-10200 (Note 2)
10450.000-10500.000		Space, Earth & Telecommand Stations

Note 1: 10368.100 is the National Weak-Signal Calling Frequency
Note 2: Broadband segment may be used for any combination of high-speed data (eg: 802.11 protocols), Amateur Television and other high-bandwidth activities. Division into channels and/or separation of uses within this segment may be done regionally based on needs and usage.