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

In the Matter of	)	
	)	
Facilitating Shared Use in the 3.1-3.55 GHz Band	)	WT Docket No. 19-348

To: The Commission

REPLY TO OPPOSITION
ARRL THE NATIONAL ASSOCIATION FOR AMATEUR RADIO

The American Radio Relay League, the national association for Amateur Radio ("ARRL" or "League"), pursuant to Section 1.429 of the Commission's rules,[1] herein replies to CTIA's Opposition ("Opposition") [2] to ARRL's Petition for Reconsideration ("Petition") in the above-captioned proceeding.[3]

In its Petition, the ARRL requested that the Commission reconsider its removal of secondary status for the Amateur service in the 3300-3500 MHz band and the requirement that amateur operations in the 3450-3500 MHz band cease "on a date consistent with the first possible grant of flexible use authorizations to new users."[4] ARRL highlighted that the Commission's explanations in the decision were speculative in nature, without grounding in the record, and that the net effect of the Commission's action would be to remove amateur operations that otherwise could employ unused spectrum. ARRL noted that if amateur operations

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[1] 47 C.F.R. § 1.429.
[2] CTIA, Opposition to Petition for Reconsideration (filed Dec. 22, 2020).
[3] *Facilitating Shared Use in the 3.1-3.55 GHz Band,* Report and Order, WT Docket No. 19-348, 85 Fed.Reg. 64062 (publ. Nov. 9, 2020).
[4] *Id.* at para. 26.

remained secondary, they would continue to be subject to non-interference requirements and cessation at any time a primary operator required the spectrum. ARRL offered to accept reasonable means to register and locate radio amateurs patterned on an already-existing amateur service rule, Section 97.303(g), that applies to two other bands.[5]

CTIA is the sole entity filing an Opposition. CTIA argues that the Commission considered and addressed the ARRL's arguments in its Order, that the Order is consistent with Commission precedent, and that "numerous" other bands are available for amateur operations.[6] CTIA is mistaken on each of these points, and each point is discussed below.

Conclusory Statements Are Not Legally Sufficient to Justify Spectrum Waste and Departure from Precedent

In its decision, the Commission did not substantively explain with the requisite "rational connection between the facts found and the choice made"[7] why it chose in this case to clear the spectrum at one fell swoop well before it may be utilized by any new licensee. CTIA settles for repeating the conclusory statements in the Commission's decision and ignoring the spectrum implications.

Conclusory statements do not substitute for discussion of the facts presented and reasoned explanation of the choices made. This is especially true in this case, where the Commission departs from its earlier spectrum policy (as discussed below) and, as a result of its decision, the time value of a valuable natural resource – the radio spectrum – will irretrievably be lost to the public.

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[5] *See* 47 C.F.R. § 97.303(g) (radio amateurs operating in the 2200 and/or 630 meter bands must have registered their operations with the Utilities Telecom Council (UTC).
[6] *Supra* note 2.
[7] *See Motor Vehicle Manufacturers Association v. State Farm Auto Mutual Insurance Co.,* 463 U.S. at 29 at 52 (1963). *See also, Petroleum Communications v. F.C.C.*, 22 F.3d 1164 at 1172 (D.C. Cir. 1994).

It is well-settled that an agency's regulatory decisions are arbitrary and capricious if they lack an adequate explanation and foundation. Conclusory statements without reasoned analysis are not a substitute. The provisions of the Administrative Procedure Act, 5 U.S.C. §§ 551 *et seq.,* require that the Commission provide the essential facts upon which its decisions are based and explanations with actual facts and evidence beyond merely repeating conclusory statements.[8] This is especially important when, as the Commission here, departs from earlier policy and precedent that had allowed for intense use to be made of the radio spectrum while controlling or preventing harmful interference during periods of transition.

To focus on the Commission's departure from good spectrum policy in this decision and the lack of rational explanation for doing so, we need only examine the precedent cited by CTIA in its Opposition. CTIA cites previous Commission decisions such as the Emerging Technologies framework for the proposition that single deadlines are needed "to clear incumbent users as the most efficient way to repurpose spectrum for new services."[9] But the Emerging Technologies and related decisions,[10] and the framework cited by CTIA,[11] did not sweep away incumbent users on a date certain as is done in this proceeding. Far from it. The Emerging Technology decisions strongly support the ARRL requests in this proceeding. If the Commission would continue to follow the path that it pioneered in its Emerging Technologies and related spectrum reallocation decisions, it would grant the ARRL's request

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[8] *Id.*

[9] Opposition at p. 6 and fn. 20, citing *Redevelopment of Spectrum to Encourage Innovation in the Use of New Telecommunications Technologies*, Report and Order and Third Notice of Proposed Rulemaking, 7 FCC Rcd 6886 (1992) ("Emerging Technologies decision").

[10] During the same time the Commission adopted closely-related rules to establish the Personal Communications Service to use some of the spectrum re-allocated in the Emerging Technologies rulemaking. *See Amendment of the Commission's Rules to Establish New Personal Communications Services,* GEN Docket No. 90-314, RM-7140, RM-7175, RM-7618, 7 FCC Rcd 5676 (1992) and multiple subsequent Reports and Orders.

[11] *Supra* note 2.

for continued secondary status and permission to continue to use spectrum capacity that otherwise will go unused and its value to the public lost.

Specifically, in its Emerging Technologies decision, the Commission did not delete the allocation for the then-incumbent fixed microwave services. It also did not clear the spectrum by establishing a single arbitrary nationwide deadline keyed to the issuance of licenses. Instead, the Commission authorized continued operation by the incumbent microwave operators unless and until the new primary licensee was ready to use the spectrum in a manner that inevitably would result in interference between the incumbent and the new user.

In the Emerging Technology proceedings the Commission encouraged spectrum sharing between the incumbent fixed microwave operators and the new primary flexible licensees (cellular-like "personal communications service" ["PCS"] licensees) whenever technically feasible. The Commission stated, for example, that "the feasibility of spectrum sharing between new services and fixed microwave services has not been fully determined and will depend on the technical design of individual new systems and services".[12] The same situation will exist at 3.4 GHz with the new primary licensees and the amateur secondary users. In its Emerging Technologies decision the Commission mandated sharing on a non-interference basis with a right by the new primary licensees to require relocation of the incumbent operators as needed, and it should do the same here.

Under the rules adopted in the Emerging Technologies decision, incumbents were required to relocate only when harmful interference would be reasonably predicted to result were they to continue operating. The language adopted in amended form continues to apply today in various parts of the Commission's Rules, including Section 101.79:

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[12] *Supra fn.9* at p. 6891 at para. 29.

47 C.F.R. § 101.79: Sunset provisions for licensees in the 1850-1990 MHz, 2110-2150 MHz, and 2160-2200 MHz bands.

> (a) FMS [Fixed Microwave Service] licensees will maintain primary status in the 1850-1990 MHz, 2110-2150 MHz, and 2160-2200 MHz bands unless and until an ET [Emerging Technology] licensee requires use of the spectrum. ET licensees are not required to pay relocation costs after the relocation rules sunset. Once the relocation rules sunset, an ET licensee may require the incumbent to cease operations, provided that the ET licensee intends to turn on a system within interference range of the incumbent, as determined by TIA TSB 10-F (for terrestrial-to-terrestrial situations) or TIA TSB 86 (for MSS satellite-to-terrestrial situations) or any standard successor. ET licensee notification to the affected FMS licensee must be in writing and must provide the incumbent with no less than six months to vacate the spectrum. After the six-month notice period has expired, the FMS licensee must turn its license back into the Commission, unless the parties have entered into an agreement which allows the FMS licensee to continue to operate on a mutually agreed upon basis. (Emphasis highlight added.)[13]

These provisions were highly successful in accomplishing the transition to PCS in the 2 GHz bands. ARRL and the hundreds of individual radio amateurs that commented in this proceeding simply request analogous provisions to govern the 3.4 GHz transition to 5G.

Lack of Alternative Bands

In its Opposition, CTIA also argues that amateurs failed to demonstrate why Amateur operations should be allowed to continue, given that "numerous" bands are available to amateurs for relocation. This conclusion overlooks the widely varying bandwidths and propagation of the different bands and that the two comparable Amateur allocations also are secondary and subject to substantial interference. There are multiple comments in the record from individual amateurs addressing their specific uses and why other frequency options often are difficult or impossible.[14]

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[13] 47 C.F.R. §101.79.

[14] *See, e.g.,* Comments of Amateur Television Network at 4-5 and appendices (filed Feb. 21, 2020).

Recognition of the comments submitted by amateur operators on the difficulty using and lack of alternative spectrum is largely absent from the Commission's decision. In some geographic areas parts of the 2.4 and 5.9 GHz bands may be able to be used to accommodate users displaced from 3.4 GHz and do have similar enough propagation characteristics, but allocated bandwidth on these other bands also is scarce in many areas. As set forth in the Comments but not addressed in the Commission's decision, the 3.4 GHz band plays a critical role in connecting networks in some areas where unlicensed WiFi and strong Part 18 signals provide a significant noise floor in the 2.4 and 5.8 GHz bands. The amateurs are willing to take their chances at 3.4 GHZ with an opportunity for quieter spectrum for their applications, even if only for an indeterminate time period. This is feasible because unlike most other spectrum users, those in the radio amateur service are prohibited from having a pecuniary interest. Experimentation and public service may suffer if and when networks must move, but there is not a constant day-to-day commercial use that would be significantly disrupted. Radio amateurs using this spectrum also tend to be especially savvy technically and able to devise solutions. Their efforts to do so may further the state of the art in spectrum sharing as they have in the past.

Several of the specific amateur uses, including propagation studies and related weak signal and moon bounce operations, cannot be substituted in other bands since by their nature they are dependent upon and studying the particular properties of the 3.3 – 3.5 GHz spectrum. Their work entails relatively narrow bandwidths, however, that may be moved within the band to avoid interference. Each location and application is unique.

Registration of Amateur Operations

The amateur operations in this band long have been conducted on a secondary allocation basis functionally similar to the *de facto* secondary status of Part 5 experimental licenses whose continued operation was (correctly) approved in this same proceeding. CTIA in its opposition seeks to distinguish amateur operations from Part 5 Experimental licensees by Part 5 "public registration" through the licensing process "allowing new 3 GHz licensees to know what entities are authorized to operate nearby [fn. omitted]."[15] This isn't really a problem.

In most circumstances the basic spectrum survey of the type routinely performed by commercial licensees in the planning stages would quickly find any amateur signal(s) in the desired service area. But to allay any concern on this account, in its filings the ARRL has suggested as a model for a reasonable registration requirement the existing provisions in the Amateur Part 97 rules for operation in the 2200 and 630 meter bands.[16] Given the short propagation paths possible at the subject 3 GHz frequencies and the nature of amateur operations thereon, a similar requirement certainly is feasible.

Conclusion

For the above reasons, CTIA's arguments are non-availing. The Commission should reconsider its deletion of the secondary amateur allocation in the 3.3-3.5 GHz band. Instead, the Commission should permit amateur operations to continue on a secondary, non-interference basis until conflicting spectrum use by a primary licensee is ready to commence. Doing so would be consistent with precedent and follow the path pioneered in the Emerging Technologies and related proceedings discussed above and that has been highly successful.

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[15] Opposition at 8.
[16] *See supra*, fn. 5.

Respectfully submitted,

ARRL, THE NATIONAL ASSOCIATION
FOR AMATEUR RADIO

225 Main Street
Newington, CT 06111

By:

David R. Siddall
ARRL Washington Counsel

DS LAW PLLC
1629 K St NW, Suite 300
Washington, DC 20006

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CERTIFICATE OF SERVICE

I, David Siddall, hereby certify that the foregoing "Reply to Opposition" of the American Radio Relay League was served this 4th day of January, 2021, by first-class mail, postage prepaid, on:

Kara Graves
Assistant Vice President, Regulatory Affairs
CTIA
1400 16th St. NW
Suite 600
Washington, DC 20036

David Siddall